Royal Canadian Mounted Police / Gendarmerie royale du Canada

Your file / Votre référence
500272

Our file / Notre référence
A-2016-05217

SEP 07 2016

Mr. Patrick THOMSON
[redacted]

Dear Mr. THOMSON:

This is in response to your request under the *Access to Information Act*, which was received by this office on June 24, 2016, to obtain:

> *I would like a current copy of a Drug Recognition Expert training manual. I am writing a paper for publication about the admissibility of DRE testimony, and need a DRE manual for this purpose. Specifically, the Evaluation of Impaired Operation (Drugs and Alcohol) Regulations, (SOR/2008-196, s 1) require an officer to be a certified drug recognition expert accredited by the International Association of Chiefs of Police in order to administer the evaluation provided for by Section 254(3.1) of the Criminal Code. I would like the training manual used by these officers*

Based on the information provided, a search for records was conducted in Ottawa, Ontario. Enclosed is a copy of all the information relevant to your request, which are disclosed in their entirety.

Please be advised that you are entitled to lodge a complaint with the Information Commissioner concerning the processing of your request within 60 days after the day that you become aware that grounds for a complaint exist. In the event you decide to avail yourself of this right, your notice of complaint should be addressed to:

Office of the Information Commissioner of Canada
30 Victoria Street, 7th Floor
Gatineau, QC K1A 1H3

Should you wish to discuss this matter further, you may contact Ms. Nicole Brown at [redacted] Please quote the file number appearing on this letter.

Regards,

Supt. David Vautour
Access to Information and Privacy Branch
Mailstop #61
73 Leikin Drive
Ottawa, ON K1A 0R2

Canada

DRE

Student

SESSION I

INTRODUCTION AND OVERVIEW

SESSION I INTRODUCTION AND OVERVIEW

Upon successfully completing this session the student will be able to:

State the goals and objectives of the course.

Outline the major course content.

Outline the schedule of major course activities.

Outline the contents and arrangements of the student manual.

During this session the student will demonstrate his or her current knowledge of basic concepts and terminology relevant to the Drug Evaluation and Classification Process.

CONTENT SEGMENTS		LEARNING ACTIVITIES
A.	Welcoming Remarks and Goal	Instructor Led Presentations
B.	Participant Introductions	Participant Led Presentations
C.	Objectives	Knowledge Examination
D.	Overview of Content and Schedule	Reading Assignments
E.	Overview of Student Manual	
F.	Administrative Matters	
G.	Glossary of Terms	

I. INTRODUCTION AND OVERVIEW

A. Welcoming Remarks and Goal

Welcome to the Drug Recognition Expert Course.

Ultimate Goal:

The goal of the course is simple.

- To help you reduce crashes, deaths and injuries caused by drug impaired drivers.

Incidence of Drugged Driving

Sunnybrook Hospital (Toronto) Study (1993)

- 41% of drivers treated at Trauma Center for crash injuries had drugs other than alcohol in them with 35% testing positive for alcohol.

British Columbia Roadside Survey (2008)

- 10.4% of drivers tested positive for drugs while 8.1% tested positive for alcohol.

Fatally Injured Drivers in Canada (2009)

- Among 13,354 drivers killed in motor vehicle crashes between 2000 and 2006, 32.7% tested positive for at least one psychoactive drug: 37.5% tested positive for alcohol.

We can do something to remove impaired drivers from our roads.

The Drug Evaluation and Classification (DEC) Program is based on solid medical and scientific facts.

- The validity of the Drug Evaluation and Classification (DEC) Program has been tested in carefully controlled research in both the laboratory and the field.

By enrolling in Drug Recognition Expert (DRE) training, you have become part of an elite international program.

- DREs form one of the tightest knit fraternities in law enforcement.

- DREs from many agencies and from many parts of the country work closely together to share information and other resources, and to maintain the highest standards of quality.

- Each of you was selected to receive this training because you were recognized by your department as a skilled and dedicated law enforcement professional.

- Your instructors welcome you to this school and are proud to have you here, and we're sure that you are proud to be here.

B. Introductions

Classroom Training Objectives

If you successfully complete this course, you will be able to:

- Describe the involvement of drugs in impaired driving incidents.
- Name the seven drug categories of drugs and recognize their effects.
- Describe and properly conduct the drug influence evaluation.
- Document the results of the drug influence evaluation.
- Properly interpret the results of the evaluation.
- Prepare a narrative Drug Influence Report.
- Testify clearly and convincingly in drug evaluation cases.
- Maintain an up-to-date DRE Curriculum Vitae (C.V.)

Every DRE needs to be able to do these eight things.

Before you can be certified as a DRE, you will have to demonstrate that you can do each of these things.

C. Overview of Content and Schedule

Major Content Topics

- Drugs in society and in vehicle operation.
- Development and effectiveness of the Drug Evaluation and Classification (DEC) Program.
- Overview of the DEC Procedures
- Eye Examinations (a major component of the DEC procedures).
- Physiology and Drugs

- Clinical indicator examinations (a major component of the DEC procedures).
- The seven drug categories.
- Resource materials and sources for evaluating officers.
- Interviewing a subject (interpreting and documenting results of an evaluation)

Eye examinations practice:

- Nystagmus, Lack of Convergence, Pupil Size, and Reaction to Light

Alcohol Workshop:

- Psychophysical testing practice.
- Point out that volunteer drinkers from outside the class will be recruited for this session.

Practicing interpretation of the evaluation results:

Clinical indicator examinations

- Pulse, blood pressure, body temperature

Practicing administration of the drug influence evaluation:

D. Overview of Manual Contents

The manual contains a summary of presentations made by instructors throughout the classroom training.

The manual includes a set of "class notes" for every session in the course.

Students are expected to use the manual to review the material covered in class.

The manual should also be used to preview the class sessions.

By taking good notes, and by studying the manual carefully, students should have no trouble in passing the course.

At the conclusion of the classroom training, the student must pass the written test with a score of 80% or better in order to progress to the certification phase.

F. Administrative Matters

Logistics

Completion of registration forms, travel vouchers, etc.

Attendance

Mandatory attendance at all sessions of this school.

Facilities

Locations of restrooms, lunchrooms, etc

Pre-test

DRUG EVALUATION AND CLASSIFICATION PROGRAM

GLOSSARY OF TERMS

ACCOMMODATION REFLEX
The adjustment of the eyes for viewing at various distances. Meaning the pupils will automatically constrict as objects move closer and dilate as objects move further away.

ADDICTION
Habitual, psychological, and physiological dependence on a substance beyond one's voluntary control.

ADDITIVE EFFECT
One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an additive effect if they both affect the indicator in the same way. For example, cocaine elevates pulse rate and PCP also elevates pulse rate. The combination of cocaine and PCP produces an additive effect on pulse rate.

AFFERENT NERVES
See: "Sensory Nerves."

ALKALOID
A chemical that is found in, and can be physically extracted from, some substance. For example, morphine is a natural alkaloid of opium. It does not require a chemical reaction to produce morphine from opium.

ANALGESIC
A drug that relieves or allays pain.

ANALOG (of a drug)
An analog of a drug is a chemical that is very similar to the drug, both in terms of molecular structure and in terms of psychoactive effects. For example, the drug Ketamine is an analog of PCP.

ANESTHETIC
A drug that produces a general or local insensibility to pain and other sensation.

ANTAGONISTIC EFFECT
One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an antagonistic effect if they affect the indicator in opposite ways. For example, heroin constricts pupils while cocaine dilates pupils. The combination of heroin and cocaine produces an antagonistic effect on pupil size. Depending on how much of each drug was taken, and on when they were taken, the suspect's pupils could be constricted, or dilated, or within the normal range of size

ARRHYTHMIA
An abnormal heart rhythm.

ARTERY
The strong, elastic blood vessels that carry blood away the heart.

ATAXIA
An inability to coordinate movements. A staggering walk and poor balance may be caused by damage to the brain or spinal cord. This can be the result of trauma, birth defect, infection, tumor, or a consequence of drug use.

AUTONOMIC NERVE
A motor nerve that carries messages to the muscles and organs that we do not consciously control. There are two kinds of autonomic nerves, the sympathetic nerves and parasympathetic nerves.

AXON
The part of a neuron (nerve cell) that sends out a neurotransmitter.

BAC
(Blood Alcohol Concentration) - The percentage of alcohol in a person's blood.

BrAC
(Breath Alcohol Concentration) - The percentage of alcohol in a person's breath as measured by a breath testing device. The device automatically converts Breath Alcohol Concentration to Blood Alcohol Concentration.

BLOOD PRESSURE
The force exerted by blood on the walls of the arteries. Blood pressure changes continuously, as the heart cycles between contraction and expansion.

BRADYCARDIA
Abnormally slow heart rate; pulse rate below the normal range.

BRADYPNEA
Abnormally slow rate of breathing.

BRUXISM
Grinding the teeth. This behavior is often seen in person who are under the influence of cocaine or other CNS Stimulants.

CANNABIS
This is the drug category that includes marijuana. Marijuana comes primarily from the leaves of certain species of Cannabis plants that grow readily all over the temperate zones of the earth. Hashish is another drug in this category, and consists of the compressed leaves from female Cannabis plants. The active ingredient in both Marijuana and Hashish is a chemical called delta-9 tetrahydrocannabinol, usually abbreviated THC.

CARBOXY THC
A metabolite of THC (tetrahydrocannabinol).

CHEYNE- STOKES RESPIRATION
Abnormal pattern of breathing. Marked by breathlessness and deep, fast breathing.

CNS (Central Nervous System)
A system within the body consisting of the brain, the brain stem, and the spinal cord.

CNS DEPRESSANTS
One of the seven drug categories. CNS Depressants include alcohol, barbiturates, anti-anxiety tranquilizers, and numerous other drugs.

CNS STIMULANTS
One of the seven drug categories. CNS Stimulants include Cocaine, the Amphetamines, Ritalin, Preludin, and numerous other drugs.

CPS (Compendium of Pharmaceuticals and Specialties)
The CPS provides detailed information on the physical appearance and psychoactive effects of licitly-manufactured drugs.

CONJUNCTIVITIS
An inflammation of the mucous membrane that lines the inner surface of the eyelids caused by infection, allergy, or outside factors. May be bacterial or viral. Persons suffering from conjunctivitis may show symptoms in one eye only. This condition is commonly referred to as "pink eye", a condition that could be mistaken for the bloodshot eyes produced by alcohol or Cannabis.

CONVERGENCE
The "crossing" of the eyes that occurs when a person is able to focus on a stimulus as it is pushed slowly toward the bridge of their nose. (See, also, "Lack of Convergence".)

CRACK/ROCK
Cocaine base, appears as a hard chunk form resembling pebbles or small rocks. It produces a very intense, but relatively short duration "high".

CURRICULUM VITAE
A written summary of a person's education, training, experience, noteworthy achievements and other relevant information about a particular topic.

CYCLIC BEHAVIOUR
A manifestation of impairment due to certain drugs, in which the suspect alternates between periods (or cycles) of intense agitation and relative calm. Cyclic behaviour, for example, sometimes will be observed in persons under the influence of PCP.

DELIRIUM
A brief state characterized by incoherent excitement, confused speech, restlessness, and possible hallucinations.

DENDRITE
The part of a neuron (nerve cell) that receives a neurotransmitter.

DIACETYL MORPHINE
The chemical name for Heroin.

DIASTOLIC
The lowest value of blood pressure. The blood pressure reaches its diastolic value when the heart is fully expanded, or relaxed (Diastole).

DIPLOPIA
Double vision.

DISSOCIATIVE ANESTHETICS
One of the seven drug categories. Includes drugs that inhibits pain by cutting off or disassociating the brain's perception of pain. PCP and it's analogs are considered Dissociative Anesthetics.

DIVIDED ATTENTION
Concentrating on more than one thing at a time. The four psychophysical tests used by DREs require the suspect to divide attention.

DOWNSIDE EFFECT
An effect that may occur when the body reacts to the presence of a drug by producing hormones or neurotransmitters to counteract the effects of the drug consumed.

DRUG
Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely.

DYSARTHIA
Slurred speech. Difficult, poorly articulated speech.

DYSPNEA
Shortness of breath.

DYSMETRIA
An abnormal condition that prevents the affected person from properly estimating distances linked to muscular movements.

DYSPHORIA
A disorder of mood. Feelings of depression and anguish.

EFFERENT NERVES
See: "Motor Nerves".

ENDOCRINE SYSTEM
The network of glands that do not have ducts and other structures. They secrete hormones into the blood stream to affect a number of functions in the body.

EXPERT WITNESS
A person skilled in some art, trade, science or profession, having knowledge of matters not within knowledge of persons of average education, learning and experience. An expert witness may assist a jury in arriving at a verdict by expressing an opinion on a state of facts shown by the evidence and based upon his or her special knowledge. (NOTE: Only the court can determine whether a witness is qualified to testify as an expert.)

FLASHBACK
A vivid recollection of a portion of an hallucinogenic experience. Essentially, it is a very intense daydream. There are three types: (1) emotional -- feelings of panic, fear, etc.; (2) somatic -- altered body sensations, tremors, dizziness, etc.; and (3) perceptual -- distortions of vision, hearing, smell, etc.

GARRULITY
Chatter, rambling or pointless speech. Talkative.

HALLUCINATION
A sensory experience of something that does not exist outside the mind, e.g., seeing, hearing, smelling, or feeling something that isn't really there. Also, having a distorted sensory perception, so that things appear differently than they are.

HALLUCINOGENS
One of the seven drug categories. Hallucinogens include LSD, MDMA, Peyote, Psilocybin, and numerous other drugs.

HASHISH
A form of cannabis made from the dried and pressed resin of a marijuana plant.

HASH OIL
Sometimes referred to as "marijuana oil" it is a highly concentrated syrup-like oil extracted from marijuana. It is normally produced by soaking marijuana in a container of solvent, such as acetone or alcohol for several hours and after the solvent has evaporated, a thick syrup-like oil is produced with a THC content generally ranging from 8 to 20 percent.

HEROIN
A powerful and widely-abused narcotic analgesic that is chemically derived from morphine. The chemical, or generic name of heroin is "diacetyl morphine".

HIPPUS
A rhythmic change in the pupil size of the eyes, as they dilate and constrict when observed in darkness independent of changes in light intensity, accommodation (focusing), or other forms of sensory stimulation. Normally only observed with specialized equipment.

HOMEOSTASIS
The dynamic balance, or steady state, involving levels of salts, water, sugars, and other materials in the body's fluids.

HORIZONTAL GAZE NYSTAGMUS (HGN)
Involuntary jerking of the eyes occurring as the eyes gaze to the side.

HORMONES
Chemicals produced by the body's endocrine system that are carried through the blood stream to the target organ. They exert great influence on the growth and development of the individual, and that aid in the regulation of numerous body processes.

HYDROXY THC
A metabolite of THC (tetrahydrocannabinol).

HYPERFLEXIA
Exaggerated or over extended motions.

HYPERGLYCEMIA
Excess sugar in the blood.

HYPERPNEA
A deep, rapid or labored breathing.

HYPERPYREXIA
Extremely high body temperature.

HYPERREFLEXIA
A neurological condition marked by increased reflex reactions.

HYPERTENSION
Abnormally high blood pressure. Do not confuse this with hypotension.

HYPOGLYCEMIA
An abnormal decrease of blood sugar levels.

HYPOPNEA
Shallow or slow breathing.

HYPOTENSION
Abnormally low blood pressure. Do not confuse this with hypertension.

HYPOTHERMIA
Decreased body temperature.

ICE
A crystalline form of methamphetamine that produces a very intense and fairly long-lasting "high".

INHALANTS
One of the seven drug categories. The inhalants include volatile solvents (such as glue and gasoline), aerosols (such as hair spray and insecticides) and anesthetic gases (such as nitrous oxide).

INSUFFLATION
See "snorting".

INTEGUMENTARY SYSTEM
The skin and accessory structures, hair and nails. Functions include protection, maintenance of body temperature, excretion of waste, and sensory perceptions.

INTRAOCULAR
"Within the eyeball".

KOROTKOFF SOUNDS
A series of distinct sounds produced by blood passing through an artery, as the external pressure on the artery drops from the systolic value to the diastolic value.

LACK OF CONVERGENCE
The inability of a person's eyes to converge, or "cross" as the person attempts to focus on a stimulus as it is pushed slowly toward the bridge of his or her nose.

MARIJUANA (MARIHUANA)
Common term for the Cannabis Sativa plant. Usually refers to the dried leaves of the plant. This is the most common form of the cannabis category.

MARINOL
A drug containing a synthetic form of THC (tetrahydrocannabinol). Marinol belongs to the cannabis category of drugs, but marinol is not produced from any species of cannabis plant.

METABOLISM
The sum of all chemical processes that take place in the body as they relate to the movements of nutrients in the blood after digestion, resulting in growth, energy, release of wastes, and other body functions. The process by which the body, using oxygen, enzymes and other internal chemicals, breaks down ingested substances such as food and drugs so they may be consumed and eliminated. Metabolism takes place in two phases. The first step is the constructive phase (anabolism) where smaller molecules are converted to larger molecules. The second steps is the destructive phase (catabolism) where large molecules are broken down into smaller molecules.

METABOLITE
A chemical product, formed by the reaction of a drug with oxygen and/or other substances in the body.

MIOSIS
Abnormally constricted pupils.

MOTOR NERVES
Nerves that carry messages away from the brain, to be body's muscles, tissues, and organs. Motor nerves are also known as efferent nerves.

MUSCULAR HYPERTONICITY
Rigid muscle tone.

MYDRIASIS
Abnormally dilated pupils.

NARCOTIC ANALGESICS
One of the seven drug categories. Narcotic analgesics include opium, the natural alkaloids of opium (such as morphine, codeine and thebaine), the derivatives of opium (such as heroin, dilaudid, oxycodone and percodan), and the synthetic narcotics (such as demerol and numorphan)

NERVE
A cord-like fiber that carries messages either to or from the brain. For drug evaluation and classification purposes, a nerve can be pictured as a series of "wire-like" segments, with small spaces or gaps between the segments.

NEURON
A nerve cell. The basic functional unit of a nerve. It contains a nucleus within a cell body with one or more axons and dendrites.

NEUROTRANSMITTER
Chemicals that pass from the axon of one nerve cell to the dendrite of the next cell, and that carry messages across the gap between the two nerve cells.

NULL EFFECT
One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce a null effect if neither of them affects that indicator. For example, PCP does not affect pupil size, and alcohol does not affect pupil size. The combination of PCP and alcohol produces a null effect on pupil size.

NYSTAGMUS
An involuntary jerking of the eyes.

"ON THE NOD"
A semi-conscious state of deep relaxation. Typically induced by impairment due to Heroin or other narcotic analgesic. The suspect's eyelids droop, and chin rests on the chest. Suspect may appear to be asleep, but can be easily aroused and will respond to questions.

OVERLAPPING EFFECT
One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an overlapping effect if one of them affects the indicator but the other doesn't. For example, cocaine dilates pupils while alcohol doesn't affect pupil size. The combination of cocaine and alcohol produces an overlapping effect on pupil size: the combination will cause the pupils to dilate.

PALLOR
An abnormal paleness or lack of color in the skin.

PARANOIA
Mental disorder characterized delusions and the projection of personal conflicts, that are ascribed to the supposed hostility of others.

PARAPHERNALIA
Drug paraphernalia are the various kinds of tools and other equipment used to store, transport or ingest a drug. Hypodermic needles, small pipes, bent spoons, etc. are examples of drug paraphernalia. The singular form of the word is"paraphernalium" or example, one hypodermic needle would be called a "drug paraphernalium".

PARASYMPATHETIC NERVE
An autonomic nerve that commands the body to relax and to carry out tranquil activities. The brain uses parasympathetic nerves to send "at ease" commands to the muscles, tissues, and organs.

PARASYMPATHOMIMETIC DRUGS
Drugs that mimic neurotransmitter associated with the parasympathetic nerves. These drugs artificially cause the transmission of messages that produce lower blood pressure, drowsiness, etc.

PHENCYCLIDINE
A contraction of PHENYL CYCLOHEXYL PIPERIDINE, or PCP. Although formerly used as a surgical anesthetic, it has no current legitimate medical use in humans.

PHENYL CYCLOHEXYL PIPERIDINE (PCP)
Often called "phencyclidine" or "PCP", it is a specific drug belonging to the Dissociative Anesthetics category.

PHYSIOLOGY
Physiology is the branch of biology dealing with the functions and activities of life or living matter and the physical and chemical phenomena involved.

PILOERECTION
Literally, "hair standing up", or goose bumps. This condition of the skin is often observed in persons who are under the influence of LSD.

POLY DRUG USE
Ingesting drugs from two or more drug categories.

PSYCHEDELIC
A mental state characterized by a profound sense of intensified or altered sensory perception sometimes accompanied by hallucinations.

PSYCHOPHYSICAL TESTS

Methods of investigating the mental (psycho-) and physical characteristics of a person suspected of alcohol or drug impairment. Most psychophysical tests employ the concept of divided attention to assess a suspect's impairment.

PSYCHOTOGENIC
Literally, "creating psychosis" or "giving birth to insanity". A drug is considered to be psychotogenic if persons who are under the influence of the drug become insane, and remain so after the drug wears off.

PSYCHOTOMIMETIC
Literally, "mimicking psychosis" or "impersonating insanity". A drug is considered to be psychotomimetic if persons who are under the influence of the drug look and act insane while they are under the influence.

PTOSIS
Droopy eyelids.

PULSE
The expansion and relaxation of the walls of an artery, caused by the surging flow of blood through the artery as a result of regular contractions of the heart.

PULSE RATE
The number of expansions of an artery per minute.

PUPILLARY LIGHT REFLEX
The pupils of the eyes will constrict and dilate depending on changes in lighting.

PUPILLARY UNREST
The continuous, irregular change in the size of the pupils that may be observed under room or steady light conditions.

REBOUND DILATION
A period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size.

RESTING NYSTAGMUS
Jerking of the eyes as they look straight ahead.

SCLERA
A dense white fibrous membrane that, with the cornea, forms the external covering of the eyeball (i.e., the white part of the eye).

SENSORY NERVES
Nerves that carry messages to the brain, from the various parts of the body, including notably the sense organs(eyes, ears, etc.). Sensory nerves are also known as afferent nerves.

SINSEMILLA
The unpollenated female cannabis plant, having a relatively high concentration of THC.

SFST
Standardized Field Sobriety Testing. The SFST is comprised of a set of three tests. Horizontal Gaze Nystagmus (HGN), Walk and Turn, and One Leg Stand. Based on a series of controlled

laboratory studies, scientifically validated clues of alcohol impairment have been identified for each of these three tests. They are the only Standardized Field Sobriety Tests for which validated clues have been identified.

SNORTING
One method of ingesting certain drugs. Snorting requires that the drug be in powdered form. The user rapidly draws the drug up into the nostril, usually via a paper or glass tube. Snorting is also known as insufflation.

SPHYGMOMANOMETER
A medical device used to measure blood pressure. It consists of an arm or leg cuff with an air bag attached to a tube and a bulb for pumping air into the bag, and a gauge for showing the amount of air pressure being pressed against the artery.

STETHOSCOPE
A medical instrument used, for drug evaluation and classification purposes, to listen to the sounds produced by blood passing through an artery.

SYMPATHETIC NERVE
An autonomic nerve that commands the body to react in response to excitement, stress, fear, etc. The brain uses sympathetic nerves to send "wake up calls" and "fire alarms" to the muscles, tissues and organs.

SYMPATHOMIMETIC DRUGS
Drugs that mimic the neurotransmitter associated with the sympathetic nerves. These drugs artificially cause the transmission of messages that produce elevated blood pressure, dilated pupils, etc.

SYNAPSE (or Synaptic Gap)
The gap or space between two neurons (nerve cells).

SYNESTHESIA
A sensory perception disorder, in which an input via one sense is perceived by the brain as an input via another sense. An example of this would be a person "hearing" a phone ring and "seeing" the sound as a flash of light. Synesthesia sometimes occurs with persons under the influence of hallucinogens.

SYSTOLIC
The highest value of blood pressure. The blood pressure reaches its systolic value when the heart is fully contracted (systole), and blood is sent surging into the arteries.

TACHYCARDIA
Abnormally rapid heart rate; pulse rate above the normal range.

TACHYPNEA
Abnormally rapid rate of breathing.

THC (Tetrahydrocannabinol)
The principal psychoactive ingredient in drugs belonging to the cannabis category.

TOLERANCE
An adjustment of the drug user's body and brain to the repeated presence of the drug. As tolerance develops, the user will experience diminishing psychoactive effects from the same dose of the drug. As a result, the user typically will steadily increase the dose he or she takes, in an effort to achieve the same psychoactive effect.

TRACKS
Scar tissue usually produced by repeated injection of drugs, via hypodermic needle, along a segment of a vein.

VERTICAL GAZE NYSTAGMUS
An involuntary jerking of the eyes (up-and-down) which occurs as the eyes are held at maximum elevation. The jerking should be distinct and sustained.

VOIR DIRE
A French expression literally meaning "to see, to say." Loosely, this would be rendered in English as "To seek the truth," or "to call it as you see it." In a law or court context, one application of voir dire is to question a witness to assess his or her qualifications to be considered an expert in some matter pending before the court.

VOLUNTARY NERVE
A motor nerve that carries messages to a muscle that we consciously control.

WITHDRAWAL
This occurs in someone who is physically addicted to a drug when he or she is deprived of the drug. Depending on the type of drug and intensity of the craving, the person may become extremely agitated, and even physically ill.

SESSION II
DRUGS IN SOCIETY AND IN VEHICLE OPERATION

SESSION II DRUGS IN SOCIETY AND IN VEHICLE OPERATION

Upon successfully completing this session the student will be able to:

Define the term "drug" in the context of this course.

Name the seven major categories of drugs that are relevant to the Drug Evaluation and Classification program.

State in approximate, quantitative terms the incidence of drug use among various segments of the Canadian public.

State in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and other driving incidents.

Correctly answer the "topics for study" questions at the end of this session.

A. Definition and Categories of Drugs

The word "drug" means many things to many people. The word is used in a number of different ways, by different people, to convey some very different ideas.

For purposes of this training, a simple, enforcement-oriented definition is needed:

A drug is any substance that, when taken into the human body, can impair the ability of the person to operate a motor vehicle.

It is worth noting that this definition excludes many substances that physicians and others would not consider "drugs". For example, nicotine (cigarettes) and acetyl salicylic acid (aspirin) would not be considered "drugs" for purposes of this training. Similarly, this definition includes as "drugs" many substances that physicians wouldn't ordinarily think of when they hear the word. Model airplane glue, for example, is a "drug" for purposes of this training.

Under this definition, there are seven broad categories of drugs.

Central Nervous System Depressants

Examples

- Alcohol
- Barbiturates
- Anti-Depressants
- Anti-Anxiety Tranquilizers

Central Nervous System Stimulants

Examples

- Cocaine
- Amphetamines
- Methamphetamine
- Ritalin

Hallucinogens

Examples

- LSD
- MDMA (Ecstasy)
- Psilocybin
- Peyote

Dissociative Anesthetics

Examples

- Phencyclidine (PCP)
- Ketamine

Dextromethorphan

Narcotic Analgesics

Examples

Heroin
Codeine
Demerol
Methadone
OxyContin

Inhalants

Examples

Glue
Gasoline
Aerosols
Nitrous Oxide
Amyl Nitrate

Cannabis

This category includes the various forms and products of Cannabis plants (e.g. marijuana, hashish, Marinol, etc.)

Each category produces a different set of effects on the human mind and body. Each category exhibits different signs of drug influence, signs which come to light in the Drug Evaluation and Classification examinations. Each category also includes drugs that are widely abused.

One fact that is abundantly clear is that many drug users don't stick with only one substance, but instead routinely ingest more than one drug category. This behavior is called "polydrug" use (the prefix "poly" derives from the Greek word for "many"). Some commonly abused combinations of drugs include:

- Alcohol and virtually any other drug (for example, out of 173 drivers arrested by LAPD on suspicion of being under the influence of drugs, 81 (or 47%) had consumed alcohol and some other drug).

- Marijuana and PCP (A common way of ingesting PCP is to sprinkle it on a marijuana cigarette and smoke it. The user then automatically ingests both PCP and Cannabis.)

- Cocaine and Heroin (This combination has its own "street name". It is commonly called a "speedball".)

- Heroin and Amphetamine (This combination is sometimes called a "poor man's speedball".)

- Heroin and PCP (Sometimes called a "fireball".)
- "Crack" Cocaine and PCP (Sometimes called "space base".)

- "Crack" cocaine and marijuana (Sometimes called "primo".)

- "Crack" and Methamphetamine (Sometimes called "croak".)

The practice of polydrug use is so common that a DRE should expect to encounter many subjects who are under the influence of more than one category of drugs. Indeed, at some times and places, polydrug use may be more common than single drug use.

B. Incidence and Characteristics of Drug Use in Canada.

Large scale national surveys help to determine the number of Canadians who use alcohol and other drugs. The Canadian Alcohol and Drug Use Monitoring Survey (CADUMS) was launched in 2008 by Health Canada. It is an ongoing general population survey designed to provide detailed information on alcohol and drug use among Canadian aged 15 and over.

Alcohol is far and away the most popular drug consumed by Canadians. The 2008 CADUMS data show that 20.3 million Canadians (or 77.3% of those aged 15 and over) consume alcohol at least occasionally. About 2.6 million drink heavily, defined as having 5 or more drinks per occasion.

The 2008 CADUMS survey also obtained information on the use of several types of illicit drug, including cannabis, cocaine, amphetamines, hallucinogens and ecstasy. Overall 3.4 million (12.1%) Canadians report using at least one of these drugs in the past year. Cannabis is the most commonly used illicit substance with approximately 3.2 million (11.4%) users in Canada. Cocaine (443,500 users), hallucinogens (542,000), ecstasy (388,000) and amphetamines (305,000) are the other commonly used drugs.

Men are considerably more likely than women to use illicit drugs. Canadians between 15 and 24 years of age are approximately 8 times more likely to use illicit drugs than those age 25 and over.

Prescription pharmaceuticals such as opioid pain relievers (e.g., Percodan®, Demerol®,and OcyContin®), stimulants (e.g., Ritalin®, Dexedrine®, Adderall®), and tranquillizers and sedatives (e.g., Valium®, Ativan®, Xanax®) are psychoactive substances that have the potential to be abused. The may be used inappropriately (e.g., too many, with alcohol or other drugs) or by those to whom they are not prescribed so as to experience the psychoactive effects – i.e., "to get high". The 2008 CADUMS survey found that 7.8 million Canadians (28.4%) had used a psychoactive pharmaceutical in the past year. About 554,000 people reported using these drugs "to get high". Women and adults over 25 years of age were most likely to use prescription pharmaceuticals but those age 15 to 24 are more likely to use them to get "high.

C. Incidence of Drug Impaired Driving

Data on the frequency with which people drive after using drugs is difficult to come by. First of all, many dryg-impaired drivers are never detected. Secondly, since many drug users also drink alcohol, when they are stopped for impaired driving they may be arrested as alcohol impaired drivers only and never investigated for drug use. Thirdly, when they are involved in crashes, they may not be tested for drugs other than alcohol.

Nevertheless, some studies have been conducted that suggest drug impaired driving is a problem of significant proportions.

(1) A random roadside survey of British Columbia drivers in 2006 found 10.4% tested positive for drugs: 8.1% had been drinking. Cannabis and cocaine were the most commonly detected drugs. (Beirness and Beasley 2009a)

(2) A study of 854 motor vehicle crash victims at the Trauma Centre at Sunnybrook Hospital in Toronto found 35% tested positive for alcohol: 41% tested positive for at least one drug other than alcohol. Cannabis was the most common drug found (14%) followed by benzodiazepines (12%) (Stoduto. et al. 1993)

(3) A study of 354 drivers in Quebec who died in road crashes between 1999 and 2001 found Cannabis in the blood of 19.5%, benzodiazepines in 8.5%, cocaine in 6.8% and opiates in 1.4%. Alcohol was also found in 41% of drug-positive cases. (Dussault et al 2002).

(4) An examination of blood tests performed by coroners on 5,884 fatally injured drivers in Canada between 2000 and 2006 found 32.7% of cases were positive for drugs: 37.5% were positive for alcohol. CNS depressants, cannabis and CNS stimulants were the most commonly detected drugs. (Beirness and Beasley 2009b).

References

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Dussault, C, Brault, M. Bouchard, Lemire AM, (2002) *The Contribution of Alcohol and Other Drugs Among Fatally Injured Drivers in Quebec: Some Preliminary Results.* In D.T. Mayhew and C. Dussault (Eds.) *Proceedings of the 16th Annual International Conference on Alcohol, Drugs and Traffic Safety.* Quebec: Societe de l'Assurance Automobile due Quebec.

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Topics for Study

1. What does the term "drug" mean, as used in this course?

2. What are the seven categories of drugs? To which category does alcohol belong? To which category does cocaine belong?

3. What does "polydrug use" mean?

4. What is a "Speedball"? What is "Space Base"?

5. In the 2008 British Columbia Roadside Survey of Alcohol and Drug Use by Drivers what percentage of drivers tested positive for drugs?

SESSION III

DEVELOPMENT AND EFFECTIVENESS OF THE DRUG EVALUATIONAND CLASSIFICATION PROCESS

SESSION III DEVELOPMENT AND EFFECTIVENESS OF THE DRUG EVALUATION AND CLASSIFICATION PROCESS

Upon successfully completing this session the student will be able to:

State the origin and evolution of the Drug Evaluation and Classification program.

Describe research and demonstration project results that validate the effectiveness of the program.

State the impact of legal precedents established by case law.

Correctly answer the "topics for study" questions at the end of this session.

A. Origin and Evolution of the Program

The Drug Evaluation and Classification program was developed by personnel of the Los Angeles Police Department (LAPD). The initial impetus for the program stemmed from the frequent encounters, by experienced traffic enforcement officers, with drivers who were clearly impaired but whose blood alcohol concentrations were very low or zero. The logical suspicion was that these drivers were under the influence of drugs other than alcohol. But obtaining convincing evidence to back up that suspicion was not easy. Occasionally, officers succeeded in having physicians examine their low BAC subjects, sometimes resulting in a medical diagnosis of drug influence. But medical personnel typically receive little or no training in the recognition of specific signs of drug impairment, particularly at street level doses; therefore, they often were unable or reluctant to offer a judgment about a subject's condition. As a result, many drivers who almost certainly were under the influence were not prosecuted or convicted.

Two LAPD sergeants were instrumental in organizing a program to help police officers develop the skills needed to perform their own assessments of drug-impaired drivers. One was Dick Studdard, a traffic officer, the other was Len Leeds, a narcotics officer. They undertook independent research by consulting with physicians, enrolling in relevant courses, studying text books and technical articles, etc. Also, they secured management level support within LAPD to continue and accelerate the research and development effort. With the assistance of many others, Sergeants Studdard and Leeds ultimately succeeded in developing a drug recognition program based on a three-step process:

STEP ONE

Verify that the subject is impaired, and verify that the subject's blood alcohol concentration is not consistent with the degree of impairment that is evident.

STEP TWO

Determine whether the impairment is drug or medically related (i.e. injury or illness).

STEP THREE

Use proven diagnostic procedures to determine the category (or combination of categories) of drugs that is the likely cause of the impairment.

In 1979, the drug recognition program received the official recognition of the LAPD.

Persons unfamiliar with drugs sometimes wonder why it is necessary to use an elaborate set of diagnostic procedures to point toward the likely category of drugs. At first glance, it might seem that the easily observable inconsistency between the subject's impairment and his or her BAC would be sufficient. In other words, if the subject is obviously impaired, and if the alcohol level in the subject's blood is not enough to account for that impairment, why not simply obtain a blood sample and analyze it for drugs? For several reasons, this simplistic approach would not work.

- The request for a blood or urine sample should be based on (at least) the strongest articulable evidence of drugs that is available. The mere inconsistency between BAC and observable impairment might not be deemed (by courts or by motor vehicle licensing agencies) as sufficient to justify the subsequent chemical test. For example, it could be argued that the subject is ill or injured, or is simply very susceptible to the effects of even low doses of alcohol. It is preferable if the officer who initiates the chemical test for drugs can articulate a credible basis for believing that those drugs are present.

- The subject may simply refuse to submit to the test. Although that action might put the subject's driver's license in jeopardy of suspension or revocation, it also will deny the prosecution access to the scientific evidence of drug involvement. Conviction or acquittal in such a case may hinge on the officer's ability to submit detailed and convincing testimony concerning the signs pointing toward a specific category or categories of drugs.

- Chemical tests of blood or urine usually disclose only whether or not a particular drug was recently used. The DRE is needed to establish the fact that the drug was indeed causing impairment.

- Analysis of blood (or urine) samples for "drugs" can be very expensive, and may require a large volume. Practical constraints require that the officer requesting the chemical analysis be able to point the laboratory technician toward the type of drugs most likely to be found in the sample.

- Several new and innovative methods for drug toxicological analysis are currently being researched. These include, but are not limited to, saliva (oral fluid) and hair sampling. As these methods are accepted in the scientific community, they will be evaluated for possible incorporation into the DEC program.

- There is always the possibility that a person suspected of drug impairment is actually suffering from an illness or injury requiring medical attention. If the subject's sample is simply drawn for subsequent analysis, and they are not examined by someone qualified to recognize the presence -- or absence -- of symptoms of drug impairment, the medical problem may not be discovered until it is too late. DRE's take justifiable pride in the numerous instances where they have secured prompt medical care for persons initially suspected of drug abuse.

B. Evidence of Program Effectiveness

Proof of the effectiveness of the DEC program began to be accumulated from the very outset of the program. LAPD personnel demonstrated that they could conduct examinations that led directly to the conviction of drug impaired drivers and other drug law violators. They also demonstrated that they could train others to conduct these examinations successfully.

Scientific evidence that the examinations provide accurate indicators of drug categories began to be accumulated in the early 1980's. The National Highway Traffic Safety Administration

sponsored a controlled, laboratory evaluation of the LAPD drug recognition procedures. The evaluation was conducted by researchers from Johns Hopkins University, assisted by senior drug recognition experts from LAPD. The researchers recruited volunteers who agreed to consume a variety of drugs, and other substances, under the researchers' supervision. During each experimental session, each volunteer swallowed a "pill" and smoked a "cigarette". Subsequently, each volunteer was examined independently by four LAPD DREs.

The "pills" given to volunteers contained one of the following:

- a placebo (i.e. no drug at all)
- Secobarbital (a CNS Depressant)
- Valium (i.e. Diazepam -- another CNS Depressant)
- d-amphetamine (a CNS Stimulant)

The "cigarette" contained marijuana or a placebo (i.e. no drug) marijuana that either actually contained THC or from which the THC had been removed (i.e., a placebo).

No combinations of drug categories were administered to any volunteer on any session. That is, if a volunteer received a marijuana cigarette, then that volunteer received a placebo pill. If the volunteer received a "loaded" pill (i.e. with a drug), then his or her cigarette was a placebo. Some volunteers on some sessions received no drug at all i.e. both the "pill" and the "cigarette" were placebos.

Two different dose levels of marijuana, diazepam and d-amphetamine were used. That is, some of the marijuana cigarettes were "weak" and some were "strong". Similarly, some of the diazepam and d-amphetamine pills were "weak" and some "were strong". All of the secobarbital pills were "strong". Note: The "strong" dose levels were significantly weaker than the drugstypically abused by impaired drivers encountered by police officers.

A most important condition of this laboratory experiment was that neither the volunteers nor the LAPD officers knew what drugs the volunteers had received. Also, the DRE's were not allowed to "compare notes" concerning their examinations of the subjects. Each DRE conducted his or her examinations in a separate room, and each had to reach an independent judgment as to what category (if any) of drug was present.

The DREs' performance in the laboratory experiment was excellent. They correctly classified 95% of the placebos only subjects as "not impaired". Conversely, they correctly classified 98.7% of the subjects who received "strong" drug doses as "impaired". Furthermore they correctly identified the category of drugs for 91.7% of those "strong" dose subjects.

The DREs were less successful in identifying the volunteers who received "weak" drug doses. For example, they classified as "impaired" about one-third of the subjects who received "weak" marijuana cigarettes, and about one-sixth of those who received "weak" d-amphetamine pills. However, it is unlikely that those "weak" dose subjects would have been stopped by officers, if they actually had been driving.

NHTSA followed up the laboratory experiment by sponsoring a Field Validation Study, in Los Angeles. Arrangements were made to have an independent laboratory analyze blood samples drawn from persons actually arrested on suspicion of drug impaired driving. Any subject who was involved in a crash was excluded from the study, since injuries could have confounded the drug examination. Similarly, any subject who refused to submit to the blood test was excluded, since there would have been no way to substantiate or refute the DRE's conclusions.

Ultimately 173 suspected drug impaired drivers were included in the Field Validation Study. Each was examined by a DRE and subsequently provided a blood sample for analysis by the independent laboratory.

A number of important facts emerged from the Field Validation Study:

1. When a trained drug recognition expert concludes that a subject is under the influence of drugs, chances are very good that the subject actually has drugs in his or her body. Only one of the 173 subjects were found to have no alcohol or other drug. Only ten others were found to have alcohol only. Thus, 93.6% of the subjects were confirmed to have drugs other than alcohol in their bodies. Of the 173 subjects, 125, or 72%, had ingested two or more drugs other than alcohol.

2. Polydrug use is very common. Only 21% of the subjects had consumed one drug other than alcohol. The study found 47% had two drugs in their system other than alcohol. Also 25% had three or more drugs other than alcohol in their system. Among the more common combinations were the following:

   - Alcohol and PCP (23 subjects)
   - Alcohol and Cannabis (19 subjects)
   - Alcohol, PCP and Cannabis (18 subjects)
   - Cannabis and PCP (20 subjects)

3. The independent blood analyses confirmed the DREs' opinions in most cases. Overall, for more than nine out of ten subjects (92.5%), the blood test confirmed the presence of at least one drug category "predicted" by the DREs.

4. Confirmation rates varied among the categories, as follows:

Category	Percent Confirmed by Blood
PCP	92%
Narcotic Analgesics	85%
Cannabis	78%
Depressants (other than alcohol)	50%
CNS Stimulants	33%

5. The relatively low confirmation rates for CNS Depressants and CNS Stimulants may have been due to limitations in the laboratory rather than because of misjudgments by the DREs. For example, the laboratory analyzed the blood only for the subcategories of Depressants known as the Barbiturates and the

Benzodiazepines; there are many Depressant drugs that do not belong to those two groupings. In addition, the blood samples were not frozen prior to their shipment to the laboratory. Unfortunately, Cocaine continues to metabolize in unfrozen blood samples. Therefore, it is possible that in some samples obtained from Stimulant abusers, the Cocaine simply disappeared before the samples were analyzed.

In a study conducted in 1990, the Arizona Department of Public Safety's Central Regional Crime Laboratory compiled records of the toxicologic analyses corresponding to DREs' opinions from 1987 to 1990. A total of 526 cases were analyzed showing that a laboratory confirmation rate of 86.5% had been achieved.

Numerous other states have conducted comparisons of laboratory analysis and DRE opinions, with the correlation rates generally exceeding 80%. A comprehensive review of these studies can be found in Beirness et al. (2007)

A recent study of 1,349 drug evaluations conducted by DRE's in Canada found an overall accuracy rate of 94.8%. CNS depressants proved to be the most difficult class of sunstances to detect accurately. Hallucinogens, dissociative anaesthetics and inhalants were rarely found in this sample of cases. (Beirness et al. 2009)

The overall conclusion of both the laboratory and field studies is that the Drug Evaluation and Classification program is a worthwhile tool for enforcement of drug-impaired driving. The tool is not 100% accurate, especially in a climate of polydrug use. However, it will furnish reliable evidence of the link between a particular subject and a particular category of drugs in an overwhelming majority of cases.

Beirness, D.J., LeCavalier, J., Singhal, D. (2007) Evaluation of the Drug Evaluation and Classification Program. A critical review of the evidence. *Traffic Injury Prevention8(4):368-376*

Beirness, D.J., Beasley, E.E., LeCavalier, J. (2009) The accuracy of evaluations by Drug Recognition Experts in Canada. *Canadian Society of Forensic Sciences Journal. 42(1): 75-79*

C. Case Law Review

American courts employ either the *Frye or Daubert* Standard for determining the admissibility of scientific evidence. The Frye Standard is the traditional test for determining the admissibility of scientific evidence. The standard derives from *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), a case involving the admissibility of the systolic blood pressure deception test (the precursor to today's polygraph test). Essentially, *Frye* courts admit new or novel scientific evidence only if the evidence is "generally accepted" in the "relevant scientific communities." The "general acceptance" standard does not require "unanimity of view." The Frye Standard does not apply to evidence that has passed from the stage of experimentation to reasonable demonstrability. This distinction makes sense because the purpose of requiring general acceptance is to ensure that a party cannot gain an unfair advantage by finding an obscure witness who will attest to obscure techniques or "junk science" without being subject to any kind of real scrutiny. The *Frye* general acceptance standard applies to methods and techniques only;

it does not apply to pure expert opinion testimony based on training and experience. In other words, an expert's opinion itself need not be generally accepted. If the evidence is not new or novel, the evidence is admissible if it is sufficiently reliable to be relevant.

The DEC Program is receiving increasingly favorable attention in court. Courts in various states have ruled favorably on the program the DRE process. Some judges have held that the DRE examination procedures meet the Frye Standard for admissibility of "new" scientific evidence, while others have ruled that the Frye Standard need not apply. The Frye Standard is set by the U.S. Supreme Court to govern the admissibility of "new" scientific evidence. In effect, these courts took judicial notice of the DEC Program, so that it is no longer necessary -- within the jurisdictions of those specific courts -- to introduce expert scientific testimony to secure the admissibility of the results of a drug influence examination.

Some of the courts which have rendered decisions are (1) the Municipal Court of the City of Tucson, County of Pima, State of Arizona (acting in "State of Arizona vs. Dayton Johnson and Samuel Rodriguez, et al.", numbers 90056865 and 90035883). The court ruled that the Frye Standard was met. This decision was appealed to the Arizona Supreme court which ruled that the Frye standard did not apply to the DEC Program. (2) the Municipal Court of Minneapolis, State of Minnesota (acting in State of Minnesota, City of Minneapolis vs. Larry Michael Klawitter, 518 N.W. 2nd 577), ruled that outside of nystagmus, the DEC Program is not subject to the Frye Standard. (3) the County Court of Boulder, State of Colorado (State of Colorado vs. Daniel Hernandez, 92M181) also ruled that the procedures utilized by DRE's are not new or novel and that the Frye Standard did not apply. (4) Washington v. Baity, 991 P. 2d 1151, 140 Wn. 2d 1 (Washington 2000), the court determined that Frye applies to the protocol because the process has "scientific elements." These are examples of decisions illustrating the acceptance the DEC Program in many courts across the nation.

One key element of the drug influence evaluation namely, Horizontal Gaze Nystagmus (HGN) has been found to meet the Frye Standard by several State Supreme Courts. The first case that led to statewide judicial notice of HGN is commonly known as "State vs. Blake" (718 P.2d 171; Arizona, 1986). See also "State vs, Superior Court of County of Cochise, 149 Ariz 269, 718 P.2d 171, 60 ALR 4th, 1103). In this landmark ruling, the Arizona Supreme Court also set standards governing the training of officers who would be qualified to testify about HGN. The court also explicitly ruled that HGN cannot be used to establish BAC quantitatively in the absence of a chemical test.

To Summarize:

The prevailing trend in court is to accept HGN as evidence of impairment, provided the proper scientific foundation is laid. However, courts consistently reject any attempt to derive a quantitative estimate of BAC from nystagmus. Keep in mind that neither nystagmus nor any other elements of the drug influence evaluation are intended to substitute for chemical testing. It is true that there is an approximate, statistical relationship between BAC and angle of onset, but this approximate relationship is not sufficiently reliable to permit BAC "prediction" in any individual case.

NOTE: In Canada, th equivalent to the Frye Standards is R vs Mohan but there is no Daubert Standard for determining the admissibility of scientific evidence. For our purposes, the fact that many US courts have accepted evidence from a DEC evaluation merely demonstrates the validity and robustness of the procedure with a legal context.

Topics for Study

1. State four reasons why it is important not to rely simply on a chemical test to establish a subject's drug impairment.

2. What categories of drugs were included in the Johns Hopkins Laboratory Study

3. In what percentage of cases in the Canadian DEC Accuracy study was the opinion of the confirmed by toxicological tests?

4. What percentage of subjects were found to be polydrug users in the LAPD Field V Validation Study?

5. What was the landmark State Supreme Court case that upheld the use of HGN as evidence of impairment?

6. What do we call the standards for admissibility of scientific evidence, set by the U.S. Supreme Court?

7. Which State first found the Drug Evaluation and Classification procedures met the standards of scientific evidence?

ATTACHMENT A

"Frye" Decisions Regarding Admissibility of Drug Recognition Expert Testimony

"Frye" refers to a United States Federal Court opinion dealing with the admissibility of scientific evidence. The court established that new or novel scientific evidence, or the novel application of scientific principles, must be shown to have met with general acceptance in the relevant scientific community before it can be admitted.

ATTACHMENT B

SCIENTIFIC PUBLICATIONS AND RESEARCH REPORTS ADDRESSING NYSTAGMUS

1. Anderson, Schweitz & Snyder, Field Evaluation of Behavioral Test Battery for DWI, U.S. Dept. of Transportation Rep. No. DOT-HS-806-475 (1983) (field evaluation of the Standardized Field Sobriety Test battery (HGN, one-leg stand, and walk and turn) conducted by police officers from four jurisdictions indicated that the battery was approximately 80% effective in determining BAC above and below .10 percent).

2. Aschan, Different Types of Alcohol Nystagmus, 140 ACTA OTOLARYNGOL SUPP. 69 (Sweden 1958) ("From a medico-legal viewpoint, simultaneous recording of AGN (Alcohol Gaze Nystagmus) and PAN (positional alcoholic nystagmus) should be of value, since it will show in which phase the patient's blood alcohol curve is...").

3. Aschan & Bergstedt, Positional Alcoholic Nystagmus in Man Following Repeated Alcohol Doses, 80 ACTA OTOLARYNGOL SUPP. 330 (Sweden 1975) (abstract available on DIALOG, file 173: Embase 1975-79) (degree of intoxication influences both PAN I and PAN II).

4. Aschan, Bergstedt, Goldberg & Laurell, Positional Nystagmus in Man During and After Alcohol Intoxication, 17 Q.J. OF STUD. ON ALCOHOL, Sept. 1956, at 381. Study distinguishing two types of alcohol-induced nystagmus, PAN (positional alcoholic nystagmus) I and PAN II, found intensity of PAN I, with onset about one-half hour after alcohol ingestion, was proportional to amount of alcohol taken.

5. Baloh, Sharma, Moskowitz & Griffith, Effect of Alcohol and Marijuana on Eye Movements, 50 AVIAT. SPACE ENVIRON. MED., Jan 1979, at 18 (abstract available on DIALOG, file 153: Medline 1979-79) (smooth pursuit eye movement effects of alcohol overshadowed those of marijuana).

6. Barnes, The Effects of Ethyl Alcohol on Visual Pursuit and Suppression of the Vestibulo-Ocular Reflex, 406 ACTA OTOLARYNGOL SUPP. 161 (Sweden 1984) (ethyl alcohol disrupted visual pursuit eye movement by increasing number of nystagmic "catch-up saccades").

7. Burns & Moskowitz, Psychophysical Tests for DWI Arrest, U.S. Dept. of Transportation Rep. No. DOT-HS-802-424 (1977) (recommended the three-test battery developed by SCRI (one-leg stand, walk and turn, and HGN) to aid officers in discriminating BAC level).

8. Burns, The Robustness of the Horizontal Gaze Nystagmus (HGN) Test, U.S. Dept. of Transportation 2004. Concludes that HGN as used by law enforcement is a robust procedure and the data obtained in this report does not support changes or revisions to the current testing or procedure

9. Church & Williams, Dose- and Time-Dependent Effects of Ethanol, 54 ELECTROENCEPHALOGRAPHY & CLIN. NEUROPHYSIOL., Aug. 1982, at 161 (abstract available on DIALOG, file 11: Psychinfo 1967-85 or file 72: Embase 1982-85) (positional alcohol nystagmus increased with dose levels of ethanol).

10. Citek, Ball and Rutledge, Nystagmus Testing in Intoxicated Individuals, Vol. 74, No. 11, Nov. 2003, Optometry, established that the HGN test administered in the standing, seated, and supine postures is able to discriminate impairment at criterion BAC's of 0.08% and 0.10%.

11. Compton, Use of the Gaze Nystagmus Test to Screen Drivers at DWI Sobriety Checkpoints, U.S. Dept. of Transportation (1984) (field evaluation of HGN test administered to drivers through car window in approximately 40 seconds: "the nystagmus test scored identified 95% of the impaired drivers" at 2; 15% false positive for sober drivers, id.).

12. Fregly, Bergstedt & Graybiel, Relationships Between Blood Alcohol, Positional Alcohol Nystagmus and Postural Equilibrium, 28 Q.J. OF STUD. ON ALCOHOL, March 1967, at 11, 17 (declines from baseline performance levels correlated with peak PAN I responses and peak blood alcohol levels).

13. Goldberg, Effects and After-Effects of Alcohol, Tranquilizers and Fatigue on Ocular Phenomena, ALCOHOL AND ROAD TRAFFIC 123 (1963) (of different types of nystagmus, alcohol gaze nystagmus is the most easily observed).

14. Helzer, Detection DUIs Through the Use of Nystagmus, LAW AND ORDER, Oct. 1984, at 93 (nystagmus is "a powerful tool for officers to use at roadside to determine BAC of stopped drivers...(O)fficers can learn to estimate BACs to within an average of 0.02 percent of chemical test readings." Id. at 94).

15. L.R. Erwin, DEFENSE OF DRUNK DRIVING CASES (3d ed. 1985) ("A strong correlation exists between the BAC and the angle of onset of (gaze) nystagmus." Id. at 8.15A(3).

16. Lehti, The Effect of Blood Alcohol Concentration on the Onset of Gaze Nystagmus, 136 BLUTALKOHOL 414 (West Germany 1976) (abstract available on DIALOG, file 173:

Embase 1975-79) (noted a statistically highly significant correlation between BAC and the angle of onset of nystagmus with respect to the midpoint of the field of vision).

17. Misoi, Hishida & Maeba, Diagnosis of Alcohol Intoxication by the Optokinetic Test, 30 Q.J. OF STUD. ON ALCOHOL 1 (March-June 1969) (optokinetic nystagmus, ocular adaptation to movement of object before eyes, can also be used to detect central nervous system impairment caused by alcohol. Optokinetic nystagmus is inhibited at BAC of only .051 percent and can be detected by optokinetic nystagmus test. Before dosage subjects could follow a speed of 90 degrees per second; after, less than 70 degrees per second).

18. Murphree, Price & Greenberg, Effect of Congeners in Alcohol Beverages on the Incidence of Nystagmus, 27 Q.J. OF STUD. ON ALCOHOL, June 1966, at 201 (positional nystagmus is a consistent, sensitive indicator of alcohol intoxication).

19. Nathan, Zare, Ferneau & Lowenstein, Effects of Congener Differences in Alcohol Beverages on the Behavior of Alcoholics, 5 Q.J. OF STUD. ON ALCOHOL SUPP., may 1970, at 87 (abstract available on DIALOG, file 11: Psychinfo 1967-85) (incidence of nystagmus and other nystagmoid movements increased with duration of drinking).

20. Norris, The Correlation of Angle of Onset of Nystagmus With Blood Alcohol Level: Report of a Field Trial, CALIF. ASS'N CRIMINALISTICS NEWSLETTER, June 1985, at 21 (The relationship between the ingestion of alcohol and the inset of various kinds of nystagmus "appears to be well documented." Id. "While nystagmus appears to be useful as a roadside sobriety test, at this time, its use to predict a person's blood alcohol level does not appear to be warranted." Id. at 22).

21. Nuotto, Palva & Seppala, Naloxone Ethanol Interaction in Experimental and Clinical Situations, 54 ACTA PHARMACOL. TOXICOL. 278 (1984) (abstract available on DIALOG, file 5: Biosis Previews 1981-86) (ethanol alone dose-dependently induced nystagmus).

22. Oosterveld, Meineri & Paolucci, Quantitative Effect of Linear Acceleration on Positional Alcohol Nystagmus, 45 AEROSPACE MEDICINE, July 1974, at 695 (G-loading brings about PAN even when subject has not ingested alcohol; however when subjects ingested alcohol, no PAN was found when subjects were in supine position, even with G-force at 3).

23. Penttila, Lehti & Lonnqvist, Nystagmus and Disturbances in Psychomotor Functions Induced by Psychotropic Drug Therapy, 1974 PSYCHIAT. FENN. 315 (abstract available on DIALOG, file 173: Embase 1975-79) (psychotropic drugs induce nystagmus).

24. Rashbass, The Relationship Between Saccadic and Smooth Tracking Eye Movements, 159 J. PHYSIOL. 326 (1961) (barbiturate drugs interfere with smooth tracking eye movement).

25. Richman, McAndrew, Decker and Mullaney, An Evaluation of Pupil Size Standards Used By Police Officers for Detecting Drug Impairment, Vol. 75, No. 3, March 2004, Opportunity, determined normative values and potential ranges for pupillary responses using the specific DEC program protocols for pupil testing in non-impaired persons.

26. Savolainen, Riihimaki, Vaheri & Linnoila, Effects of Xylene and Alcohol on Vestibular and Visual Functions in Man, SCAND. J. WORK ENVIRON. HEALTH 94 (Sweden 1980) (abstract available on DIALOG, file 172: Embase 1980-81 on file 5: Biosis Previews 1981-86) (the effects of alcohol on vestibular functions (e.g., positional nystagmus) were dose-dependent).

27. Seelmeyer, Nystagmus, A Valid DUI Test, LAW AND ORDER, July 1985, at 29 (Horizontal Gaze Nystagmus test is used in "at least one law enforcement agency in each of the 50 states" and is "a legitimate method of establishing probable cause." Id.).

28. Smith, Hayes, Yolton, Rutledge and Citek, Drug Recognition Expert Evaluations Made Using Limited Data, Forensic Science International 130 (2002), p. 167-173, demonstrated that DRE officers can make a correct positive identification of drug intoxication with limited information.

29. Tharp, Burns & Moskowitz, Circadian Effects on Alcohol Gaze Nystagmus (paper presented at 20th annual meeting of Society for Psychophysiological Research), abstract in 18 PSYCHOPHYSIOLOGY, March 1981 (highly significant correlation between angle of onset of AGN and BAC).

30. Tharp, Burns & Moskowitz, Development and Field Test of Psychophysical Tests for DWI Arrests, U.S. Dept. of Transportation Rep. No. DOT-HS-805-864 (1981) (standardized procedures for administering and scoring the SCRI three-test battery; participating officers able to classify 81% of volunteers above or below .10).

31. Umeda & Sakata, Alcohol and the Oculomotor System, 87 ANNALS OF OTOLOGY, RHINOLOGY & LARYNGOLOGY, May-June 1978, at 392 (in volunteers whose "caloric eye tracking pattern" (CETP) was normal before alcohol intake, influence of alcohol on oculomotor system appeared consistently in the following order: (1) abnormality of CETP, (2) positional alcohol nystagmus, (3) abnormality of eye tracking pattern, (4) alcohol gaze nystagmus).

32. Wilkinson, Kime & Purnell, Alcohol and Human Eye Movement, 97 BRAIN 785 (1974) (oral dose of ethyl alcohol impaired smooth pursuit eye movement of all human subjects).

33. Zyo, Medico-legal and Psychiatric Studies on the Alcohol Intoxicated Offender, 30 JAPANESE J. OF LEGAL MED., No. 3, 1976, at 169 (abstract available on DIALOG, file 21: National Criminal Justice Reference Service 1972-85) (recommends use of nystagmus test to determine somatic and mental symptoms of alcohol intoxication as well as BAC).

SESSION IV

OVERVIEW OF DRUG EVALUATION AND CLASSIFICATION PROCEDURES

SESSION IV OVERVIEW OF DRUG EVALUATION AND CLASSIFICATION PROCEDURES

Upon successfully completing this session the student will be able to:

Name the components of the Drug Evaluation and Classification program drug influence evaluation.

State the purposes of each component.

Describe the activities performed during each component.

Correctly answer the "topics for study" questions at the end of this session.

A. Components of the Drug Evaluation and Classification (DEC) Procedure

The DEC procedure is a systematic and standardized method of examining a subject to determine:

(1) Whether the subject is impaired; and if so,

(2) Whether the impairment is caused by to drugs or a medical condition; and if drugs,

(3) The category or combination of categories of drugs that are the likely cause of the subject's impairment.

It is a systematic process because it is based on a complete set of observable signs and symptoms that are known to be reliable indicators of drug impairment. A DRE never reaches a conclusion based on any one element of the evaluation, but instead on the totality of facts that emerge. These facts are obtained from careful observations of the subject's:

- appearance
- behaviour
- performance of psychophysical tests
- eyes
- vital signs
- any other evidence

The evaluation is standardized because DRE officers perform it the same way every time. By conducting a systematic and standardized evaluation, you will help avoid mistakes and help promote and maintain professionalism and consistency among DREs. Perhaps most importantly, you will help secure the court's acceptance of your testimony.

The systematic and standardized evaluation is broken down into twelve major components or steps. The checklist on the next page lists the steps in the sequence in which they are performed. DREs refer to the checklist every time they conduct an evaluation.

Note: There may be cases in which the DRE is unable to complete each step of the evaluation due to circumstances beyond his or her control such as injury to the subject, uncooperativeness of the subject, or equipment failure. In such cases, the DRE may still be able to form an opinion based on the evidence that he/she is able to observe and document.

INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE DRUG EVALUATION AND CLASSIFICATION PROGRAM DRUG INFLUENCE EVALUATION CHECKLIST

_____ 1. Breath alcohol test

_____ 2. Interview of arresting officer

_____ 3. Preliminary examination and first pulse
(Note: Gloves must be worn from this point on.)

_____ 4. Eye examinations

_____ 5. Divided attention tests:

_____ Romberg balance

_____ Walk and turn

_____ One leg stand

_____ Finger to nose

_____ 6. Vital signs and second pulse

_____ 7. Dark room examinations and ingestion examination

_____ 8. Check for muscle tone

_____ 9. Check for injection sites and third pulse

_____ 10. Interrogation, statements, and other observations

_____ 11. Opinion of evaluator

_____ 12. Toxicological examination

The 12-step drug influence evaluation procedure includes the following:

1. Breath Alcohol Test, to determine the subject's blood alcohol concentration (BAC).

   By obtaining an accurate and immediate measurement of BAC, the DRE can determine whether alcohol may be contributing to the subject's observable impairment, and whether the concentration of alcohol is sufficient to be the sole cause of that impairment.

   It is always possible that a person suspected of being under the influence of drugs other than alcohol may actually have consumed only alcohol. However, it is also very common to find that a subject has consumed alcohol and other drugs.

2. Interview of the Arresting Officer, to take advantage of the things that he or she may have seen or heard during earlier contact with the subject.

   Most arresting officers are not as knowledgeable about drugs as are DREs. The arresting officers may have uncovered some drug paraphernalia, or overheard the subject using drug related "street" terms, without recognizing their significance. A few minutes spent in a careful discussion with the arresting officer can alert the DRE to the most promising areas of investigation to be explored with the subject.

3. Preliminary Examination, which is a structured series of questions, specific observations and simple tests that provides the first opportunity to examine the subject closely and directly. **NOTE: to avoid infection, the DRE must wear gloves from this portion of the evaluation on**.

   One major purpose of the preliminary examination is to determine if the subject may be suffering from an injury or some other condition not necessarily related to drugs. Another major purpose is to begin systematically assessing the subject's appearance, behaviour, etc. for signs of possible drug influence.

4. Examinations of the Eyes, which include Horizontal Gaze Nystagmus, Vertical Gaze Nystagmus and a check for Lack of Convergence.

   Nystagmus is caused by certain categories of drugs. Nystagmus is an involuntary jerking of the eyes as the eyes gaze to the side or as they are elevated. The presence of nystagmus, and the point at which it becomes observable, can shed light on the possible presence of those categories and the extent to which they may be affecting the subject.

   The inability of the eyes to converge toward the bridge of the nose also gives evidence of the possible presence of certain categories of drugs.

5. Divided Attention Psychophysical Tests, which include the Modified Romberg Balance test; the Walk and Turn test; One Leg Stand test; and the Finger to Nose test.

   The subject's performance of these tests produces articulable evidence of their psychophysical impairment. The specific errors of omission or commission may point toward the categories of drugs that are behind that impairment.

6. Vital Signs Examinations, which include systematic checks of the subject's blood pressure; pulse rate; and temperature.

Certain categories of drugs may elevate blood pressure, pulse rate and raise the body temperature. Other drugs would have precisely the opposite effects. Vital signs as well as physical observations thus provide much valuable evidence of the presence and influence of a variety of drug categories.

7. Dark Room Examinations, which include systematic checks of the size of the pupils of the subject's eyes; the reaction of the pupils to light; and evidence of ingestion of drugs by nose or mouth.

Certain categories of drugs affect the eyes, and especially the pupils, in predictable ways. By examining the eyes under carefully controlled lighting conditions, important evidence of those drug categories may be obtained.

8. Examination for Muscle Tone

Certain categories of drugs will cause the muscles to become rigid, while others may cause the muscles to become flaccid.

Examination of a subject's muscle tone is done by checking their left arm, firmly grasping the upper arm and slowly moving down to determine whether the muscle tone is flaccid, near normal or rigid.

9. Examination for Injection Sites, e.g. via hypodermic needles.

Users of certain categories of drugs routinely or occasionally ingest their drugs via injection. Evidence of needle use (scars, "tracks", etc.) may be found on veins along the neck, arms, legs, etc.

10. Subject's Statements and Other Observations.

Based on the nine previous components of the drug influence evaluation, the DRE should have formed at least an articulable suspicion as to the category or categories of drugs that may be present. The DRE then can proceed to attempt to interview the subject concerning the drug or drugs involved. Proper 10a, 10b, Charter and Caution procedures shall be followed to ensure the admissibility of any statements made by the subject to the evaluator.

11. Opinion of the Evaluator

Based on all of the evidence and observations obtained during the preceding ten steps, the DRE should be able to reach an informed opinion concerning:

- Whether the subject is impaired by a drug or drugs; and if so,
- The category or combination of categories of drugs that is the cause of the subject's impairment.

These conclusions must be documented, along with a narrative summary of the observed facts that led to the conclusions.

12. Toxicological Examination, which is a chemical test or tests that can provide scientific, admissible evidence to substantiate the DRE conclusions.

B. General Guidelines For Interviewing The Arresting Officer

In most cases, the people you examine on suspicion of drug impairment will not be people whom you arrested. Some other officer usually will have had the first contact with the subject and will have made the arrest. The charge or charges of arrest may vary widely and may or may not involve a traffic related offense. In any event, the situation usually will be that the arresting officer (or someone else) recognizes that the subject may be impaired, has some reason to believe that drugs other than alcohol may be contributing to the impairment, and summons you to conduct an evaluation of the subject.

In a particular case, the arresting officer may happen to be quite knowledgeable about drugs and may have some very well informed suspicions as to what types of drugs the subject may be using. In another case, the arresting officer may not have the knowledge as to the kinds of drugs that may be involved. But in all cases there is the possibility that the arresting officer may have seen, heard, smelled or uncovered something that could be a significant clue of drug influence to a trained DRE. A few minutes spent in a careful, systematic interview of the arresting officer may supply the DRE with some very important insights as to the categories of drugs most likely to be found in the particular case at hand.

The key concept here is that the interview be systematic. The DRE shouldn't simply ask the arresting officer an open-ended question such as "What do we have here?" The arresting officer may not be sufficiently knowledgeable about drugs to recognize what is relevant and what is not. Instead, the DRE should inquire in a logical sequence as to the subject's behaviour, statements and any physical evidence that may have been uncovered.

<u>Inquiries concerning the subject's behaviour</u>

(1) Was the subject operating a vehicle?
(This may help to establish whether a charge of 253 1 (a) C.C.C. applies to this particular case, and also serve to identify whether potential traffic law violations may be relevant.)

(2) What vehicle/operator actions, maneuvers, etc. were observed?
(This may disclose evidence of impaired divided attention ability, relaxed inhibitions, etc.)

(3) Was there a crash?
(This can indicate whether the subject may have suffered injuries that could confound the drug evaluation.)

(4) Was the subject observed smoking, drinking or eating?
(All of these are common means of ingesting various drugs.)

(5) Was the subject inhaling any substance?
(Another common method of ingesting certain drugs.)

(6) How did the subject respond to the arresting officer's stop?
(Actions during the stopping sequence may also disclose indicators of impairment.)

(7) Did the subject attempt to conceal or throw away any items or materials?
(Such materials may have been drugs or drug-related paraphernalia.)

(8) What has been the subject's attitude and demeanour during contact with the arresting officer and have there been any changes?

(This information can be relevant to the DRE's own safety, and can also shed light on the kinds of impairment the subject may be experiencing.)

Inquiries concerning the subject's statements

(9) Has the subject complained of an illness or injury?
(An illness or injury could confound the drug evaluation, but could also suggest the effects of certain types of drugs.)

(10) Has the subject used any "street terms" or slang associated with drugs or drug paraphernalia?
(Persons who use such terms are likely to be users of the drugs to which the terms relate.) NOTE: The arresting officer might not recognize "street terms" for what they are. It may be useful to follow up this question by asking the officer whether the subject used any unusual or unfamiliar words or phrases.

(11) How has the subject responded to the arresting officer's questions?
(Impairment may be evident, in a variety of ways, from the manner of the subject's responses.)

(12) Was the subject's speech slurred, slow, rapid, thick, mumbled, incoherent, etc?
(Various types of drugs may affect speech in various ways.)

(13) What, specifically, has the subject said to the arresting officer?
(Numerous utterances may shed light on the kinds of drug-related effects that the subject is experiencing.)

Inquiries Concerning Physical Evidence

(14) What items or materials were uncovered during the search of the subject and/or vehicle? (Even seemingly innocuous or familiar items may be recognized by trained DREs as being associated with possible drug use.)

(15) Were any smoking paraphernalia uncovered? (Even routine smoking items, such as commercially produced cigarettes, pipes, etc. may disclose evidence of drugs.)

(16) Was there any injection related material? (For example, such material could include needles, syringes, leather straps or rubber tubes used as tourniquets to help expose veins, bent spoons or bottle caps used in heating and dissolving drugs, etc.)

(17) Were there any balloons, plastic bags, small metal foil wrappings or any similar items? (These kinds of items frequently are used as drug containers.)

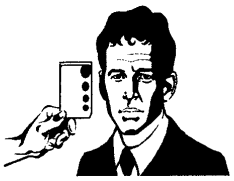
(18) What was the subject's blood alcohol concentration? (Reasonable Suspicion or Reasonable Grounds must be formed before the "Breath Demand" can be read to the subject.)

C. Overview of The Preliminary Examination

The preliminary examination of the subject consists of a series of questions; observations of the subject's face, breath and speech; an initial series of checks of the subject's eyes; and the first of three checks of the subject's pulse rate that will be made during the drug influence evaluation. As a safety precaution, officers should secure their weapons prior to beginning the evaluation.

The questions are a set of formal inquiries about any injuries or medical problems from which the subject may be suffering. Courts generally hold that these questions do not conflict with the subject's Charter Rights. The subject can refuse to answer these questions. This does not constitute a refusal under 254 (5)C.C.C. The questions include:

- Are you sick or injured?
- Do you have any physical defects?
- Are you diabetic or epileptic?
- Do you take insulin?
- Are you under a doctor's or dentist's care?
- Are you taking medication?



Answers to these questions may disclose circumstances that could impede or confound the subsequent steps in the drug evaluation. The subject's answers, and the manner in which he or she answers, could also give evidence of the possible presence of certain types of drugs. If any affirmative responses are given, the DRE should ask appropriate follow up questions.

The observations of the subject's face, breath and speech are straight forward. Make note, for example, if the face appears flushed or pale, and if the subject appears to be perspiring. Any noteworthy odors of the breath should be recorded, such as alcoholic beverages; marijuana; or a chemical odor. If the subject's speech is in any way distorted, this too should be recorded.

The initial checks of the subject's eyes include some very important steps. One of these is the visual check for equal pupil size. Look at the subject's eyes to determine whether the pupils appear to be equal. If the pupils appear to be unequal, a further check will be necessary. This check is made by using a device called a "pupillometer", which has a series of small circles or semi-circles of various diameters. The diameter is measured and indicated in millimeters ("mm"). By holding the pupillometer alongside the subject's eye, you can determine which circle/semi-circle is approximately the same size as the pupil. You must check both pupils.

A second important check of the eyes is an assessment of the eyes' tracking ability. You should hold a pencil, penlight or similar object about 12 - 15 inches in front of the subject's nose, and move it smoothly to the subjects extreme left, and smoothly back to the extreme right, instructing the subject to follow the stimulus with their eyes only. Always make at least two complete passes in front of the subject's eyes. If the two eyes do not exhibit the same tracking ability, this too may indicate a possible head injury or medical problem.

After assessing the subject's tracking ability, you can also perform a preliminary assessment of whether Horizontal Gaze Nystagmus is present in the subject's eyes. In particular, if the nystagmus or "jerking" is observed, an initial estimation of the angle of onset can be made. The approximate angle of onset may help to determine whether the subject has consumed some drug other than alcohol.

If there is a significant disparity between the nystagmus angle of onset, and what would be expected from the known BAC, the DRE should be alert to the possible presence of some other nystagmus causing drug.

The nystagmus angle of onset is one clue to consider in assessing whether drugs other than alcohol may be present. But it certainly is not the only clue to consider, and it is far from being the most important.

One final thing to be examined in the initial checks of the subject's eyes is the condition of the eyelids. Many drugs will cause the eyelids to droop, as the user exhibits a sleepy appearance. A drooping of one eyelid, but not the other, possibly signifies an injury or other medical problem. The medical, or technical, term for droopy

eyelids is Ptosis. The final element in the preliminary examination is the first check of the subject's pulse rate. Pulse rate is one of the vital signs that serve as very reliable indicators of the possible presence of certain categories of drugs. Pulse rate can also be affected by anxiety, and it is common for an arrested subject to experience anxiety while being examined by a police officer. Pulse rate is measured near the beginning of the drug influence evaluation, again during the middle, and finally near the end to allow the subject's anxiety to "settle down" before the last measurement.

D. Overview of the Examinations of the Eyes

Prior to administration of HGN, the eyes are checked for equal tracking (can they follow an object together) and equal pupil size. If the eyes do not track together, or if the pupils are noticeably unequal in size, there is chance that medical disorders or injury may be present.

If the subject is wearing eyeglasses have them removed. Position the stimulus approximately 12-15 inches from the subject's nose and slightly above eye level. You may observe Resting Nystagmus at this time. Check the subject's eyes for the ability to track together. Move the stimulus smoothly across the subject's entire field of vision. Check to see if the eyes track the stimulus together or if one lags behind the other. If the eyes don't track together it could indicate a possible medical disorder, injury or blindness.

Next, check to see that both pupils are equal in size. If they are not, this may indicate a head injury, or some other complication.

DREs obtain important evidence of the presence of certain drug categories from three examinations of the subject's eyes:

- **Horizontal Gaze Nystagmus**
- **Vertical Gaze Nystagmus**
- **Lack of Convergence**

HORIZONTAL GAZE NYSTAGMUS (HGN) should already be familiar to you as a highly reliable Standardized Field Sobriety Test for alcohol impairment. In fact, HGN not only is a powerful indicator of alcohol impairment, but it will also disclose impairment by CNS Depressants, Dissociative Anesthetics, and by most Inhalants. These three categories of drugs usually will cause HGN.

You should check for the following three clues of HGN in each eye:

✓ Clue #1: Lack of Smooth Pursuit

Start with a stimulus (pencil, pen, penlight, etc.) held vertically in front of the subject's face, above eye level and approximately 12 to 15 inches away from the subject's nose. Tell the subject to keep his/her eyes

focused on the stimulus, to hold their head still and to follow the movement of the stimulus with their eyes only.

Check the subject's left eye by moving the stimulus smoothly to the subject's extreme left, then smoothly all the way to his/her extreme right, then smoothly back to the extreme left and then back to the extreme right. The stimulus should be moved at a speed that requires approximately 2 seconds (between 1.5 and 2.5 seconds) to bring it from the center to the subjects extreme left, and approximately 4 seconds (between 3 and 5 seconds) to bring it from one side to the other. Two complete passes should be made in front of the eye: that is, from the center to left the side, back to the right side, back to the left side again, back to the right side, and finally back to the center.

While the eye is moving, you should examine it closely for signs of "a lack of smooth pursuit". If a person is not under the influence of a CNS Depressant, Inhalant, or a Dissociative Anesthetic (D.I.D. drugs), their eyes should glide smoothly in the sockets, in much the same way that windshield wipers slide smoothly across the windshield when it is raining steadily. But if the person is under the influence of one of those three categories of drugs, their eyes will usually jerk noticeably as they move, similar to a windshield wiper dragging across a dry windshield.

Clue #2: Distinct and Sustained Nystagmus at Maximum Deviation

Continue with the stimulus about 12 - 15 inches in front of the subject's face, with the tip of the stimulus above eye level. Instruct the subject to keep his/her head still and follow the stimulus with their eyes. Move the stimulus all the way to the subject's left side, until the eye is turned to its maximum deviation. Hold the stimulus in that position for at least four seconds, and carefully observe the eye. Then, repeat the process with the stimulus at the subject's extreme right side. Persons under the influence of alcohol or other nystagmus causing drugs usually will exhibit a distinct, sustained, pulsating, very pronounced jerking when the eye is at maximum deviation. In order to consider this clue as "present", you must observe a clear, sustained and unmistakable jerking. A slight, barely visible tremor **does not** constitute "distinct jerking".

Clue #3: Angle of Onset

When you use HGN as a Standardized Field Sobriety Test of alcohol impairment, you are used to determining whether the jerking of the eye begins prior to 45 degrees. As a DRE, you are going to have to be a bit more precise than that. Within certain limits, it is important for the DRE to estimate the actual angle at which the jerking first begins. We need to do this because it gives us a clue as to whether the subject is impaired by alcohol alone, or by some combination of alcohol with another Depressant, an Inhalant, or a Dissociative Anesthetic.

From the original research that led to the development and validation of HGN as a Standardized Field Sobriety Test for alcohol, we know that there is an approximate statistical relationship between blood alcohol concentration (BAC) and the angle of onset of nystagmus. The relationship is expressed by this formula:

BAC = (50 - Angle of Onset) x 10

According to the formula, if the angle of onset was 40 degrees, then the "BAC" would approximately equal 50 minus (50 minus 40) x 10; or 10 x 10 = 100mg%. Similarly, if the angle of onset was 35-degrees, "BAC" would be approximately (50 minus 35) x 10, for a BAC of 150mg%.

It is important to keep in mind that this formula expresses an average, approximate statistical relationship, **not a precise mathematical relationship**. Humans (and their eyes) do not all react to alcohol or other

drugs in exactly the same way. The formula may be reasonably accurate for some people, but much less accurate for others.

The formula is not sufficiently accurate for us to use HGN to produce evidence of a specific BAC, and courts routinely reject any attempt to do so. But the formula is of value to us as DREs because it can help us detect an evident gross disparity between the subject's BAC and the nystagmus that is observed.

For example, you are called in to examine a subject who has a BAC of 70mg%. Based on that alone, you'd expect to find the onset of HGN close to 40 to 45 degrees. But you discover that the subject's HGN begins at approximately 30 degrees. That would be inconsistent with the BAC, and you would begin to think that this subject might also have taken some other Depressant, an Inhalant, or a Dissociative Anesthetic.

For DRE purposes, you will be expected to be able to estimate an angle of onset to the nearest 5 degree increment, over the range from 30 degrees to 45 degrees. If the subject's eyes begin to jerk before they have moved to the 30 degree angle, you will not attempt to estimate the angle precisely, but will simply record that the subject exhibits "immediate onset". But from 30 degrees on out, you will record a numeric estimate of onset, i.e. 30 degrees, 35 degrees, 40 degrees or 45 degrees.

To determine the angle of onset, again position the stimulus approximately 12-15 inches from the subject's nose and slowly move the stimulus toward your right. NOTE: It is important to use the four full seconds to determine the onset of nystagmus. Watch the left eye ball closely for the first sign of jerking. When you think that you first see the eye jerk, stop moving the stimulus and hold it steady. Verify that the eye really is jerking: if it is not, start moving it again to your right until you see the jerking begin. Once you find the point of onset of nystagmus, estimate the angle, to the nearest 5 degrees, then, repeat this procedure for the subject's right eye. One final point about the nystagmus onset angle is don't forget that there are many drugs that do not cause HGN. For example, CNS Stimulants do not cause HGN; neither do Hallucinogens, Cannabis or Narcotic Analgesics. Therefore, a subject might be under the influence of, for example a combination of alcohol and cocaine, and their nystagmus angle of onset would be consistent with the alcohol level alone.

VERTICAL GAZE NYSTAGMUS

Vertical Gaze Nystagmus, like HGN, is a jerking of the eyes. Vertical Gaze Nystagmus is an involuntary jerking of the eyes (up and down) which occurs when the eyes gaze upward at maximum elevation.

Vertical Gaze Nystagmus is associated with the very same drugs that cause Horizontal Gaze Nystagmus. In other words, Vertical Gaze Nystagmus may be exhibited by someone who is under the influence of any CNS Depressant (including alcohol), an Inhalant or a Dissociative Anesthetic such as PCP and its analogs. By the same token, Vertical Gaze Nystagmus, like HGN, is not produced by CNS Stimulants, Hallucinogens, Cannabis or Narcotic Analgesics. High doses for that individual of Depressants, Inhalants or a Dissociative Anesthetic usually cause Vertical Gaze Nystagmus. Therefore, it is not uncommon to encounter subjects who exhibit HGN, but do not exhibit Vertical Gaze Nystagmus.

To check for Vertical Gaze Nystagmus, hold a stimulus horizontally in front of the subject, approximately 12-15 inches in front of the subject's nose. Direct the subject to focus his/her eyes at a specific point on the stimulus. Instruct the subject to hold his/her head steady and to follow the stimulus with their eyes only. Elevate the stimulus until the eyes are raised as far as possible and hold them at that position for a minimum of four seconds. Observe the eyes closely to see whether any up and down jerking occurs. With Vertical Gaze Nystagmus, we do not attempt to identify an angle of onset. Vertical Nystagmus is either present or not

present. There is no drug that will cause Vertical Gaze Nystagmus that will not cause Horizontal Gaze Nystagmus.

Remember, the mere fact that Vertical Gaze Nystagmus is present does not guarantee that the subject is under the influence of some drug other than alcohol. Alcohol itself will cause Vertical Gaze Nystagmus, if the BAC is high for that individual. Remember that there are many drugs that do not cause Vertical Gaze Nystagmus.

LACK OF CONVERGENCE

In simplest terms, **Lack of Convergence** means an inability to cross the eyes. We start to check for Lack of Convergence by positioning the stimulus approximately 12 to 15 inches in front of the subject's nose in the same position we use for the HGN test. Inform the subject that you are going to move the stimulus around in a circle, then move it toward their face, and that you will bring it in close to the bridge of the nose. You will not actually touch the subject's nose with the stimulus. Make sure that the subject knows this in advance, so that they do not become frightened during the test and jerk their head away.

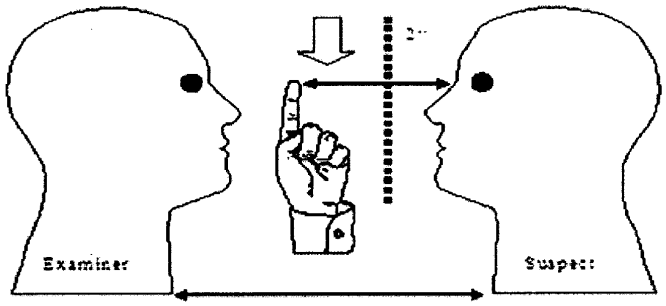
Instruct the subject to keep their head steady and to follow the movement of the stimulus with the eyes only.

Start moving the stimulus in a circle in front of the subject's face either clockwise or counterclockwise, and observe the eyes to verify that the subject is tracking the stimulus. Then move the stimulus to within approximately two inches of the bridge of the nose. Carefully observe the subject's eyes to determine whether both eyes converge on the stimulus.

Note: You should not touch the subject's nose nor come any closer than approximately two (2) inches from the bridge of the nose. Also, you should keep the stimulus high enough so that you can observe the eye movements, making sure the subject does not close his/her eyes to a point where you cannot observe them.

If the eyes are able to cross (converge) i.e. if they come together at a minimum of two inches (2") from the bridge of the nose, Lack of Convergence is "not present", But if one eye drifts away or outward toward the side instead of converging to the bridge of the nose or to the point of convergence (approximately 2 inches from the bridge of the nose), Lack of Convergence is "present". (Refer to the diagram on the next page).

Normal convergence response is a distance approximately two inches (2") from the bridge of the nose.



If the subject cannot converge one or both eyes on the stimulus at approximately two inches from the bridge of the nose, then Lack of Convergence is "present"

We record the results of this test by diagramming the movement of the eyes as they come together and then at their final position when the stimulus is moved in to approximately two inches from the bridge of the nose.

Lack of Convergence usually occurs with people who are under the influence of any drug that causes HGN. CNS Depressants, Inhalants and Dissociative Anesthetics usually will cause Lack of Convergence. Cannabis also will usually cause Lack of Convergence, even though it doesn't cause HGN. Other kinds of drugs, i.e. CNS Stimulants, Hallucinogens and Narcotic Analgesics usually do not prevent the eyes from converging. You should be aware that many people have difficulty crossing their eyes even when they are totally drug free, and it is not uncommon to find unimpaired individuals who exhibit Lack of Convergence.

E. Review of the Divided Attention Psychophysical Tests

Four divided attention tests are administered to subjects during a drug influence evaluation.

Modified Romberg Balance Test

The Romberg Balance test used by DRE's is a modified version of the original Romberg Balance test developed in the 19th Century.

This test requires the subject to stand with his/her feet together, head tilted slightly back, eyes closed and estimate the passage of thirty seconds. When the subject believes that the thirty seconds have passed, he or she is to tilt the head forward, open the eyes and say "Stop".

Administrative Procedures

- Tell the subject to stand straight with his/her feet together and his/her arms down at their sides.
- Tell the subject to maintain that position while you give the instructions. Emphasize that he or she must not start the test until you say "begin".
- Ask the subject if he or she understands so far.
- Tell the subject that, when you tell them to, they must tilt their head back and close their eyes. DEMONSTRATE how the head should be tilted, but DO NOT CLOSE YOUR EYES while demonstrating.
- Tell the subject that when you say "Start", they must keep their head tilted back with their eyes closed until they think that 30 seconds have gone by. DO NOT tell the subject to "count to thirty seconds" or to use any other specific procedure to keep track of time. But on the other hand, DO NOT tell the subject that they are not allowed to count to thirty seconds. SIMPLY SAY, "keep your head tilted back with your eyes closed until you think that thirty seconds have gone by".
- Tell the subject that, when they think the 30 seconds have gone by, they must bring their head forward, open their eyes and say "Stop".
- Ask the subject if they understand.
- Look at your watch and pick a convenient time to start the test.

- Tell the subject to tilt their head back and close their eyes.
- Tell the subject to begin.
- Keep track of time while the subject performs the test.
- When the subject opens his/her eyes, ask them "how much time was that?"
- If 90 seconds elapses before the subject opens his/her eyes, stop the test.

Documenting the test

At the ends of the "arrows" above the "stick figures", record the number of inches of sway exhibited by the subject. The "stick figure" that has only one arm and one leg is used to record front to back sway. The two armed and two legged figure is used for side to side sway.

Under "internal clock", record the actual number of seconds the subject stood with their eyes closed.

Look and listen for the following:

- subject unable to stand still or steady with the feet together
- body tremors
- eyelid tremors
- muscle tone (either more rigid or more flaccid than normal)
- any statements or unusual sounds made by the subject when performing the test.

Document any of the above, or any other noteworthy observations, across the chest areas of the "stick figures", and elaborate as necessary on the reverse side of the drug influence evaluation face sheet.

Walk and Turn Test

This test should already be very familiar to you from your previous SFST and DRE Pre-School training. The test requires the subject to stand in a heel to toe fashion with his/her arms at his/her sides while a series of instructions are given. Then, the subject must take nine heel to toe steps along a straight line, turn in a prescribed manner, and take another nine heel to toe steps along the line. All of this must be done while counting the steps aloud and keeping their arms at their sides. The subject must not stop walking until the test is completed.

For the DEC evaluation, this test requires a straight line long enough to allow the subject to take 12-15 heel-to-toe steps.

Procedures for Walk-and-Turn Testing

1. Instructions Stage: Initial Positioning and Verbal Instructions

For standardization in the performance of this test, have the subject assume the heel-to- toe stance by giving the following verbal instructions, accompanied by demonstrations:

- "Place your left foot on the line". Demonstrate.
- "Place your right foot on the line ahead of the left foot, with the heel of your right foot against the toe of left foot." Demonstrate.
- "Place your arms down at your sides." Demonstrate.
- "Maintain this position until I have completed the instructions. Do not begin."
- "Do you understand?" (Make sure subject indicates understanding.)

2. Demonstrations and Instructions for the Walking Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- "When I tell you to start, take nine heel-to-toe steps on the line, turn, and take nine heel-to-toe steps on the line back." (Demonstrate 3 heel-to-toe steps.)
- "When you turn, keep the front foot on the line, and turn by taking a series of small steps." (Demonstrate).
- "While you are walking, keep your arms at your sides, watch your feet at all times and count your steps out loud."
- "Once you start walking, don't stop until you have completed the test."
- "Do you understand the instructions?" (Make sure subject indicates understanding.)
- "You may begin."

NOTE: If the subject fails to either look at his/her feet or count their steps out loud, remind them to do so and note the occurrence on the evaluation form.

Note: There may be times when the subject will have to be reminded that step "one" is the first step taken from heel-to-toe position.

Documenting the test

Using the "footprints" you will record every instance where the subject stopped walking or stepped off the line. For a **stop** draw a vertical line across the "toe" of the step at which the stop occurred and mark the line with an "S". For a **step off**, draw a line from the appropriate footprint at an angle in the direction in which the foot stepped. If the subject fails to touch heel to toe, draw a vertical line across the "toe" where this clue was noted and mark the line with an "M".

Eight validated clues of impairment have been identified for the Walk and Turn test. Two of them apply while the subject is standing in the heel to toe position and listening to the instructions:

- Cannot keep balance. (i.e. feet break away from the heel to toe stance);
- Starts too soon (i.e. subject starts walking before told to do so).

At the top of the checklist portion of the Walk and Turn segment of the drug influence evaluation face sheet, you will record the numbers of times these two clues were observed while you were giving the instructions. For example, if the subject breaks away from the heel to toe stance twice, put two check marks on the "Cannot keep balance" line.

The other six validated clues apply during the walking stage of the test. They are:

- Stops while walking
- Does not touch heel to toe (by more than ½ inch)
- Steps off the line
- Uses arms to balance
- Improper turn
- Incorrect number of steps

In the checklist area you will record the first five of those, separately for the first nine steps and the second nine. Beneath the footprint area you will describe how the subject turned. If they turned in the appropriate fashion, simply write "proper" in that space. But if the subject "staggered to the left" or executed an "about face" turn or any turn other than a proper turn, write that description in the space.

If the subject was unable to begin or complete the test, explain why. Usually this will be due either to a physical infirmity that precludes the test entirely (e.g. "subject has an artificial left leg") or to your decision to stop the test (e.g. "subject nearly fell twice while attempting to stand for the instructions"). Whatever the case might be, some reason must be documented for a test that wasn't given or completed.

One Leg Stand Test

This test obviously requires the subject to stand on one leg. The other leg is to be extended in front of the subject in a stiff leg manner, with the foot held approximately six inches above the ground. The subject is to look at the elevated foot and count out loud in the following manner: "one thousand one, one thousand two, one thousand three, ..." until told to stop. You will time the subject as this test is performed and will tell the subject to stop when the thirty seconds has elapsed. The subject will be required to perform this test twice, first standing on the left leg, then on the right.

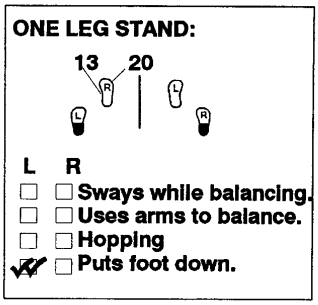
Procedures for One-Leg Stand Testing

1. Instructions Stage: Initial Positioning and Verbal Instructions

Initiate the test by giving the following verbal instructions, accompanied by demonstrations.

- "Please stand with your feet together and your arms at the sides, like this." (Demonstrate)
- "Do not start to begin the test until I tell you to do so."

- "Do you understand?" (Make sure subject indicates understanding.)



2. Demonstrations and Instructions for the Balance and Counting Stage

Explain the test requirements using the following verbal instructions, accompanied by demonstrations:

- "When I tell you to start, raise your (right/left) leg, approximately six inches off the ground, foot parallel to the ground." (Demonstrate one leg stance.)
- "You must keep both legs straight and your arms at your side."
- "While holding that position, count out loud in the following manner: "one thousand one, one thousand two, one thousand three, until told to stop." (Demonstrate a count, as follows: "one thousand one, one thousand two, one thousand three, etc." Officer should not look at his foot when conducting the demonstration - OFFICER SAFETY.)
- Point Out: If the subject puts the foot down, give instructions to pick the foot up again and continue counting from the point at which the foot touched.
- "Keep your arms at your sides at all times and keep watching the raised foot."
- "Do you understand?" (Make sure subject indicates understanding.)
- "Go ahead and perform the test."

NOTE: It is important that this test lasts for thirty seconds and you must keep track of time. If the subject counts slowly, you will tell them to stop when thirty seconds have gone by, even if for example, the subject has only counted to "one thousand and twenty". On the other hand, if the subject is counting rapidly, they may count to "one thousand forty before the thirty seconds has gone by and you say to stop.

Make sure you record the subjects' actual count in the thirty seconds.

AFTER the subject completes the test while standing on the left leg, have him/her put their feet together with their arms down at their side. Repeat the instructions and ask the subject if they understand. Have him/her perform the test while standing on the right leg.

Documenting the test

Four validated clues of impairment have been identified for the One Leg Stand:

- Sways while balancing
- Uses arms to balance
- Hopping
- Puts foot down

You will place check marks in or near the small boxes to indicate how many times you observed each of the clues. You will do this separately for the test on the left leg (L) and the test on the right (R). In addition, if the subject puts their foot down during the test, you will record when it happened. To do this, write the count number at which the foot came down. For example, if the subject when standing on their left leg, lowered their right foot at a count of "one thousand thirteen", and again at "one thousand twenty" your diagram should look like the example to the right. The subject's actual count during the thirty seconds should be documented in the top area of the box above the foot the subject was standing on.

You must also pay attention to the subject's general appearance and behaviour while he or she is performing this test. Take note of anybody tremors or muscle tension that may be apparent. Listen for any unusual or "interesting" sounds or statements the subject might make while the test is in progress. Make sure that any such information is documented on the face sheet or in your narrative report.

Finger to Nose Test

The Finger to Nose test means just that: the subject is required to bring the tip of his/her index finger up to touch the tip of their nose. They will perform this test with their eyes closed and their head tilted slightly back, standing in a manner identical to that required for Romberg Balance (feet together and arms at their sides). The subject will attempt this six times, three with each hand. You will instruct the subject as to which hand to use for each attempt. You will always use this sequence when administering this test: "left...right...left...right...right...left".

Administrative Procedures

- Tell the subject to place his/her feet together and to stand straight.
- Tell the subject to place his/her arms down at their sides, close their hands with the index finger extended and rotate the palms forward.
- Tell the subject that, when you say to "begin", he/she will tilt their head back slightly and close their eyes. DEMONSTRATE how the head should be titled back, but DO NOT CLOSE YOUR EYES.
- Inform the subject that you will instruct them to bring the tip of an index finger up to touch the tip of their nose. DEMONSTRATE how the subject is supposed to move the arm and how he/she is supposed to touch the tip of their nose.

  NOTE: The arm is brought directly from the subject's side in front of the body touching the tip of their nose with the tip of their index finger.
- Tell the subject that, as soon as they touch their finger to their nose, they must return the arm to their side.
- Tell the subject that, when you say "right", they must move the right hand index finger to their nose; when you say "left", the subject must move the left hand finger to their nose.
- Ask the subject if they understand.
- Tell the subject to "begin". MAKE SURE he/she tilts his/her head back and closes their eyes. EMPHASIZE to the subject that he/she must keep their eyes closed until you say to open them.

- Give the commands in EXACTLY this sequence:

  "left...right...left...right...right...left".

  MAKE SURE the subject returns their arm to their side immediately after each attempt. PAUSE about two or three seconds between commands.

- After the sixth attempt, tell the subject to open their eyes.

Documenting the test

Although the Finger to Nose test has not been scientifically validated, research and experience hows that persons who are impaired by alcohol or other drugs sometimes miss the tip of the nose and sometimes fail to use the proper finger. On the diagram, you will draw a line to indicate where the finger tip "landed" on each attempt, and you will indicate which finger was actually used. In addition, be alert for body sway, body tremors, eyelid tremors, muscle tension, unusual or "interesting" sounds or statements and anything else noteworthy. Document all such observations on the face sheet and in your narrative report.

F. Overview of the Vital Signs Examinations

The three vital signs examined during the drug influence evaluation are pulse rate; blood pressure; and body temperature. They are covered in some detail in Session VII of this training program. For the time being, some simple definitions are sufficient:

Pulse rate is the number of expansions that occur in an artery in one minute. Each time the heart "beats" (or contracts) it sends a surge of blood through the arteries. These surges can easily be felt if you place your finger tips over an artery and apply slight pressure. All you have to do to measure pulse rate is to feel the surges while looking at a wristwatch, and count the number of surges that occur in thirty seconds, then multiply by two.

Blood pressure is the force exerted by blood on the walls of the arteries. A person's blood pressure constantly changes from instant to instant. When the heart contracts, and sends the blood surging through the arteries, the blood pressure reaches its highest value. This is called the systolic pressure. As the heart expands, the surge of blood slows, and the pressure drops.

When the heart is fully expanded, the blood pressure falls to its lowest level. This is called the **diastolic** pressure. Then, the heart starts to contract and the pressure rises again. The blood pressure continuously rises and falls, cycling between the systolic and diastolic values, as the heart beats.

Measurement of blood pressure requires a special instrument called a sphygmomanometer. A stethoscope is also needed.

Body temperature is measured by using an oral thermometer.

G. Overview of the Dark Room Examinations

Estimating Pupil Size

The pupils of our eyes continually adjust in size to accommodate different lighting conditions. When we are in a darkened environment, the pupils expand or "dilate", to allow the eyes to capture as much light as possible. When the lighting conditions are very bright, the pupils shrink, or "constrict", to keep the eyes from being overloaded. This process of constriction and dilation normally occurs within limits.

We use a device called a **pupillometer** to estimate the size of the subject's pupils. The DRE pupillometer has a series of circles or semi-circles, with diameters ranging from 1.0 mm to 9.5mm, in half-millimeter increments. We hold the pupillometer alongside the subject's eye, and move the pupillometer up or down until we locate the circle or semi-circle closest in size to the pupil.

Pupil size estimations are recorded as the numeric value that corresponds to the diameter of the circle or semi-circle that is closest in size to the subject's pupil in each lighting condition.

We estimate pupil size under three different lighting conditions:

- Room Light
- Near Total Darkness
- Direct Light

1. Estimation of Pupil Size Under Room Light

The pupils are examined in room light prior to darkening the room. Since room lighting conditions can vary considerably and often cannot be controlled, the range of pupil sizes may vary.

Have the subject look straight ahead at a point or location behind the DRE and slightly above the subject's eye level. Care should be taken to ensure the subject is not staring at a light source. Position the pupillometer alongside the eye to ensure an accurate estimation.

After checking both the left and right eye, turn off the lights and wait 90 seconds to allow your eyes and the subject's eyes to adapt to the dark.

2. Estimation of Pupil Size Under Near Total Darkness

Completely cover the tip of the penlight with your finger or thumb, so that only a reddish glow and no white light emerges. Bring the glowing red tip up toward the subject's left eye until you can distinguish the pupil from the colored portion of the eye (iris). Continue to hold the glowing red tip in that position and bring the pupillometer up alongside the subject's left eye and locate the circle/semi-circle that is closest in size to the pupil. Then repeat this procedure for the subject's right eye.

3. Estimation of Pupil Size Under Direct Light

Leave the tip of the penlight uncovered and bring the light from the side of the subject's face and shine it directly into their left eye. Position the penlight so that it illuminates and approximately fills the subject's eye socket. Hold the penlight in that position for 15 seconds with the pupillometer up alongside the left eye, and find the circle/semi-circle that is closest in size to the pupil. Then repeat this procedure for the subject's right eye. While observing the eye for the 15 seconds with the pupillometer in position, you should also check for rebound dilation. The definition for rebound dilation is available in the glossary and will be covered in depth later in this school.

While checking the pupil size under direct light, you must evaluate the pupil's reaction to light. If a person is not under the influence of any drug, his or her pupils should constrict within one second when the penlight's

beam strikes the eye directly. But certain categories of drugs may cause the constriction to occur more slowly or perhaps not to occur at all.

Two other activities conducted in the darkroom are: (1) the examination of the nasal area and (2) the examination of the oral cavity. In both cases, you must look closely for signs of drug use, or even for traces of drug or concealed quantities of drugs.

Tell the subject to tilt their head back. Shine the penlight directly into the nostrils. Look for traces of drugs or other materials in the nasal passages. Also check for redness and scarring or abrasions that might indicate repeated "snorting" of certain drugs.

Tell the subject to open their mouth wide. Shine the penlight directly into the mouth. Shine the beam around the inside of the mouth to illuminate all areas.

Look for residual quantities of drugs and for unusual coloring of the inside surfaces of the mouth (e.g. green or reddish coloring). Look near the gums for small balloons, bags, tissue or foil wrappings, or other small containers of drugs. Tell the subject to elevate their tongue, and look under the tongue for debris, or other evidence of ingestion.

Three important things should be kept in mind about the dark room examinations. First, a second officer should always accompany you and the subject into the dark room, as a safety precaution. Second, no weapons should be taken into the darkroom. Third, after entering the dark room, no examination should begin for 90 seconds, to allow your eyes, and the subject's to adjust to the darkness.

H. Examination of Muscle Tone

To begin the examination of the muscle tone start with the subject's left arm, firmly grasping the upper arm and slowly moving down. The muscle will appear flaccid, normal or rigid to the touch. Then check the right arm in the same manner.

I. Examination for Injection Sites

Persons who frequently inject drugs often develop lengthy scars, called "tracks", from repeated injections into the same vein. Fresh injection sites often can be found at the end of a "track". Many times, a fresh injection site will not be easily visible to the naked eye. Therefore, a DRE should search for injection sites by touch, running the fingers along such places as the neck, forearms, wrists, back of hands, or other subjected areas of injection. When a possible injection site is located, a ski light can be used to provide a magnified and illuminated visual inspection. The third pulse is taken by the DRE in this step.

Hypodermic needles are sized according to gauge. The gauge of a needle is a measurement of its inside diameter. The gauge number represents how many needles of that size would be needed to equal one inch. For example, a 24 gauge needle has an inside diameter of 1/24th of an inch; a 10 gauge needle has an inside diameter of 1/10th of an inch. Therefore, the higher gauge, the smaller the diameter of the needle.

J. Subject Statements

The DRE should be aware that often during the evaluation process, subject's may make numerous spontaneous, incriminating statements. These statements should be documented. DRE's should check to make sure that the subject has been appropriately advised of his/her Charter rights. DRE's should ask additional probing questions as appropriate.

K. Opinion of DRE

By this point in the evaluation, the DRE should have formed an opinion of the category or categories of drugs responsible for any observed impairment. This opinion is based on the totality of the evaluation.

L. Obtaining a Toxicological Sample

The process of obtaining toxicological samples will vary depending upon what samples are to be taken, i.e. urine, blood and/or, saliva. The containers for these samples will also vary depending on the type of test used and the laboratory that will do the analysis. A department or agency policy should delineate how each sample should be taken. You will need to become familiar with and follow your department's policies and procedures governing toxicological sample collection, handling, shipment, be taken. You will need to become familiar with and follow your department's policies and procedures governing toxicological sample collection, handling, shipment, etc. consideration should be given to witnessing the sample being obtained, chain of custody for the evidence, preservation and the return of the analysis by the laboratory.

M. A Brief Overview of Toxicology

1. Introduction

The information in this section is intended to provide a basic understanding of chemical testing for drugs that a DRE needs to have to appreciate fully the role of toxicology in this program. As much as possible, the information has been kept non-technical. It will not be covered in depth in class, but you are expected to be familiar with what is given in this manual.

2. Some Key Concepts

DEFINITION: Toxicology is the study of poisons and their effects on living organisms. For DRE purposes, the "poisons" in question are drugs, and in some cases the metabolites of drugs. A toxicologist analyzes physical specimens such as blood and urine for drugs and drug metabolites.

A metabolite, for DRE purposes, is a chemical substance derived from a drug, that is formed by the action of the body upon that drug. It is important to be aware that some metabolites are themselves psychoactive. That is to say, some metabolites cause impairment: Therefore, a metabolite may also be a drug. It is also important to know that it may be the metabolite, and not the original or "parent" drug that is detected in the laboratory. In some instances, finding a particular metabolite allows the chemist to conclude with certainty that a specific drug was ingested, even though the methods and equipment available to the lab can't detect that drug itself. Finding the metabolite is good, scientific evidence that the drug was there.

3. Limitations of Toxicology

Toxicology has some important limitations. One limitation is that, with the exception of alcohol, toxicology cannot produce proof of drug impairment. That is, the chemist can't analyze the blood or urine and come up with a number that "proves" the person was or wasn't impaired. For alcohol alone, the chemist can do that, or at least come very close to doing it.

But alcohol is a special drug. Chemically speaking, the alcohol molecule is very simple compared to the molecules of other drugs. Alcohol's metabolites don't impair. Scientists have had many opportunities to study alcohol's effects under carefully controlled experimental conditions. The scientific community has a relatively clear understanding of how alcohol works on the body and brain.

These statements generally can't be made about other drugs. Drugs are metabolized in complex ways, and sometimes the metabolites are also drugs. Some drugs can be stored in the body's tissues, so that even after the drug has cleared from the blood, it's still in the body and brain and still causing impairment. Apart from post-mortem studies of lethal levels, there haven't been routine opportunities to correlate drug concentrations with degrees of impairment. Ethical concerns limit our ability to study illegal drugs, especially at "street" dosages. It is difficult to replicate in the laboratory the drug combinations, methods of ingestion and drug purities characteristic of "street" use. Even if it were possible to study individual drug concentrations and their relationships to impairment in depth, the practice of polydrug use and the myriad of different combinations seen on the street would make that information of little practical use. Finally, many laboratories simply don't perform quantitative analyses to determine the drug concentrations, but only determine qualitatively the presence of the drugs. The reasons for avoiding quantitative analysis include the facts that it is costly, time consuming, and may be beyond the capability of the equipment available to the lab. Also, if urine is the specimen preferred by or submitted to the lab, quantitative analysis is less important, because it doesn't lend itself to clear interpretation. In short, chemistry basically cannot supply the "magic number" of impairment for drugs.

Another limitation of toxicology is that it doesn't provide evidence of the time at which the drug was ingested. Therefore, they will not be able to provide direct evidence of the subject's condition at the time of arrest. In some instances, it is possible that a "positive" chemical test reflects drugs that the subject took long before being arrested, and that were metabolized and no longer causing impairment prior to his or her arrest.

4. Toxicology's Roles in this Program

Exactly what are the roles that toxicology plays in this program? First and foremost, toxicology is **the twelfth step in the drug influence evaluation**.

A DRE doesn't complete the evaluation until they either obtain a specimen from the subject, or formally document the fact that the subject refused to submit to the toxicological test. It is important that the court be aware that toxicology is the final step of the evaluation. It follows the formation of the DRE's opinion; the opinion is not based on the results of the toxicological analysis. Similarly, the arrest, booking and charging of the subject are not based on the toxicological analysis, and must be supported by other, solid evidence. The DRE expects that toxicology will **support or corroborate the opinion** that they have formed. A toxicological analysis supports the opinion by confirming the presence of a particular drug that is consistent with the DRE's opinion. The concentration at which the drug is present shouldn't be an issue, because it isn't possible to relate concentration to "impairment" with any degree of reliability.

DREs also need to understand that sometimes the toxicological analysis will not confirm the DRE's opinion. The DRE needs to be honest enough to admit that, when this happens, it may be because their opinion is incorrect. The drug influence evaluation isn't an exact science. Drugs affect different people in different ways. In this program, we "never say never", and we "always avoid saying always".

But sometimes, the toxicology doesn't corroborate a DRE's opinion even though the opinion is correct. The lab's instruments, personnel and analytical methods are not infallible. There are certain drugs that a particular laboratory simply may not test for, and there are others that can't be "seen" unless they are present at fairly high concentrations.

To corroborate DREs' opinions, toxicology performs two kinds of analyses: **screening and confirmation**. Screening tests are easier, cheaper and faster than confirmatory tests. Confirmatory tests are more sensitive

and more specific than screening tests. In loose terms we can say that a positive screening test means "it looks like this sort of drug is there". A positive confirmatory test means "this particular drug is definitely there".

Confirmatory tests employ methods different from those of the screening tests. The confirmatory test is designed to provide absolute proof of a drug's presence, or at least as close to absolute as science can come. Confirmatory tests usually are required if the case goes to trial. DREs should be aware that, to cut down on costs, some labs do not conduct the confirmatory tests unless the case is going to go to trial. If this is the policy of your laboratory, you must provide the toxicologist with as much advanced notice of the trial date as possible, so he or she can perform the confirmatory analysis in a timely manner.

Suppose the screening test is positive, but the confirmatory test is not positive; what does that mean? Here again, DREs need to admit that it may mean that the drug isn't there. Some "screens" will react to substances other than psychoactive drugs. The screening tests are not absolutely indicative of drug presence; if they were, there would be no need for a confirmatory test.

Failure to confirm a drug does not necessarily mean that the "screen" was inaccurate. Every analytical procedure has a "detection" threshold; that is the lowest quantity or concentration of the drug that the instrument can possibly detect. Above that is the "quantification" threshold; that is the lowest concentration that can be numerically determined by the instrument. Standard laboratory procedure calls for establishing a third level, called the "cut-off" level, which usually is set slightly **above** the "quantification" threshold. Typically, the laboratory's report for the confirmatory test will read "not detected" unless the drug is found at a concentration greater than or equal to the "cut-off" level. But in fact, the drug could be present, at a somewhat lower concentration.

Then why don't laboratories simply lower their "cut-off" levels, if they really want to support their DREs? The reason is that the laboratory needs to preserve its scientific validity. If it loses that, the testimony of its toxicologists will be worthless. There are definite limits to the accuracy of chemical equipment and procedures. If the cut-offs are set too low, "false positives" will result (i.e. reports of "drug found" when it isn't really there). The lab won't be able to defend its reports scientifically, so it won't be able to support the DREs at all. Still, it is important for DREs and Provincial and agency DRE coordinators to consult with their toxicologists to try to reach agreement concerning optimum cut-offs, that do not compromise scientific integrity but at the same time provide adequate support to this program.

Fundamentally, toxicology's role in this program is corroborative. The observations of the arresting officer, and the observations, measurements and estimates of the DRE provide the best proof of the subject's impairment.

Toxicological analysis provides scientific corroboration that the subject actually ingested a drug. In some cases, the analysis may also provide scientific support for the allegation that the subject was impaired. In addition toxicologist can provide expert witness testimony on the analytical procedures used and the results of that testing, the prevalence of the drug in epidemiological studies, and information from peer reviewed and published scientific literature. This may include case reports, laboratory studies of controlled drug dosing, driving simulator studies or actual on-the-road driving studies. All of this information can be used together to support the observations made by the DRE and subsequently their opinions of impairment. Toxicology also plays an important role in on-going studies to document the validity of this program, in monitoring the work of individual DREs and in assessing the progress students are making during their certification training.

5. Blood/Urine/Oral Fluid: Which is Better?

Blood/Urine/Fluid are the most common specimens used for toxicology analysis. If we have a choice, which should we pick?

The answer is, it depends upon the policies and procedures of your Police Service, the particular condition of your subject, the equipment and procedures available to your laboratory and possibly the drug categories you believe are causing the subject's impairment will all have a bearing on the choice.

Some advantages of blood:

- The presence of a drug in blood more reliably indicates recent use than does the presence of the drug in urine. Urine tests may produce "positive" results weeks after the drugs were used. This is much less likely to happen with blood tests. Thus a positive blood test is more contemporaneous with drug impairment.

- The collection of a blood specimen usually occurs under a greater degree of supervision. When providing a urine specimen, a subject may have an opportunity to dilute or contaminate the specimen, or even substitute some other fluid for it.

Some advantages of urine:

- Urine is usually easier to obtain. Subjects often are more willing to supply urine, and medical personnel need not be present to collect it.

- Urine analysis is less expensive than blood analysis.

- Drug concentrations usually are higher and thus easier to detect in urine than in blood.

- Some drugs clear very quickly from the blood. The time delay from the initial traffic stop to the collection of the blood sample may impede the laboratory's ability to corroborate the DREs opinion. But drugs usually remain detectable in the urine for longer periods of time.

Some advantages of Oral Fluid:

- Oral Fluid is relatively easy to obtain.

- It is the least invasive of the 3 toxicological samples.

At present, Oral Fluid Sample Kits are in the "Testing" phase in Canada. Further tests are to be completed before the Forensic Laboratories will accept Oral Fluid samples.

6. What DREs Can Do To Optimize Laboratory Corroboration

DREs can help the lab help them by following a few simple reporting procedures. First, make sure that you advise the lab what drug category(s) you believe are present when you submit the urine or blood specimen.

Many labs request a copy the DRE report along with the specimen. The report assists in ensuring that targeted and appropriate testing is performed. All labs need to know the kinds of drugs that may be present, because that information can help the toxicologist determine if he or she needs to extend testing beyond the standard "menu" of screening procedures. Also make sure you **tell the lab what drugs the subject admitted taking**, and also let them know **what drugs you found in the subject's possession.**

Probably the most important advice for a DRE who wants maximum support from the lab is to **talk to the toxicologists**. Find out what kind of specimen they fully support. This will vary from Provincial Lab to Provincial Lab, and possibly from case to case. Ask the toxicologists for instruction and find out if they would like to receive a copy of your report along with the specimen. Make sure you understand what the laboratory report means. Establishing a regular dialogue with the lab is essential for maintaining the support system this program demands.

Finally, DREs need to be aware of and sympathetic to the laboratory's limitations. DREs are not infallible, and neither are laboratories. All labs have "chemical blind spots", i.e. drugs for which no routine detection procedures or suitable instruments are available. Many labs, for example, find it very difficult to detect or confirm THC in blood specimens, or to find LSD in either urine or blood. In addition, most laboratories are not well equipped to screen for certain anti-psychotic drugs or for some of the narcotic analgesics. DREs need to know that these limitations are a fact of life. They should not be a cause for disagreement between the DRE and the lab.

DRUG INFLUENCE EVALUATION

Evaluator	DRE No.	Rolling Log No.			
Recorder/Witness	Crash: ☐ None ☐ Fatal ☐ Injury ☐ Property	Case #			
Arrestee's Name (Last, First MI)	DOB	Sex	Race	Arresting Officer (Name, ID No.)	
Date Examined/Time/Location	Breath Results: ☐ Refused Instrument # %	Chemical Test ☐ Refused ☐ Urine ☐ Blood			
Miranda Warning Given: ☐ Yes ☐ No By:	What have you eaten today? When?	What have you been drinking? How much?	Time of last drink?		
Time now?	When did you last sleep? How long?	Are you sick or injured? ☐ Yes ☐ No	Are you diabetic or epileptic? ☐ Yes ☐ No		
Do you take insulin? ☐ Yes ☐ No	Do you have any physical defects? ☐ Yes ☐ No	Are you under the care of a doctor or dentist? ☐ Yes ☐ No			
Are you taking any medication or drugs? ☐ Yes ☐ No	Attitude:	Coordination:			
	Breath:	Face:			
Speech:	Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery	Blindness: ☐ None ☐ Left Eye ☐ Right Eye	Tracking: ☐ Equal ☐ Unequal		
Corrective lens: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft	Pupil size: ☐ Equal ☐ Unequal, (explain)	Able to follow stimulus: ☐ Yes ☐ No	Eyelids: ☐ Normal ☐ Droopy		

Pulse and time 1. ____/____ 2. ____/____ 3. ____/____	HGN Lack of smooth pursuit Maximum deviation Angle of onset	Left Eye ____ ____ ____	Right Eye ____ ____ ____	Vertical Nystagmus ☐ Yes ☐ No Convergence Right eye Left eye
One Leg Stand				

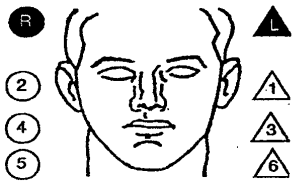
Romberg Balance	Walk and Turn test	Cannot keep balance Starts too soon:	L R ☐ ☐ Sways while balancing ☐ ☐ Uses arms to balance ☐ ☐ Hopping ☐ ☐ Puts foot down

	1st Nine	2nd Nine
Stops walking		
Misses heel to toe		
Steps off line		
Raises arms		
Actual # steps		

Type of footwear:

Internal clock Est. as 30 seconds	Describe Turn	Cannot do test (explain)	Nasal area:

Draw lines to spots touched



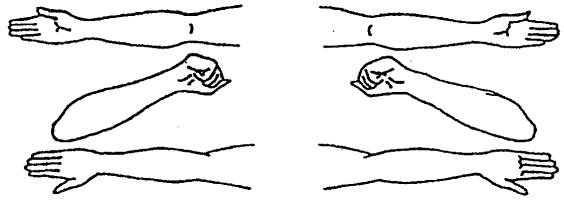
Pupil Size	Room Light	Darkness	Direct
Left			
Right			

Rebound dilation ☐ Yes ☐ No

Oral cavity:

Reaction to Light:

RIGHT ARM **LEFT ARM**



Blood pressure ____/____	Temperature ____ °f		
Muscle tone: ☐ Near normal ☐ Flaccid ☐ Rigid Comments:			

What medication or drug have you been using? How much?	Time of use?	Where were the drugs used? (location)	
Date/Time of Arrest	Time DRE Notified	Evaluation Start Time	Time Completed
DRE signature (Include rank)	ID #	Reviewed by:	

Opinion of evaluator: ☐ Rule Out ☐ Alcohol ☐ CNS Stimulant ☐ Dissociative Anesthetic ☐ Inhalant ☐ Medical ☐ CNS Depressant ☐ Hallucinogen ☐ Narcotic Analgesic ☐ Cannabis

Topics for Study

1. Give three important reasons for conducting drug evaluation and classification evaluations in a standardized fashion.

2. What are the twelve major components of the drug evaluation process?

3. How many times is pulse rate measured during the drug evaluation and classification evaluation?

4. Are the diameters of a pupillometer's circles/semi-circles indicated in centimeters, millimeters or micrometers?

5. What formula expresses the approximate statistical relationship between blood alcohol concentration and nystagmus onset angle?

6. Which of the seven categories of drugs ordinarily do not cause nystagmus?

7. How many heel-to-toe steps is the subject instructed to take, in each direction, on the Walk and Turn test?

8. What period of time is the subject required to estimate during the Romberg Balance test?

9. What is systolic pressure?

10. What is the name of the instrument used to measure blood pressure?

11. Name the four validated clues of the One Leg Stand test.

12. Name the eight validated clues of the Walk and Turn test.

13. Suppose you have two hypodermic needles, one is 14 gauge, the other is 20 gauge. Which needle has the smaller inside diameter?

SESSION V

EYE EXAMINATIONS: NYSTAGMUS, CONVERGENCE, PUPIL SIZE AND REACTION TO LIGHT

SESSION V **EYE EXAMINATIONS: NYSTAGMUS, CONVERGENCE, PUPIL SIZE AND REACTION TO LIGHT**

Upon successfully completing this session the student will be able to:

State the purposes of various eye examinations in the DEC drug influence evaluation procedure.

Describe the administrative procedures for the eye examinations.

Describe the clues of each eye examination.

Conduct the eye examinations and note the clues observed.

Prepare complete, clear and accurate records of the eye examinations.

In this session, you will have an opportunity to observe demonstrations of the various eye examinations of the drug influence evaluation process. You will also have opportunities to practice administering those examinations.

The eye examinations include:

- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Pupil Size Estimation
- Pupil Reaction to Light

Horizontal Gaze Nystagmus (HGN).

As a review, we already know that HGN is an excellent indicator of alcohol impairment and will also disclose impairment by any CNS Depressant other than alcohol, Dissociative Anesthetics, such as PCP and its analogs and by most Inhalants. These three categories of drugs usually will cause HGN.

We check for three clues of HGN in each eye:

Check #1: Does the eye track smoothly?

As a reminder, we start with a stimulus (pencil, pen, penlight, etc.) held vertically in front of the subject's face, above eye level and about 12 to 15 inches away from the subject's nose. Tell the subject to keep his/her eyes focused on the stimulus, to hold his/her head steady, and to follow the movement of the stimulus with their eyes only.

Check the subject's left eye by moving the stimulus to your right. Move the stimulus smoothly, at a speed that requires approximately two seconds to bring the subject's eye as far to the side as it can go. While moving the stimulus look at the subject's eye and determine whether it is able to pursue smoothly. Then move the stimulus all the way to the left, back across subject's face checking if the right eye pursues smoothly. Movement of the stimulus should take approximately two seconds out and two seconds back for each eye. Make at least two complete passes in front of the eyes to check for this clue.

While the eye is moving you should examine it closely for signs of "a lack of smooth pursuit". If a person is not under the influence of a CNS Depressant, Inhalant or a Dissociative Anesthetic their eyes should glide smoothly in the sockets, in much the same way that windshield wipers slide smoothly across the windshield when it is raining steadily. But if the person is under the influence of a CNS Depressant, an Inhalant or a Dissociative Anesthetic their eyes will usually jerk noticeably as they move, similar to a windshield wiper dragging across a dry windshield.

Check #2: Does the eye exhibit distinct and sustained nystagmus when it is held at maximum deviation for a minimum of four seconds?

After you have checked both eyes for lack of smooth pursuit, check the eyes for distinct and sustained nystagmus at maximum deviation beginning with the subject's left eye. This is done by moving the stimulus to the subject's left side until the eye has gone as far to the side as possible. Usually no white will be showing in the corner of the eye at maximum deviation. Hold the eye at that position for a minimum of four seconds and observe the eye for distinct and sustained nystagmus. Move the stimulus all the way across the subject's face to check the right eye holding that position for a minimum of four seconds. Repeat the procedure. Someone under the influence of Depressants, Inhalants or a Dissociative Anesthetic usually will exhibit distinct and sustained nystagmus at maximum deviation. A slight, barely visible tremor of the eye **does not** constitute "distinct jerking" for our purposes.

Check #3: What is the angle of onset of the nystagmus?

When using HGN as a Standardized Field Sobriety Test of alcohol impairment, you determine whether the jerking of the eye begins prior to 45-degrees. As a DRE, you are going to have to be more precise than that. Within certain limits, it is important for the DRE to estimate the actual angle at which the jerking first begins. We need to do this because it gives us a clue as to whether the subject is impaired by alcohol alone, or by some combination of alcohol with another Depressant, an Inhalant or a Dissociative Anesthetic.

You should remember from your earlier training that some original research led to the development and validation of HGN as a Standardized Field Sobriety test for alcohol, and that we know that there is an approximate statistical relationship between blood alcohol concentration (BAC) and the angle of onset of nystagmus. The relationship is expressed by this formula:

BAC = (50 - Angle of Onset) x 10

According to the formula, if the angle of onset was 40 degrees, then the "BAC" would approximately equal (50 minus 40) x 10; or 10 x 10 = 100mg%. Similarly, if the angle of onset was 35-degrees, "BAC" would be approximately (50 minus 35) x 10, for a BAC of 150mg%.

It is important to always keep in mind that this formula expresses an average, approximate statistical relationship, **not a precise mathematical relationship**. Humans, and their eyes, do not all react to alcohol or other drugs in exactly the same way. The formula may be reasonably accurate for some people but much less accurate for others. The formula is not sufficiently accurate for us to use HGN to produce evidence of a specific BAC and courts routinely reject any attempt to do so. But the formula is of value to us as DREs because it can help us detect an evident gross disparity between the subject's BAC and the nystagmus observed.

For example, you are called in to evaluate a subject who has a BAC of 70mg%. Based on that alone, you would expect to find the onset of HGN close to 40 to 45 degrees. But suppose you discover that the subject's HGN begins at about 30 degrees. That would be inconsistent with the BAC, and you would begin to think that this subject might also have taken some other Depressant, an Inhalant, or possibly a Dissociative Anesthetic.

Remember for DRE purposes, you will be expected to be able to estimate angle of onset to the nearest 5 degree increment, over the range from 30 degrees to 45 degrees. If the subject's eyes begin to jerk before they have moved to the 30 degree angle, you will not attempt to estimate the angle precisely and will record that the subject exhibits "immediate onset". But from 30 degrees on out, you will record a numeric estimate of onset, i.e. 30 degrees, 35 degrees, 40 degrees, or 45 degrees.

To determine the angle of onset, position the stimulus about 12-15 inches from the subject's nose and slowly move the stimulus toward your right. NOTE: It is important to use the full four seconds to determine the onset of nystagmus. Watch the left eye closely for the first sign of jerking. When you think that you first see the eye jerk, stop moving the stimulus and hold it steady. Verify that the eye is jerking. If it is not, start moving it again to your right until you see the jerking begin. Once you find the point of onset of nystagmus estimate the angle to the nearest five (5) degrees. Repeat this procedure for the subject's right eye. One final point about the nystagmus onset angle, don't forget that there are many drugs that **do not cause HGN**.

Vertical Gaze Nystagmus (VGN)

From your earlier training you learned that Vertical Gaze Nystagmus, like HGN, is a jerking of the eyes. Vertical Gaze Nystagmus is an involuntary jerking of the eyes (up and down) which occurs as the eyes are held at maximum elevation.

Vertical Gaze Nystagmus is associated with the same drugs that cause Horizontal Gaze Nystagmus. High doses, for that individual, of Depressants, Inhalants or a Dissociative Anesthetic cause Vertical Gaze Nystagmus. Therefore, it is not uncommon to encounter subjects who exhibit HGN but do not exhibit Vertical Gaze Nystagmus.

To check for Vertical Gaze Nystagmus, hold a stimulus horizontally in front of the subject, about 12-15 inches in front of the subject's nose. Direct the subject to focus their eyes at a specific point on the stimulus. Instruct the subject to hold their head steady and to follow the stimulus with their eyes only. Elevate the stimulus until the eyes are raised as far as possible and hold them at that position for a minimum of four seconds. Observe the eyes closely to see whether any up and down jerking occurs. With Vertical Gaze Nystagmus, we do not attempt to identify an angle of onset: we simply record that Vertical Gaze Nystagmus is either "present" or "not present". There is no drug that will cause VGN that will not cause HGN.

Remember, the mere fact that Vertical Gaze Nystagmus is present does not guarantee that the subject is under the influence of some drug other than alcohol. Alcohol itself will cause Vertical Gaze Nystagmus, if the BAC is high for that individual. Also remember that there are many drugs that do not cause Vertical Gaze Nystagmus.

Lack of Convergence

You should recall from your earlier training that **Lack of Convergence** means an inability to cross the eyes. To check for Lack of Convergence, we first determine if the subject routinely wears eyeglasses during reading and near visual tasks. If so, ensure that the eyeglasses are worn by the subject for the check for Lack of Convergence, if they are available. The role of clear

vision and focusing can have a significant effect on the convergence of the eyes. In the clinical setting, the Lack of Convergence check is routinely conducted with the eyeglasses on if normally worn by the subject. To conduct the Lack of Convergence check, we position the stimulus approximately 12 to 15 inches in front of the subject's face in the same position we use for the HGN test. Inform the subject that you are going to move the stimulus around in a circle, then you are going to move it toward their face and that you will bring it in close to the nose. You will not touch the subject's nose with the stimulus. Make sure that the subject knows this in advance so that he/she does not become frightened during the test and jerk their head away. Instruct the subject to keep their head steady, and to follow the movement of the stimulus with the eyes only.

Start moving the stimulus in a circle in front of the subject's face either clockwise or counterclockwise, and observe their eyes to verify that the subject is tracking the stimulus. Then, slowly move the stimulus in toward the bridge of the nose.

The eyes should come together and cross (converge) as they track and stay aligned on the stimulus. Continue moving the stimulus and have the subject's eyes converge toward the bridge of the nose. If the subject cannot converge towards the bridge of the nose, (the minimum distance for a normal convergence response is approximately two inches (2") from the bridge of the nose) hold the stimulus at the convergence point for approximately one (1) second then remove the stimulus while observing the eyes.

Remember that you should not actually touch the subject's nose and should not come in any closer than approximately two (2) inches from the bridge of the nose. Also, you should keep the stimulus high enough so that you can observe the eye movements, making sure the subject does not close the eyes to a point where you cannot observe them.

Lack of Convergence usually occurs with people who are under the influence of any drug that causes HGN. Thus, Depressants, Inhalants, and Dissociative Anesthetics usually will cause Lack of Convergence. Cannabis also will usually cause Lack of Convergence, even though it doesn't cause HGN. Other kinds of drugs, i.e. CNS Stimulants, Hallucinogens and Narcotic Analgesics usually do not prevent the eyes from converging. But you should be aware that many people have difficulty crossing their eyes even when they are totally drug free. So it is not uncommon to find unimpaired individuals who exhibit Lack of Convergence.

Estimating Pupil Size

The pupils of our eyes continually adjust in size to accommodate different lighting conditions. When we are in a darkened environment, the pupils expand, or "dilate", to allow the eyes to capture as much light as possible. When the lighting conditions are very bright, the pupils shrink, or "constrict", to keep the eyes from being overloaded. This process of constriction and dilation normally occurs within limits.

We use a device called a **pupillometer** to estimate the size of the subject's pupils. The DRE pupillometer has a series of circles or semi-circles, with diameters in half-millimeter

increments. The pupillometer is held alongside the subject's eye and moved up or down until the circle or semi-circle closest in size to the pupil is located.

We record the pupil size estimations that corresponds to the diameter of the circle/semi-circle closest in size to the subject's pupil in each lighting condition.

The three pupil size estimations conducted by the DRE are:

1. Estimation of Pupil Size Under Room Light

Here the pupils are examined in room light prior to darkening the room. Since room lighting conditions can vary considerably and often cannot be controlled, the range of pupil sizes may also vary.

The final two pupil size estimations are made with the use of a penlight in a near totally darkened room. After darkening the room, we wait 90 seconds to allow the subject's eyes and our own eyes to adapt to the dark. Once we have done that, we proceed with the estimations.

2. Estimation of Pupil Size Under Near Total Darkness

For this examination, we completely cover the tip of the penlight with our finger or thumb, so that only a reddish glow and no white light emerges. Bring the glowing red tip up toward the subject's left eye until you can distinguish the pupil from the colored portion of the eye (Iris). Continue to hold the glowing red tip in that position and bring the pupillometer up alongside the subject's left eye and locate the circle/semi-circle that is closest in size to the pupil. This is then repeated for the subject's right eye.

3. Estimation of Pupil Size Under Direct Light

During this examination we bring the penlight from the side of the subject's face and shine the beam directly into their left eye. Position the penlight so that it illuminates and approximately bathes the subject's eye socket. Hold the penlight in that position for 15 seconds with the pupillometer up alongside the left eye, and find the circle/semi-circle that is closest in size to the pupil. Then repeat this procedure for the subject's right eye. While observing the eye for the 15 seconds with the pupillometer in position, you should also check for rebound dilation.

Normal Sizes for the Pupil

We estimate pupil size under three different lighting conditions; Room Light, Near Total Darkness and Direct Light, and remember that the range of pupil sizes will vary. For most non-impaired people, even under very bright light the pupils won't constrict much below a diameter of 2.0 millimeters (mm); and even under near total dark conditions, the pupils usually will only dilate to a diameter of not more than 8.5 mm. For a normal non-impaired person, the average pupil size and range for:

- **Room Light** is approximately **4.0 mm** with an average range of normal pupil sizes ranging from **2.5 to 5.0 mm**.

- **Near Total Darkness** is approximately **6.5 mm** with an average range of normal pupil sizes ranging from **5.0 to 8.5 mm**.

- **Direct Light** is approximately **3.0 mm** with an average range of normal pupil sizes ranging from **2.0 to 4.5 mm**.

Reaction of the Pupils to Light

During the direct light estimation of the pupil size, we also look for another clue of possible drug influence; reaction of the pupils to light. With a non-impaired person, the pupils will constrict within one second after the penlight is shined directly into the eye. Some drugs however, may affect the pupil's reaction to light. No category of drugs will speed up the reaction of the pupils, but some will slow it down. CNS Depressants and CNS Stimulants for example, will both slow the pupil's reaction. It may seem strange that CNS Stimulants will do this, since we think of those type of drugs as "speeding things up", nevertheless they do slow the reaction. With someone under the influence of Narcotic Analgesics, you may observe little or no visible reaction of the pupils to direct light. This may be due to the fact that the drug constricts the pupils to the point where any further constriction isn't noticeable to your naked eye. Hallucinogens, Dissociative Anesthetics, and Cannabis usually don't affect the reaction of the pupils. Some Inhalants will usually slow pupillary reaction.

Expected Results

The following summarizes the results that generally can be expected when these eye examinations are administered to persons under the influence of the various categories of drugs.

	CNS Depressants	Inhalants	Dissocative Anesthetics	Cannabis	CNS Stimulants	Hallucinogens	Narcotic Analgesics
Horizontal Gaze Nystagmus	YES	YES	YES	NO	NO	NO	NO
Vertical Gaze Nystagmus	YES *High Dose	YES *High Dose	YES	NO	NO	NO	NO
Lack of Convergence	YES	YES	YES	YES	NO	NO	NO
Pupil Size	NORMAL (2)	NORMAL (4)	NORMAL	DILATED (68)	DILATED	DILATED	CONSTRICTED
Reaction to Light	SLOW	SLOW	NORMAL	NORMAL	SLOW	NORMAL (3)	LITTLE OR NONE VISIBLE

* High Dose for that individual

2 Soma, Quaaludes and some anti-depressants usually dilate pupils.

3 Certain psychedelic amphetamines may cause slowing.

4 Normal, but may be dilated.

6 Pupil size possibly normal.

BEAR IN MIND that there is a great deal of difference among humans and their individual reactions to drugs. The chart lists what we can generally expect to find when we examine subjects, but no one can guarantee that we will always find precisely these responses.

SOME KEY TECHNICAL TERMS REGARDING THE EYES

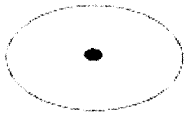
Rebound Dilation is defined as a period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size. Rebound dilation is observed only with the estimation of pupil size under the Direct Light procedure.

Pupillary Unrest is defined as the continuous, irregular change in the size of the pupils that may be observed under room or steady light conditions.

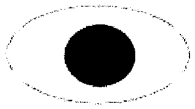
Accommodation Reflex is an adjustment of the eyes for viewing objects at various distances. Meaning the pupils will automatically constrict as objects move closer and dilate as objects move further away.

Pupillary Light Reflex means the pupils of the eyes will constrict and dilate depending on changes in lighting.

Miosis means an abnormally small pupil, i.e. constricted.



Mydriasis means an abnormally large pupil, i.e. dilated.



Ptosis is the technical term for "droopy eyelids".

Attachment A

PARTICIPANT PROFICIENCY EXAMINATION STANDARDIZED FIELD SOBRIETY TEST BATTERY

Participant Name: _____ Date: _____

I. HORIZONTAL GAZE NYSTAGMUS

_____ 1. Have subject remove glasses if worn.

*_____ 2. Stimulus held in proper position (approximately 12"-15" from nose, just slightly above eye level.

_____ 3. Check for equal pupil size and resting nystagmus.

_____ 4. Check for equal tracking.

*_____ 5. Smooth movement from center of nose to maximum deviation in approximately 2 seconds and then back across subject's face to maximum deviation in right eye, then back to center. Check left eye, then right eye. (Repeat)

*_____ 6. Eye held at maximum deviation for a minimum of 4 seconds (no white showing). Check left eye, then right eye. (Repeat)

*_____ 7. Eye moved slowly (approximately 4 seconds) from center to 45 angle. Check left eye, then right eye. (Repeat)

*_____ 8. Check for Vertical Gaze Nystagmus. (Repeat)

II. WALK-AND-TURN

_____ 1. Instructions given from a safe position.

*_____ 2. Tells subject to place feet on a line in heel-to-toe manner (left foot behind right foot) with arms at sides and gives demonstration.

*_____ 3. Tells subject not to begin test until instructed to do so and asks if subject understands.

*_____ 4. Tells subject to take nine heel-to-toe steps on the line and demonstrates.

*_____ 5. Explains and demonstrates turning procedure.

*_____ 6. Tells subject to return on the line taking nine heel-to-toe steps.

*_____ 7. Tells subject to count steps out loud.

*_____ 8. Tells subject to look at feet while walking.

_*_ 9. Tells subject not to raise arms from sides.

_*_ 10. Tells subject not to stop once they begin.

_*_ 11. Asks subject if all instructions are understood.

III. ONE-LEG STAND

_____ 1. Instructions given from a safe position.

_____ 2. Tells subject to stand straight, place feet together, and hold arms at sides.

_____ 3. Tells subject not to begin test until instructed to do so and asked if subject understands.

_*_ 4. Tells subject to raise one leg, either leg, approximately 6" from the ground, keeping raised foot parallel to the ground, and gives demonstration.

_*_ 5. Tells subject to keep both legs straight and to look at elevated foot.

_*_ 6. Tells subject to count out loud in the following manner: one thousand one, one thousand two, one thousand three, until told to stop, and gives demonstration.

_____ 7. Checks actual time subject holds leg up. (Time for 30 seconds.)

Instructor: _____

SESSION VI

PHYSIOLOGY AND DRUGS: AN OVERVIEW

SESSION VI PHYSIOLOGY AND DRUGS: AN OVERVIEW

Upon successfully completing this session, the student will be able to:

Explain in layman's terms the general concept of human physiology.

Explain in layman's terms the purpose and functions of major systems in the body (nervous system, circulatory system, respiratory system, etc.).

Explain in layman's terms how drugs work in the body.

Explain in general terms how the drug evaluation is used to detect signs or symptoms indicative of drug impairment.

Correctly answer the "topics for study" questions at the end of this session.

Physiology and Drugs: An Overview

The purpose of this session is to provide a brief overview of how the human body functions in a "normal" state and thus lay a foundation for comparison when drugs are introduced into the body. At best, you will acquire a general working knowledge and will by no means become a qualified medical specialist.

The DRE can be compared to the operator of an evidential chemical test device...while it is beneficial to understand the general principles involved in the operation of the device, it is not necessary for each operator to be able to explain every detail of its operation. Rather, if the operator follows the operational instructions the device will produce accurate and reliable results. The same is true of the Drug Evaluation and Classification procedure...if each DRE conducts the evaluation as instructed, and accurately records the test results and other observations, then the totality of information gathered during the evaluation will enable the DRE to predict the cause of impairment with a high degree of accuracy. The DRE's opinions of the cause of impairment will be limited to the seven categories of drugs, or some combination thereof, and/or a known or unknown medical or other condition that may produce similar signs or symptoms. It is not necessary to become a medical specialist or technician in human physiology. However, a general working knowledge of how the body functions is very helpful.

Physiology is the branch of biology dealing with the functions and activities of life or living matter and the physical and chemical phenomena involved[1]. For purposes of this course, physiology is the study of the functions of living organisms and their parts. In this session, we will focus on the chief functions of the body systems. This approach should provide a general overview of the intricate workings of the body and its larger parts.

A. Body Systems

Our simple concept of human physiology focus on ten major systems of the body. We can help remember their names by using the somewhat gruesome, but easy to recall phrase "MURDERS, INC.". Each of those letters stands for the name of a body system:

M is for the Muscular System
U is for the Urinary System
R (the 1st R) is for the Respiratory System
D is for the Digestive System
E is for the Endocrine System
R (the 2nd R) is for the Reproductive System
S is for the Skeletal System
I is for the Integumentary System
N is for the Nervous System
C is for the Circulatory System

The last two (Nervous and Circulatory) are the most important systems to a DRE, but several of the others also come at least indirectly into play when we conduct a drug influence evaluation. Each of the ten systems is briefly discussed below.

[1] Merriam-Webster's Medical Disctionary (2008).

Muscular System: The body has three kinds of muscles: (1) the heart; (2) the smooth muscles (which control involuntary movements); and (3) the striated muscles (which control voluntary movements). The brain controls the operation of all these muscles through the nervous system.

Urinary System: The urinary apparatus consists of two kidneys connected by long tubes (ureters) to a storage device, the bladder, plus a third tube, the urethra, which leads from the bladder to the outside. Many of the waste products are filtered out of the blood as it passes through the kidneys and these wastes are then removed from the body in the urine.

Since drugs are removed from the blood in the kidneys and passed out of the body in the urine, the urinary system plays a key role in producing evidence of drug use.

Respiratory System: The chief organs of the respiratory system are the diaphragm and the lungs. The diaphragm is a muscular sheet that separates the thoracic cavity from the abdominal cavity, and draws fresh air into the lungs and forces used air out. The transfer of oxygen from the air to the blood and of carbon dioxide from the blood to the atmosphere occurs in the lungs. Oxygen must be supplied to all the body cells, and carbon dioxide must be removed from them in order for life to exist. The voice and, therefore all verbal communication is largely the responsibility of the respiratory system. The respiratory system forces air through the voice box, which in turn allows for speech to be accomplished.

Digestive System: The digestive system consists chiefly of the tongue and teeth, esophagus (food tube), stomach, intestines, liver and pancreas. The digestive system is responsible for reducing large food particles to a size and chemical nature that can be absorbed (taken from the digestive system into the blood) and thereby utilized by the body cells for energy, growth and tissue repair.

The digestive system plays a key role in introducing drugs that are swallowed (pills, alcohol, etc.) into the blood. It also plays a role in determining onset of effects, depending upon the contents of the stomach and the type(s) of drug involved.

Endocrine System: The endocrine system consists of the thyroid, parathyroid, pituitary, and adrenal glands, plus portions of the pancreas, testes, and ovaries, in conjunction with certain other hormone producing tissues. The endocrine system produces powerful chemical substances, called hormones, that exert great influence on the growth and development of the individual, and aid the nervous system in the regulation of numerous body processes. The hormones released by the endocrine system travel through the bloodstream, and reach other tissues and organs that they help to control.

Reproductive System: The functions of the reproductive system fall into two categories: cell producing (cytogenic) and hormone producing (endocrinic). We are primarily concerned with hormone production since the hormones produced by the reproductive system aid the nervous system in its regulatory role.

Skeletal System: The skeletal system consists of bones, cartilage and the ligaments that hold bones together. The skeletal system gives the body support and protection, permits movement, provides for muscle attachment, forms blood cells, stores minerals, and removes certain poisons from the blood.

While the drug evaluation does not directly examine the skeletal system, we must be aware that injuries or other conditions can affect performance of psychomotor tests.

Integumentary System: The integumentary systems consist of the skin and its accessory structure, hair and nails. The skin is well supplied with blood vessels, nerves, sweat and oil glands. The chief functions of the skin include protection of the body, helping to maintain a constant body temperature and water content, excretion of wastes and perception of changes in the environment (sensation).

The skin can provide several clues during the drug evaluation. For example, pale or flushed appearance, skin temperature, presence or absence of sweat, lack of sensation, etc.

Nervous System: The nervous system consists of the brain, spinal cord, and nerves, each of which is made up of nerve cells (neurons) and supporting tissues. The nervous system keeps the body apprised of changes in the environment by enabling sight, hearing, smell, taste and through sensations of temperature, touch, pressure and pain. The nervous system also enables reasoning, memory and emotions.

It sends impulses that cause muscles to contract and glands to secrete, and it works with all body systems to integrate all physiological processes so that normal functions can be maintained. Much of the activity of the nervous system is reflex in character; that is, it is carried out below the level of consciousness.

Circulatory System: The circulatory system consists of the heart, blood vessels, arteries, veins, capillaries and blood. The heart pumps blood throughout the body, transporting food, water, hormones, antibodies, oxygen, carbon dioxide, and many other substances to or from the body cells as required. Body temperature regulation is a partial responsibility of the circulatory system, since warm blood is constantly moved throughout the body.

The circulatory system plays a key role in transporting drugs to the brain, where most of the drugs' effects are exerted. The circulatory system also transports the drugs to the liver and other organs, where the drugs are metabolized.

B. The Concept of Homeostasis

Homeostasis: The internal environment of the body consists of those fluids that bathe the body cells (intercellular or tissue fluid, blood and lymph). Many years ago it was discovered that although oxygen, foods, water and other substances are constantly leaving the body fluids to enter cells, and carbon dioxide and other wastes are constantly leaving cells and entering these fluids, the chemical composition of the fluids remains within remarkably narrow limits. This phenomenon was given the name "homeostasis". ("Homeo" meaning elements and "stasis" meaning balance).

By definition, homeostasis is **the dynamic balance or steady state involving levels of salts, water, sugars and other materials in the body's fluids**. Homeostasis is a dynamic, rather than a static, or stationary equilibrium because the composition of body fluids is in a state of flux. No matter what we eat, how much or how little we exercise, or what daily stresses and strains the body is subjected to, it retains homeostatic equilibrium of the body fluids. The rhythm of the heart and that of breathing, the constancy of body temperature, and the steady level of blood pressure under specific circumstances or conditions are all manifestations of homeostatic mechanisms at work within the body.

Every organ system plays some role in the maintenance of homeostasis. The circulatory system keeps the body fluids well mixed; the respiratory system constantly brings in oxygen and eliminates carbon dioxide; the digestive system takes in food and water and eliminates solid wastes; the skin and kidneys eliminate watery wastes; the skeletal system forms blood cells; the nervous system integrates the functioning of the other systems; and so on.

When drugs are introduced into the body the resultant interactions can cause the body to speed up, to slow down, or to become confused. During the drug evaluation we examine bodily functions and attempt to determine the cause of the impairment that is observed.

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C. A Simple View of the Heart and the Circulatory System

You have often heard that the heart is a pump, and that it works in pretty much the same way as an old fashioned, hand operated pump used to draw water from a well. That remains an accurate picture for our purposes.

The heart, of course, pumps blood. The heart has chambers that fill with blood. Then, the heart constricts strongly in response to signals received along the Autonomic Motor Nerves. That constriction sends the blood surging out of the heart. The blood surges out into a group of strong, elastic "tubes" called arteries. The arteries carry the blood away from the heart. The arteries divide into smaller and smaller branches, and finally into a network of tiny blood vessels called capillaries, which pervade the body's tissues and organs.

After the heart completes its strong contraction, it relaxes and begins to expand again. This expansion is also in response to signals received along Autonomic Motor Nerves. As the heart's

chambers expand, blood pours into them. This returning blood is carried by another network of "tubes" called veins. The veins collect the blood seeping back from the tissues and organs, and carry it back to the heart.

There are two separate circulation systems: 1) the systemic system involves the whole body and is driven by the left side of the heart; 2) the pulmonary system deals with the passage of blood through the lungs and is driven by the right side of the heart.

The left side pumps blood through the aorta and arteries to the tissues. The right side pumps blood through the pulmonary artery to the lungs and returns it to the left side of the heart via the pulmonary vein.

One very special artery is connected to the right side of the heart. This is the Pulmonary Artery. This is the artery that the heart uses to send blood to the lungs. The blood that surges into the Pulmonary Artery has little or no oxygen in it. But when the blood reaches the lungs it picks up a fresh supply of oxygen. The newly oxygenated blood then returns to the left side of the heart, via the four Pulmonary Veins. On the next contraction of the heart, the newly oxygenated blood is sent surging into the network of arteries that connect to the left side of the heart; through those arteries the blood is carried to all other organs and tissues.

The blood deposits its oxygen in the organs and tissues and then seeps back from those organs and tissues through a network of veins that connect to the right side of the heart. On the next contraction, this oxygen-depleted blood is sent surging into the Pulmonary Artery and over to the lungs, and the process continues.

Every time the heart contracts, blood rich in oxygen rushes out of the left side of the heart, into a network of arteries. At the same time, blood depleted of oxygen surges out of the right side of the heart, through the one special artery called the Pulmonary Artery. Every time the heart expands, blood that has just received a fresh supply of oxygen from the lungs pours back into the left side of the heart via the Pulmonary Veins. At the same time, blood that has given up its oxygen to the tissues and organs pours back into the right side via the many other veins.

The special nature of the Pulmonary Artery is now clear: **it is the only artery that carries blood depleted of oxygen**. All other arteries connect to the left side of the heart, and carry blood rich in oxygen. By the same token, the Pulmonary Veins are special, too. They are the only veins that carry oxygenated blood.

The normal heart beats regularly, and keeps on beating, and beating, and beating...never resting for more than a small fraction of a second. The rate of heartbeat, or heart rate, is the number of beats per minute and is regulated by the Autonomic Motor Nerves. Sympathetic Nerve fibers insure that the heart beats fast enough to maintain circulation during any activity. Parasympathetic Nerve fibers send signals to slow the heart. This coordination of nerve signals insures that the heart beats neither too fast nor too slowly. And the coordination works, unless something...such as drugs...interferes with the signals.

In the DEC program, heart rate is measured by taking a subject's pulse. Some people may exhibit an irregular or arrhythmic heart beat, i.e., where the interval between pulses varies. The normal range of pulse rate for the DEC program is 60-90 beats per minute.

The force exerted by the blood circulating in the arteries is called **blood pressure**.

There are two components of blood pressure; systolic pressure, and diastolic pressure. Systolic pressure occurs when the heart contracts and the maximum force is exerted on the arteries by the blood. Diastolic pressure occurs when the heart relaxes and the minimum force is exerted on the arteries by the blood. In the DEC program, the normal range for blood pressure is 120-140 systolic and 70-90 diastolic.

Additional information on pulse and blood pressure is available in Session VII - Vital Signs.

D. A Simplified Concept of the Nervous System

The Nervous System is one of the body's major control mechanisms. The other major control mechanism is the endocrine system. The endocrine system uses "chemical messengers", called hormones, to control the various tissues and organs. The Nervous System uses a combination of electrical and chemical "messengers" to transmit its signals.

Nerves are sometimes depicted as wires, similar to telephone or telegraph wires, that carry electric signals from the brain to the muscles and from the eyes, ears, etc. back to the brain. That is not a very accurate representation, and it is not suitable for our purposes.

A better model is one that imagines that a nerve consists of a series of broken wire segments, where the segments are separated by short spaces, or gaps. In this model, each segment of "wire" is a nerve cell, also known as a **neuron**. The space between two cells is called a **synapse**, or synaptic gap.

We can imagine a message running along a "wire segment" in much the same manner that electrical signals travel along telephone lines. When the message reaches the end of a segment, it must somehow "jump across the synapse" to reach the next piece of wire. Nerves use chemical messengers to jump the gap. When the signal reaches the end of the neuron, it triggers the release of a special chemical called a **neurotransmitter**. The neurotransmitter flows across the synapse and contacts the next neuron, where it is received. The reception of the chemical triggers an "electrical impulse" in that neuron, causing the signal to travel along the neuron until it reaches the next gap, where the release of the chemical is once again triggered. In this way, the signal moves along the entire nerve, in a series of electrical impulses and chemical transfers.

Neurons, or nerve cells, contain a number of different neurotransmitters, or chemical messengers. Each neurotransmitter carries a particular message.

The neuron has three main parts:

- The **cell body**.

- The **Axon** is the part of the neuron that sends out the neurotransmitter.

- The **Dendrite** is the part that **receives** the neurotransmitter.

Using a baseball analogy, the Axon is the "pitcher" of neurotransmitter, and the Dendrite is the "catcher" of the neurotransmitter.

The gap between two neurons is called synapse or synaptic gap. The neurotransmitters carry a message across the synaptic gap from the axon of one cell to the dendrite of the next cell.

Types of Nerves

Some nerves carry messages **away from the brain**, for example, commands from the brain to the heart, telling it to beat faster or more slowly; or, commands from the brain to the eyes, telling them to dilate or constrict the pupils; or, from the brain to the muscles in the arm, telling them to raise or lower the hand; or, many other commands of this type. These nerves that carry messages away from the brain are called the **Motor Nerves**, or the Efferent Nerves. If something interferes with the messages that the brain sends out along the Motor Nerves, the brain's control over the body's organs and muscles will be disturbed. As a result, the heart might beat faster than it should, the pupils might constrict when they shouldn't, the arms and legs might not move exactly as the brain intends.

Other nerves carry messages **to the brain**, for example, signals from the eyes, the ears, the body's pain sensors, the inner ear, etc. The brain decodes the signals that come to it along these nerves, and forms "pictures" of the outside world and of the body's internal condition. These nerves that carry messages to the brain are called the **Sensory Nerves**, or the Afferent Nerves. If something interferes with the messages that the brain receives through the Sensory Nerves, the brain's perception of what is happening to the body and to the outside world will be distorted. As a result, the brain might "smell an odour" when it ought to hear a sound, or might "see an object" that doesn't really exist, or might feel no pain despite a severe injury.

This, very basically, is how drugs work: they interfere with the messages that the brain transmits along the Motor (Efferent) Nerves, and they interfere with the messages that the brain receives along the Sensory (Afferent) Nerves.

The Motor Nerves divide into two subsystems:

(1) One subsystem is made up of the Voluntary Motor Nerves; they carry messages from the brain to the striated muscles, i.e., the muscles that we consciously control. The Voluntary Motor nerves carry the commands that cause us to move our arms and legs, smile or frown, turn our heads, etc.

(2) The other subsystem is made up of the Autonomic Motor Nerves; they carry messages from the brain to the heart and to the smooth muscles. The Autonomic Motor Nerves carry the commands that cause our pupils to dilate, our lungs to inhale and exhale, our heartbeat to slow, etc. In other words, the Autonomic

Motor Nerves send commands to the muscles and organs we do not consciously control.

The Autonomic Motor Nerves are further divided into two groups, the **Sympathetic Nerves** and the **Parasympathetic Nerves**. The Sympathetic Nerves command the body's automatic responses in reaction to fear, stress, excitement, etc.

Through the Sympathetic Nerves, the brain sends "wake up calls" and "fire alarms" to the heart and the smooth muscles. The Sympathetic Nerves carry the messages that cause the pupils to dilate; the blood pressure and pulse rate to rise; the sweat glands to activate; the hair to stand on end; the blood vessels of the skin to constrict; etc. In short, the messages transmitted along the Sympathetic Nerves excite or stimulate the body. The Sympathetic Nerves act as the body's "gas pedal" and make the body go faster.

The Parasympathetic Nerves have exactly the opposite function. They carry messages that produce a relaxed state in the body, and that promote tranquil activities. The brain sends its "at ease" and "all clear" messages along the Parasympathetic Nerves. Those messages cause the pupils to constrict; heartbeat to slow; blood pressure to drop; peripheral blood vessels to dilate; digestion to proceed; etc. The Parasympathetic Nerves act as the body's "brake pedal" and slows the body down.

Naturally, neurotransmitters, or chemical messengers, are involved in carrying signals along both the Sympathetic and Parasympathetic nerves. Some drugs mimic the action of certain neurotransmitter. When taken into the body, these drugs come into contact with dendrites (receptor ports) of nerves and cause messages to be transmitted along Sympathetic or Parasympathetic Nerves.

Drugs that mimic neurotransmitter that are associated with Sympathetic Nerves are called **Sympathomimetic** drugs. They artificially cause the excitement and stimulation associated with the brain's natural "wake up calls". CNS Stimulants and Hallucinogens are considered to be sympathomimetic drugs.

Cannabis and PCP also have sympathomimetic characteristics, to some degree.

Drugs that mimic neurotransmitter associated with the Parasympathetic Nerves are called **Parasympathomimetic**. They induce the transmission of messages that cause lowered blood pressure, drowsiness, muscle relaxation, etc; Narcotic Analgesics and CNS Depressants are considered to be parasympathomimetic.

Although there are more than 100 chemicals in the brain, only about two dozen probably are true neurotransmitters. The primary neurotransmitters in the brain are norepinephrine (noradrenaline), acetylcholine, dopamine, serotonin, gamma amino butric acid (GABA), endorphins and enkephalins. Norepinephrine, also called noradrenaline, produces effects in the body that are similar to the effects produced by adrenaline. Acetylcholine plays a role in muscle control and effects neuromuscular or myoneural junctions. Dopamine plays a role in mood control and is used in treating Parkinson's Disease. Serotonin is a vasoconstrictor, thought to be involved in sleep, wakefulness, and sensory perception. GABA inhibits various

neurotransmitters and also causes a release of growth hormones. Endorphins and enkephalins are the body's natural pain relievers.

E. How Drugs Work

In simple terms, drugs work by artificially creating natural body reactions that are generally associated with the work of neurotransmitters and hormones. Therapeutic doses of legitimate prescription drugs and over the counter medications are designed to produce carefully controlled simulations of natural action of hormones or neurotransmitters, to make up for a deficiency in the body's natural supply. A common example of this is the first-thing-in-the-morning cup of coffee that is a ritual for many people. When the alarm clock forces us to awake, against our will, our Parasympathetic Nerves are operating in high gear and we are flooded with hormones that induce sleep and relaxation. We use the stimulant caffeine to overcome the body's natural chemicals, so that we can get started on the day's work. An entirely different, but also common example, occurs when we find ourselves worried and anxious at the end of the day, because of problems on the job, at home or wherever. This is stress, and our brains react to stress by activating the Sympathetic Nerves: we're too "keyed up" to sleep. That is when many people reach for the glass of wine, or the Xanax or Valium tablet, to overcome the body's natural stimulation.

But we pay a price when we do these things. When we introduce these chemicals, we disrupt the body's natural balance. The body is going to react, because it must preserve homeostasis. And the body's reaction will try to alter its own supply of natural chemicals to accommodate the ones we have introduced.

One way in which the body may react to the presence of a drug is by producing hormones and neurotransmitters that tend to **counteract** the effects of the drug. For example, if a person snorts cocaine, their brain might react to the resulting stimulation by sending commands along the Parasympathetic Nerves to depress bodily functions, and by commanding the endocrine system to release hormones that also will produce depression. This can lead to an interesting situation: the drug may metabolize, i.e., react with oxygen and other chemicals in the body, and dissipate so that its effects no longer are present; but in the mean time, the brain has caused the body to be flooded with natural hormones and neurotransmitters designed to counteract the drug, and they may still be exerting their effects.

We call this situation the "downside of a drug" or the **"downside effect"**. When a person is experiencing the downside of a drug or the downside effect they may not be under the active influence of the drug. The person may be exhibiting the opposite effects of the drug because of the body's attempt to counteract the effects produced by the drug they consumed.

Two common examples occur with cocaine and methamphetamine. Both of these drugs stimulate the body. The body attempts to counter these stimulant effects by releasing certain hormones and neurotransmitters. As the effects of cocaine or methamphetamine diminish, the hormones and neurotransmitters the brain dispatched to counteract the drug take over and in some cases, cause the body to go below the homeostasis level producing an opposite effect or "downside effect". Many times the person's signs and symptoms will also mirror a narcotic

analgesic or depressant, i.e., constricted pupils, depressed pulse and blood pressure. Persons on the downside of a drug or exhibiting the downside effect may be unable to operate a vehicle safely.

It is not uncommon for a DRE to encounter someone on the downside of a drug. When the arresting officer apprehends a subject, the effects of a particular drug might be very evident. But by the time the DRE is summoned and arrives to conduct the evaluation, the effects may have worn off. As a DRE, you are called upon to give your best professional opinion concerning what is affecting the subject at the time of your evaluation. You must never attempt to infer or estimate what the subject's state or nature of impairment may have been at the time prior to your contact with them.

There is another way in which the body may react to drugs, especially when the drug is routinely used over a period of time. Because the drug is artificially simulating the actions of certain hormones and neurotransmitters, the body may come to rely on the drug to supply those actions, and may simply cease producing those natural chemicals. We call this phenomenon **Negative Feedback**. It simply means that the brain accommodates the routine presence of a drug by turning off the supply of natural chemicals that correspond to the drug. Evidence suggests that this Negative Feedback clearly occurs in users of heroin and cocaine, to cite just two examples. The bodies of cocaine and heroin users apparently cease producing the hormones and neurotransmitters needed for proper pain relief, stress reduction, mental stability and motivation. Very quickly, the user simply can't cope without the drug. A similar effect is physical dependence, or **addiction to the drug**; because the natural chemicals are no longer available, the body needs the drug to provide the functions those natural chemicals used to perform.

Another way in which the body may compensate is by developing increased **tolerance** to the drug, meaning that the same dose of the drug will produce diminishing effects. To express this another way, a steadily stronger dose of the drug will be needed to produce the same effects. Habitual users of drugs may develop tolerance to the drug and as a result they may exhibit relatively little evidence of impairment on the psychophysical test. Even tolerant drug users, when impaired, usually exhibit clinical evidence.

The concept of metabolism is important for an understanding of how drugs work in the body. **Metabolism** is defined as the combined chemical and physical processes that take place in the body involving the distribution of nutrients and resulting in growth, energy production, the elimination of wastes, and other body functions.

There are two basic phases of metabolism: anabolism, the constructive phase, during which small molecules resulting from the digestive process are built up into complex compounds that form the tissues and organs of the body; and catabolism, the destructive phase, during which larger molecules are broken down into simpler substances with the release of energy. A metabolite is a product of metabolism, the chemical changes that take place when the drug reacts with enzymes and other substances in the body. The body uses chemical reactions to break down the drug and ultimately to eliminate it. Sometimes, metabolites of the original drug are themselves drugs and cause impairment. An example, the body quickly metabolizes heroin

into morphine, and it is the morphine that actually produces the effects the heroin user experiences.

F. Medical Conditions Which Sometimes Mimic Drug Impairment

There are numerous medical conditions and injuries that may cause their victims to appear to be under the influence of alcohol or other drugs. DREs are not expected to be a physician and should not attempt to diagnose a disease or medical condition. As soon as a DRE becomes aware of the fact that he or she is dealing with a medical rule out, appropriate treatment should be sought. The DRE should be suspicious of signs or symptoms that seem inconsistent with the DRE's knowledge and training.

Some common medical conditions that DREs may encounter include:

Bipolar Disorder (Manic-Depression) - a condition characterized by the alteration of manic and depressive states.

Conjunctivitis - This is an inflammation of the mucous membrane that lines the inner surface of the eyelids giving a red, bloodshot appearance of the conjunctiva of the eyes. At first glance, this may appear similar to the bloodshot conditions associated with impairment by alcohol or Cannabis. This condition may occur in one eye only.

Diabetes - A diabetic is most likely to be confused with a person impaired by alcohol or drugs when he or she has taken **too much insulin**, so that the blood sugar level becomes dangerously low. This condition is called **insulin shock**. A diabetic in insulin shock may appear very confused, may be non-responsive, sweat profusely and exhibit elevated pulse rate and blood pressure. If you suspect that you may be dealing with insulin shock, give the subject a glass of orange juice, a bite of candy or simply a spoonful of sugar; that should rapidly produce a noticeable improvement in his or her condition.

Head Trauma - A severe blow or bump to the head may injure the brain and create disorientation, confusion, lack of coordination, slowed responses, speech impairment and other gross indicators of alcohol or drug influence. Because the injury usually affects one side of the brain more than the other, disparities usually will be evident in the subject's eyes. Look at the pupils, and observe whether they are obviously different in size. Check the eyes' tracking ability, and see whether they are dissimilar, e.g., one eye moving smoothly while the other jerks noticeably. Check the eyelids to see if one droops while the other appears normal.

Multiple Sclerosis - Victims of Multiple Sclerosis (MS) and other degenerative muscular disorders may exhibit severe coordination problems, gait ataxia, tremors, slurred or garbled speech and many of the other gross indicators of intoxication. However, they will usually appear alert.

Shock - Shock victims often will appear dazed, uncoordinated and non-responsive. Some conditions that should immediately alert a DRE to possible medical conditions include: droopy facial muscles on one side and unusual body movements on only one side.

Stroke - A stroke will usually produce many of the same effects and indicators associated with head trauma. Stroke victims often will have pupils that are markedly different in size. One pupil may remain fixed and exhibit no visible reaction to light, while the other reacts normally.

Some other medical conditions that may cause signs and symptoms similar to drug impairment include: carbon monoxide poisoning, seizures, endocrine disorders, neurological conditions, psychiatric conditions, and infections. There are also normal conditions which can affect vital signs. Some examples are: exercise, excitement, fear, anxiety and depression.

Topics for Study

1. What is a neurotransmitter? What is a hormone?

2. What is a dendrite? What is an axon? What is a synapse?

3. Do arteries carry blood toward the heart or away from the heart?

4. What is unique about the Pulmonary Artery?

5. What are the two types of nerves that make up the Autonomic Nervous Subsystem?

6. Is Cocaine sympathomimetic or parasympathomimetic? What about Heroin?

7. Explain the concept of the "downside effect". Explain the concept of "Negative Feedback".

8. What do we call the nerves that carry messages away from the brain? What do we call the nerves that carry messages toward the brain?

SESSION VII
EXAMINATION OF CLINICAL INDICATORS

SESSION VII EXAMINATION OF VITAL SIGNS

Upon successfully completing this session the student will be able to:

Explain the purposes of the various vital signs examinations in the drug influence evaluation procedure.

Explain the administrative procedures for these examinations.

Explain the cues obtained from these examinations.

Document the examinations of vital signs accurately and completely.

Correctly answer the "topics for study" questions at the end of this session.

A. Concepts and Procedures for Measuring Pulse Rate

Some important definitions:

Pulse is the expansion and relaxation of an artery generated by the pumping action of the heart.

Pulse rate is the number of pulsations in an artery in one minute.

An artery is a strong, elastic blood vessel that carries blood from the heart to the body tissues.

A vein is a blood vessel that carries blood back to the heart.

When the heart contracts, it squeezes blood out of its chambers, and sends the blood surging into the arteries. The surging blood pushes against the walls of the arteries, causing them to expand. If you know where to locate an artery (for example, in the crease of your wrist, just below the base of the thumb) and you press your finger tips onto the skin just above the artery, you will feel the artery expand each time blood surges through it. If you keep your finger tips on the artery and count the pulses that occur in one minute, you will determine your pulse rate.

The Radial Artery provides a convenient pulse point. The Radial Artery can be located in or near the natural crease of the wrist, on the side of the wrist next to the thumb. To use the Radial Artery pulse point, have the subject hold his or her arm straight out, with the palm of their hand facing down. Place the tips of your index and middle fingers into the crease of the subject's wrist, near the base of the thumb, and exert a slight pressure. Allow the subject's hand to droop down from gravity; this will tighten the pressure on your finger tips and aid you to feel the pulse.

The Brachial Artery provides another useful pulse point. It can be located in the crook of the arm, halfway between the center of the arm and the side of the arm closest to the body.

The Carotid Artery can also provide pulse points. The Carotid Artery can be located in the neck, on either side of the "Adam's Apple."

Key points to keep in mind about measuring pulse rate:

- Don't use your thumb to feel someone's pulse because there is an artery in the thumb. If you apply pressure with the thumb, the "beat" you feel may be your own pulse, and not the subject's.

- If you use the Carotid Artery pulse point, don't apply pressure to both sides of the "Adam's Apple." Doing so can cut off the supply of blood to the brain.

- When measuring pulse rate, count the beats for 30 seconds, then multiply by two.

Some technical terms associated with pulse rate:

- Tachycardia: Abnormally rapid heart rate.
- Bradycardia: Abnormally slow heart rate.
- Arrhythmia: Abnormal heart rhythm.

B. Concepts and Procedures for Measuring Blood Pressure

All DREs need to be aware that many females have birth control implants in their upper left arm. The DRE should check for the implants, and if found, the blood pressure should be taken on the subject's right arm.

Some important definitions:

Blood pressure is the force that the circulating blood exerts on the walls of the arteries. The blood pressure changes from instant to instant, as the heart contracts and relaxes.

Systolic pressure is the maximum or highest blood pressure. The blood pressure reaches its systolic value when the heart contracts and sends the blood surging into the arteries.

Diastolic pressure is the minimum or lowest blood pressure. The blood pressure reaches its diastolic value when the heart is fully expanded.

A Sphygmomanometer is a device for measuring blood pressure. The major parts or components of a Sphygmomanometer include:

- The compression cuff, which can be wrapped securely around the arm and which contains a rubber bladder that can be inflated with air. There are different cuffs designed for children, adults and people with extra large arms; these cuffs have different sized bladders.

- The pressure bulb, which can be squeezed to inflate the rubber bladder with air.

- The pressure control valve, which controls the inflation or deflation of the rubber bladder. To inflate the bladder, the pressure control valve must be twisted all the way to the right (clockwise); then, the pressure bulb can be squeezed to pump air into the bladder. To deflate the bladder, the pressure control valve must be twisted to the left (counter-clockwise); the more the valve is twisted to the left, the faster the bladder will deflate.

- The manometer, or pressure gauge, which displays the air pressure in the bladder.

- Tubes, connecting the pressure cuff to the manometer and to the pressure bulb.

Some technical terms associated with blood pressure:

- Hypertension: Abnormally high blood pressure.
- Hypotension: Abnormally low blood pressure.

Blood Pressure is measured in units of millimeters of mercury. Sometimes this is abbreviated as "mmHg", where "mm" represents "millimeters" and "Hg" is the chemical symbol for the element mercury (from "Hydrargyrum", the Latin word for "mercury"). When the manometer or pressure gauge indicates that the pressure in the bladder is 120 mmHg, that means that the air in the bladder, if forced into a glass tube containing liquid mercury, would push the mercury up the tube to a height of 120 millimeters. Some Sphygmomanometers actually have pressure gauges that consist of glass tubes containing mercury, with a ruler alongside the tube marked off in millimeters. Usually, however, aneroid pressure gauges are used. ("Aneroid" means "without fluid".)

When you measure and record blood pressure, it is not necessary to use the symbols "mmHg". Simply record the numbers.

The principles involved in measuring blood pressure are easy to understand. When the pressure cuff is wrapped around the upper arm (e.g. around the bicep) and inflated with air, the air pressure exerts a force on the arm. When the pressure in the bladder gets high enough, the arteries in the arm will be squeezed shut, and no blood will flow through the arteries. In this respect, the pressure cuff works just like a tourniquet.

When the pressure control valve is twisted to the left, air starts to escape from the bladder and the pressure on the arm (and on the artery) starts to drop. However, as long as the air pressure on the artery remains higher than the blood pressure in the artery, the artery will remain squeezed shut and no blood will flow.

Consider this question: What will happen when the air pressure on the artery drops to the point where it just equals the blood pressure in the artery?

At that point, the heart will again be able to push the blood through the artery, so the flow of blood will resume.

But the blood pressure is constantly changing, from instant to instant. At one instant, the pressure will be at its maximum, or Systolic value. Then the blood pressure drops, and a very short time later it will reach its minimum or Diastolic level. Then it climbs again, and repeats the cycle over and over.

When the air pressure in the bladder drops to the point where it equals the Systolic blood pressure, blood will be able to spurt through the artery each time the heart contracts. But an instant later, as the heart starts to expand and the blood pressure drops, the artery will squeeze shut again and the flow will stop.

If the air is allowed to continue to escape from the bladder, the air pressure eventually will fall to the point where it reaches the Diastolic level. At that point, the blood pressure in the artery

always will be equal to or higher than the air pressure on the artery, so the artery will stay open and blood will flow steadily. So the basic idea is simple:

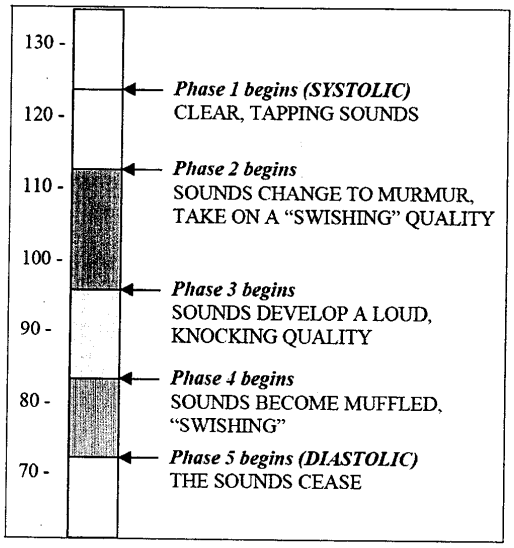
- To measure blood pressure, start by pumping up the bladder until the artery is squeezed completely shut and no blood flows.
- Let the air pressure drop slowly until the blood just begins to spurt through the artery. When that happens, the pressure shown on the gauge will be equal to the Systolic pressure.

- Continue to let the air pressure drop until the blood finally flows steadily through the artery. The pressure showing on the gauge at that time will be the Diastolic pressure.

To determine when the blood starts to spurt, and when it starts to flow steadily, a stethoscope is needed.

The stethoscope should be applied to the skin, directly above the artery. For example, with the blood pressure cuff wrapped around the bicep, the stethoscope can be applied to the Brachial artery pulse point.

When no blood is flowing through the artery, you will hear nothing through the stethoscope. But when the air pressure in the cuff falls to the systolic level, you will hear the blood begin to spurt. The sound you will hear starts as a clear tapping. This is the first phase of what are called Korotkoff Sounds, a distinct series of sounds that are heard as the air pressure in the cuff drops from the systolic to the diastolic level.



As you continue to allow the air to escape from the cuff, the spurts of blood through the artery become steadily longer and the sounds change. They become fainter taking on a swishing quality, and pass through a "knocking" phase, and then suddenly become muffled. Eventually, when the air pressure drops to the diastolic level, the blood flows steadily and all sound ceases.

Step-by-step procedures for measuring blood pressure

(1) Position the cuff on the bicep so that the tubes extend down the middle of the arm.

(2) Wrap the cuff snugly around the bicep.

(3) Clip the manometer to the subject's sleeve, or to some other convenient location, so that you can observe the gauge easily.

(4) Twist the pressure control valve all the way to the right.

(5) Put the stethoscope earpieces in your ears. Make sure the earpieces are turned forward.

(6) Apply the stethoscope to the Brachial Artery pulse point.

(7) Rapidly inflate the bladder to a level high enough to squeeze the artery shut. Usually, a pressure of 180 will be sufficient.

(8) Twist the pressure control valve slightly to the left to allow the air to escape from the bladder slowly (2 mmHg per second).

(9) Keep your eyes on the pressure gauge and listen for the Korotkoff Sounds.

a. Record the Systolic pressure when the first sound (clear, tapping) is heard.

b. Record the Diastolic pressure when the sounds cease.

If the DRE is unable to successfully obtain a blood pressure measurement the first time, they should wait a minimum of three minutes before attempting to obtain another measurement.

C. Concepts of Temperature Measurement

Body temperature is measured using an oral thermometer. The thermometer should always be covered with a clean disposable cover prior to taking the subject's temperature.

When measuring temperature with an oral thermometer, it is important to ensure that the thermometer remains under the person's tongue and that the person is not talking during the measurement process. DRE's should also try to refrain from letting the person drink hot or cold fluids immediately prior to measuring temperature.

	CNS Depressants	Inhalants	Dissociative Anesthetics	Cannabis	CNS Stimulants	Hallucinogens	Narcotic Analgesics
Pulse Rate	Down (2)	Up	Up	Up	Up	Up	Down
Blood Pressure	Down	Up/Down	Up	Up	Up	Up	Down
Temp	Normal	Up/Down/Normal	Up	Normal	Up	Up	Down

2. Down with Anaesthetic gases, up with volatile solvents and aerosols.

"Normal" systolic blood pressure 120-140
"Normal" diastolic blood pressure 70-90
"Normal" pulse (adult male) 60-90
"Normal" temperature 37.0 plus or minus .5 degree, Celcius (98.6 plus or minus 1.0 degree, Fahreheit

The following summarizes the results that <u>generally</u> can be expected when the vital signs examinations are administered to persons under the influence of the various categories of drugs.

Topics for Study

1. Where is the Radial Artery pulse point?

2. Why should you never attempt to feel a subject's pulse with your thumb?

3. Does an artery carry blood to the heart or from the heart?

4. What does the symbol "Hg" represent?

5. What is Diastolic pressure?

6. When do the Korotkoff Sounds begin?

7. Name and describe the major components of a Sphygmomanometer.

8. Which of the seven categories of drugs generally will cause blood pressure to be elevated?

SESSION VIII

DEMONSTRATIONS OF THE EVALUATION SEQUENCE

SESSION VIII DEMONSTRATIONS OF THE EVALUATION SEQUENCE

Upon successfully completing this session the student will be able to:

Describe the sequence in which examinations and other activities are performed in the drug influence evaluation procedure.

In this session, you will have an opportunity to observe demonstrations of the entire Drug Evaluation and Classification drug influence evaluation procedure. Your instructors will conduct some of these demonstrations "live", in the classroom. There will also be a video demonstration. The demonstrations will illustrate the systematic and standardized process used for the Drug Evaluation and Classification Program.

Your instructors will make the video available for reviewing, after normal class hours. You should make an effort to view the video at least a second time before the completion of this course to ensure you are able to conduct an evaluation using the systematic and standardized process.

SESSION IX

CENTRAL NERVOUS SYSTEM DEPRESSANTS

SESSION IX CENTRAL NERVOUS SYSTEM DEPRESSANTS

Upon successfully completing this session the student will be able to:

Explain a brief history of the CNS Depressant category of drugs.

Identify common drug names and terms associated with this category.

Identify common methods of administration for this category.

Describe the symptoms, observable signs and other effects associated with this category.

Describe the typical time parameters, i.e. onset and duration of effects, associated with this category.

List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs.

Correctly answer the "topics for study" questions at the end of this session.

A. Overview of CNS Depressants

Central Nervous System Depressants slow down the operations of the brain. They first affect those areas of the brain that control a person's conscious, voluntary actions. As dosage increases, depressants begin to affect the parts of the brain controlling the body's automatic, unconscious processes, such as heartbeat and respiration.

Alcohol is the model for the CNS Depressant category of drugs. Alcohol is the most familiar, and most widely abused, depressant. With some exceptions, all depressants affect people in much the same way as does alcohol.

Some major subcategories of CNS Depressants other than alcohol include:

- Barbiturates
  (Derivatives of Barbiturate Acid)

- Non-Barbiturates
  (Synthetic compounds with a variety of chemical structures)

- Anti-Anxiety Tranquilizers
  (Frequently prescribed and frequently abused)

- Anti-Depressants
  (It may seem to be a contradiction in terms to call a subcategory of Depressants the Anti-Depressants; but in this case, we simply mean that these drugs are prescribed to combat psychological depression. For that reason, the Anti-Depressants are sometimes known as the "mood elevators".)

- Anti-Psychotic Tranquilizers
  (Also known as the "major tranquilizers", to distinguish them from the Anti-Anxiety tranquilizers, or "Minor Tranquilizers".)

- Combinations of the other five subcategories.

Some examples of specific drugs included in each subcategory are given in the table on pages IX-4 and IX-5.

Most users of CNS Depressants ingest these drugs orally. However, although the practice is not common, some Barbiturate abusers inject their drugs intravenously. The injection paraphernalia used by Barbiturate abusers are similar to those used by Heroin addicts, although a larger hypodermic needle is used, because the Barbiturate solution is thicker than the Heroin solution. The injection sites on the skin of a Barbiturate abuser exhibit large swellings, and may develop ulcerations. Necrosis may occur, i.e., a decaying of the body's tissue at the injection site.

EXAMPLES OF CNS DEPRESSANTS

BARBITURATES	NON-BARBITURATES	ANTI-ANXIETY TRANQUILIZERS
Butalbital Common trade name: Fiornal, Trianal	Carisoprodol Trade name: "Soma"	Alprazolam Trade name: "Xanax"
Pentobarbital Common trade name: "Nembutal" Common street names: "yellows"; "yellow jackets"	Chloral Hydrate Common trade names: "Aquachloral"; "Noctec" Common street names: "Mickey Finn"; "Knock-out Drops"	Chlordiazepoxide Trade name: "Apo-chlordiazepoxide"
Phenobarbital Many trade names Common street name: "pink ladies"	Diphenhydramine Hydrochloride Common trade names: "Benadryl"; "Sominex"; "Dramamine"	Clonazepam Trade name: "Rivotril"
Secobarbital Common trade name: "Seconal" Last listed in Canada in 2007.	Gamma-hydroxybutyrate Street names: "GHB"; "GBL"; "Liquid X";"1,4 Butanediol" Trade name is Xyrem.	Diazepam Trade name: "Valium"
	Methaqualone (No longer produced in U.S) Street name:"Ludes"	Duloxetine Trade name: "Amo-clobemide"
	Paraldehyde Trade name: "Paraldehyde Injection BP"	Flunitrazepam Trade Name: "Rohypnopl" Street names: "Roofies" or "Roches" Not legal in Canada or the US.
	Phenytoin Trade name "Dilantin"	Flurazepam Trade name: "Dalmane"
	Zolpidem Common trade names: "Ambien" Not available in Canada.	Lorazepam Trade name: "Ativan"
		Meprobamate Trade names: "282 MEP";
		Oxazepam Trade name: "Apo-oxazepam"
		Temazepam Trade name: "Restoril"
		Triazolam Trade name: "Halcion"

EXAMPLES OF CNS DEPRESSANTS
(CONTINUED)

ANTI-DEPRESSANTS	ANTI-PSYCHOTIC TRANQUILIZERS	COMBINATIONS
Amitriptyline	Chlorpromazine Trade name: "Thorazine"	Chlordiazepoxide and Amitriptyline Trade name: "Limbitrol"
Hydrochloride Common trade names: "Elavil"; "Endep"	Droperidol Trade name: "Inapsine"	Chlordiazepoxide Hydrochloride and Clidinium Bromide Trade name: "Librax"
Bupropion Trade name: "Wellbutrin"	Lithium Carbonate	Perphenazine and Amitriptyline Common trade names: "Apo Peram"; "PMS-Levazine"
Citalopram Trade name: "Celexa"	Lithium Citrate	
Desipramine Hydrochloride Common trade names: "Norpramin"; "Pertofrane"	Haloperidol Trade name: "Haldol"	
Doxepin Hydrochloride Common trade names: "Adapin"; "Sinequan"		
Escitalopram Trade name: "Lexapro"		
Fluoxetine Trade names:"Prozac"; "Sarafem"		
Fluvoxamine Trade name: "Luvox"		
Impramine Trade name: "Tofranil"		
Paroxetine Trade name: "Paxil"		
Phenelzine Sulfate Trade name: "Nardil"		
Sertraline Trade name: "Zoloft"		
Trazodone Trade name: "Desyrel"		
Venlafaxine Trade name: "Effexor"		

B. Possible Effects of CNS Depressants

Once again, alcohol is the model here. Other depressants generally affect people in much the same way as does alcohol.

- reduced social inhibitions
- divided attention impairment
- slowed reflexes
- impaired judgment and concentration
- impaired vision and coordination
- slurred, mumbled or incoherent speech
- a wide variety of emotional effects, such as euphoria, depression, suicidal tendencies, laughing or crying for no apparent reason, etc.

In general, a person under the influence of a CNS Depressant will look and act as though they were drunk on alcohol.

C. The Onset and Duration of Depressants' Effects

Some CNS Depressants act very quickly, and begin to affect their users within seconds. Others act more slowly, sometimes taking one-half hour or more to begin to exert an influence. The quick acting depressants also tend to be relatively short acting: in some cases their effects wear off in a matter of minutes. The slow acting depressants, on the other hand, tend to produce longer lasting effects.

Depressants fall into four groups, based on how quickly they take effect and how long their effects last.

The Ultra Short Depressants take effect in a matter of seconds, but their effects dissipate in just a few minutes. They are used medically to provide a momentary sedation of a patient, for example to reduce a psychiatrist's patient's anxieties and inhibitions at the beginning of a counseling session. An example of an Ultra Short Depressant is Thiopental (Pentothal), sometimes call "truth serum". Ultra Short Depressants rarely are the drugs of choice for abusers, because their effects don't last long enough to satisfy most abusers.

The Short Depressants are more attractive to drug abusers. They generally take effect within 10-15 minutes, and their effects last approximately four hours. Medical applications of the Short Depressants include treatment of insomnia and sedation of patients prior to surgery. An example of a short depressant is Secobarbital.

Intermediate Depressants may require up to 30 minutes to take effect, but their effects typically last 6-8 hours. They are popular among drug abusers who desire a longer-lasting state of intoxication. The medical applications of Intermediate Depressants are similar to those of Short Depressants. Amobarbital is an example of an Intermediate Depressant.

The drugs Diazepam and Flurazepam straddle the border between short and intermediate depressants. The result is a fairly fast acting drug with fairly prolonged effects.

The Long Depressants generally are not the preferred drugs of abusers. This is because they take too long to start producing effects (typically, about one hour). However, their effects usually last 8-14 hours. Long Depressants are used medically to control epilepsy and other conditions that can cause convulsions.

D. Signs and Symptoms of Depressant Overdose

Overdoses of CNS Depressants produce effects that are essentially identical to those of alcohol overdoses:

- the person becomes extremely drowsy and may pass out;
- the heartbeat slows;
- respiration becomes shallow;
- the skin may feel cold and clammy;
- death may result from respiratory failure.

Combinations of depressants can be especially risky. Unfortunately, many people routinely do combine depressants, usually in the form of alcohol and some other depressant. In some cases, the effects that result may be greater than the sum of the effects that the two drugs would produce independently.

E. Expected Results of the Evaluation

When a person under the influence of CNS Depressants is evaluated by a DRE, the following results can generally be expected:

Horizontal Gaze Nystagmus - yes

Vertical Gaze Nystagmus – yes, (high does for that individual)

Lack of Convergence - yes

Pupil size – normal; however, in the specific cases of Soma (not available in Canada), Methaqualone (Quaaludes) and some anti-depressants the pupils will usually be dilated.

Pupil's reaction to light - slow

Pulse rate - will be down; however, with Quaaludes and alcohol the pulse rate may be elevated.

Blood Pressure - down

Temperature - normal.

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. E. GRAHAM | DRE NO. 4654 | ROLLING LOG NO. 98

RECORDER/ WITNESS: SGT. J. FERGUSON | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE # S-Session 9-1

ARRESTEE'S NAME (LAST, FIRST, M): COCKROFT CAROLYN | DOB (YY-MM-DD): 60-04-21 | AGE: 49 | SEX: F | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. M. SMITH # 49771

DATE EXAMINED/TIME/LOCATION: 04/11/2009 - 0045 TRF. OFFICE | BREATH RESULTS: ☐ Refused Results 0 mg% Instrument # 00324 | CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. SMITH

What have you eaten today? When? CHICKEN SOUP 8pm

What have you been drinking? How Much? NOTHING | Time of last drink? N/A

Time now? MIDNIGHT | When did you last sleep? How long? LAST NIGHT 6HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes — IT'S NONE OF YOUR BUSINESS ☒ No

ATTITUDE: SULLEN, WITHDRAWN, NON-RESPONSIVE

COORDINATION: POOR, STUMBLING, STAGGERING

SPEECH: SLURRED

BREATH: NOTHING NOTED

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☒ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 60 10050	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 58 10105	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 58 10117	Angle of Onset	35°	35°

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: 27/30 (26, R) | 26/30 (7, L)

ROMBERG BALANCE: 2" / 2" / 2" / 2"

WALK AND TURN TEST: EXTRA STEPS

Cannot keep balance ✓

Starts too soon ✓

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	✓✓	✓
Steps off Line	✓	Ø
Raises Arms	✓✓	Ø
Actual Steps Taken	9	11

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ Puts foot down

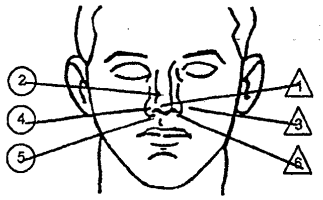
INTERNAL CLOCK: 46 Estimated as 30 sec.

Describe Turn: LOST BALANCE STAGGERED TO RIGHT

Cannot do Test (explain): N/A

Type of Footwear: LOAFERS

○ Right △ Left — Draw lines to spots touched

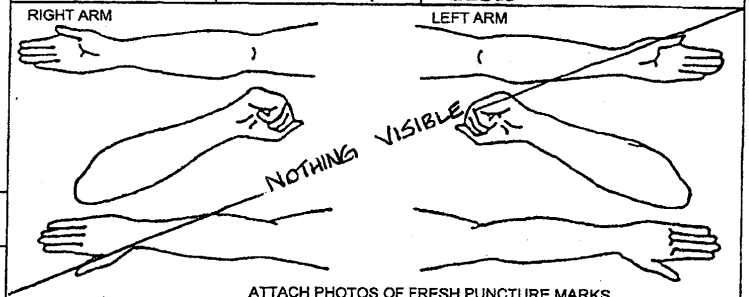


PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.0	3.5
Right Eye	4.0	6.0	3.5
Rebound Dilation		☐ Yes ☒ No	

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: SLOW



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 70 | TEMP: 37.0

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? I TOOK SOME MEDICINE MY BROTHER GAVE ME | How much? U/K | Time of use? DON'T REMEMBER | Where were the drugs used? (Location) BROTHER'S HOUSE

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
04/11/2009 0015	0035	0045	0125

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT MEDICAL ☐ ALCOHOL DEPRESSANT ☐ STIMULANT HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC NARCOTIC ANALGESIC ☐ INHALANT CANNABIS ☒ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** 1200 Vanier Parkway, Ottawa Ont.

(2) **Witnesses:** Sgt John Ferguson

(3) **Source:** The writer was notified that Sgt John Ferguson had arrested a subject – Carolyn Cockcroft for impaired driving and was now requesting a drug evaluation be conducted on her. Ferguson indicated that he observed Cockcroft travelling at 30km/h on Highway 417. When stopped, she appeared dazed and disoriented. She was unable to perform the roadside SFSTs and transported to the office where she had provided breath samples indicating a BAC of 0mg%.

(4) **First Observations of Subject:** Cockcroft was first observed in an interview room. She was quiet, withdrawn, and slow to respond to questions. When she would try to walk, she would stumble. She stumbled and nearly fell a number of times.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Cockcroft had a 2" sway side to side as well as front to back. She estimated the passing of 30 seconds in 46 seconds. **Walk & Turn Test** – She lost her balance once during the instruction stage. On her way up the line, she stepped off line on her 2nd step, missed heel to toe on her 5th & 8th steps, lost her balance and staggered during her turn, then missed heel to toe on her 4th step and took an extra 2 steps on her way back. **One Leg Stand Test** – While balancing on her left leg, she swayed while balancing, used her arms for balance, hopped, and put her foot down on her count of 26. While balancing on her right leg, she swayed while balancing, used arms for balance, and put her foot down on her count of 7. **Finger to Nose Test** – She was unable to touch the tip of her finger to the tip of her nose 5 out of 6 times.

(6) **Clinical Signs:** Cockcroft had a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, and an angle of onset of 35 degrees. Her pulse rate measurements of 58 were below the normal range & her blood pressure was below the normal range. Her reaction to light was slow, she exhibited a lack of convergence, and her muscle tone was flaccid.

(7) **Statements:** Cockcroft indicated she took some of her brother's medication earlier.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Evan Graham, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Cockcroft provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Karen Oldham | DRE NO.: 15074 | ROLLING LOG NO.: 63

RECORDER/ WITNESS: Cst. Justin MacLean

CRASH: ☐ None ☐ Fatal ☐ Injury ☑ Property

FILE #: S-Session 9-2

ARRESTEE'S NAME (LAST, FIRST, M): SAUNDERS, Laura

DOB (YY-MM-DD): 71 11 20 | AGE: 38 | SEX: F | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Joseph MUIR

DATE EXAMINED/TIME/LOCATION: 2009-09-12 1348hrs. ANC MR.

BREATH RESULTS: ☐ Refused Results N/A Instrument # N/A

CHEMICAL TEST: ☐ Refused ☐ Urine ☐ Oral fluid ☑ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: Cst. Joseph Muir

What have you eaten today? When? Kraft Dinner Noon

What have you been drinking? How Much? "Don't ask. Idiot"

Time of last drink? N/A

Time now? "I lost track" | When did you last sleep? How long? Last night 10hours

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☑ Yes "Yes, I can't pronounce it though" ☐ No

ATTITUDE: Impatient

COORDINATION: Gait ataxia, slow movements

SPEECH: Thick, slurred

BREATH: No odour detected

FACE: Normal / heavy makeup

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, If so ☐ Hard ☐ Soft

Eyes: ☑ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☑ Yes ☐ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☐ Normal ☑ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 60 / 1353	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 56 / 1409	Max. Deviation	☑ Yes ☐ No	☑ Yes ☐ No
3. 58 / 1425	Angle of Onset	45°	45°

Vertical Nystagmus? ☑ Yes ☐ No

Convergence: Right Eye ○ Left Eye ○

ONE LEG STAND: 22/30 | 24/30

ROMBERG BALANCE: 2" | 3"

WALK AND TURN TEST

Cannot keep balance ✓✓✓✓ (4)

Starts too soon ✓✓ (2)

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	All	All
Steps off Line	✓✓ (2)	Ø
Raises Arms	Constant	Constant
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ Puts foot down

INTERNAL CLOCK: 64 Estimated as 30 sec.

Describe Turn: pivot on both feet in one movement

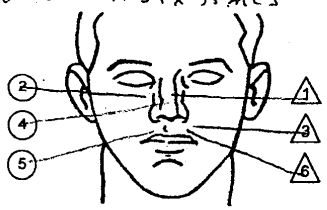
Cannot do Test (explain): N/A

Type of Footwear: socks

○ Right △ Left

Draw lines to spots touched

Had to be told to put arm down all six times



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	5.0	3.5
Right Eye	4.0	5.0	3.5

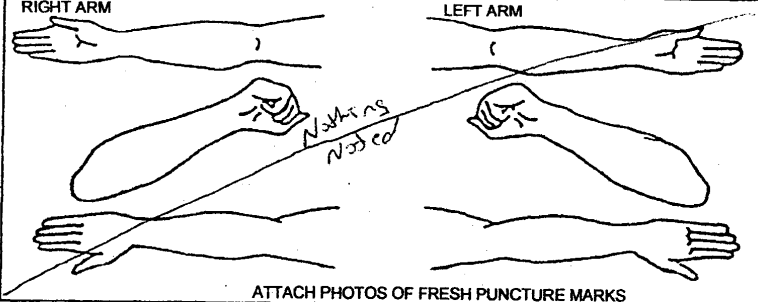
Rebound Dilation: ☐ Yes ☑ No

NASAL AREA: Nothing noted

ORAL CAVITY: Nothing noted

REACTION TO LIGHT: slow

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 80 TEMP: 35.6°

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? Lorazepam | How much? A couple | Time of use? "At work" "I don't know" | Where were the drugs used? (Location) "At work, never mind"

DATE/TIME OF ARREST: 2009-09-12 1045 hrs.

TIME DRE NOTIFIED: On scene

EVAL START TIME: 1348 hrs

TIME COMPLETED: 1439 hrs.

MEMBERS SIGNATURE: K. Oldham

SERIAL/REG. #: 73221

REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL

☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** RNC Headquarters, St John's, NFLD

(2) **Witnesses:** Constable Justin McLean

(3) **Source:** The writer attended a single vehicle collision with no injuries. First responders had placed the female driver – Laura Saunders in the police vehicle prior to the writer's arrival and had read her a demand for a drug evaluation due to her acting dazed and slow despite emergency services personnel indicating she was not injured. Cst McLean had also indicated she was unsteady on her feet and her speech was slurred but there was no indication of alcohol present.

(4) **First Observations of Subject:** Saunders was first observed in the back seat of the police vehicle. Her eyes were fixed forward in a constant hundred mile stare. Her speech was slow and sometimes incoherent. She was having a difficult time holding paperwork.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Saunders had a 2" sway front to back and a 3" sway side to side. **Walk & Turn Test** – She lost her balance 4 times during the instruction stage and tried to start too soon twice. During the walking stage, she missed heel to toe on every step, pivoted on both feet in one motion to make her turn, and on the way back down the line, he stepped off line on step 2 & 6. She raised her arms for balance constantly throughout the test. **One Leg Stand Test** – While balancing on her left leg she swayed while balancing, used her arms to balance, and put his foot down on her counts of 4 & 9. While balancing on her right leg she swayed while balancing, used her arms for balance, and put her foot down on her count of 2. **Finger to Nose Test** – She was unable to touch the tip of her nose with the tip of her finger on any of her 6 attempts and had to be told to return her arm to her side each time.

(6) **Clinical Signs:** Saunders had a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, had an angle of onset of 45 degrees, and exhibited vertical nystagmus. Her pulse rate, blood pressure and body temperature were all below the normal range. Her reaction to light was slow, she exhibited a lack of convergence, and her muscle tone was flaccid.

(7) **Statements:** Saunders indicated she took Lorazepam earlier but would not specify when.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Karen Didham, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Saunders provided a blood sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Sgt. Rob Martin | DRE NO.: 11088 | ROLLING LOG NO.: 214

RECORDER/ WITNESS: Cst. Steven Marsh | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 9-3

ARRESTEE'S NAME (LAST, FIRST, M): SANFORD, Tim | DOB (YY-MM-DD): 451011 | AGE: 64 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Steven Morash

DATE EXAMINED/TIME/LOCATION: 2009-09-21 1737hrs YRP H.Q. | BREATH RESULTS: ☐ Refused Results 0 mg% Instrument # 944101 | CHEMICAL TEST: ☐ Refused ☐ Urine ☐ Oral fluid ☑ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: Cst. S. Morash | What have you eaten today? When? Meatball Sub Lunch | What have you been drinking? How Much? I don't drink | Time of last drink? N/A

Time now? 5pm | When did you last sleep? How long? Last night 6hours | Are you sick or injured? ☐ Yes ☑ No | Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No | Do you have any physical disabilities? ☐ Yes ☑ No | Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☑ Yes ☐ No: Clonazepam | ATTITUDE: Cooperative | COORDINATION: Slow, unsteady

SPEECH: slurred, slow, mumbling | BREATH: Nothing noted | FACE: Flushed

CORRECTIVE LENS: ☐ None ☑ Glasses ☐ Contacts, If so ☐ Hard ☐ Soft | Eyes: ☐ Normal ☑ Reddened Conjunctiva ☑ Bloodshot ☐ Watery | Blindness: ☑ None ☐ L. Eye ☐ R. Eye | Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain) | Nystagmus Present: ☑ Yes ☐ No | Able to follow stimulus: ☑ Yes ☐ No | Eyelids: ☐ Normal ☑ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 84, 1747	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 80, 1807	Max. Deviation	☑ Yes ☐ No	☑ Yes ☐ No
3. 80, 1818	Angle of Onset	40°	40°

Vertical Nystagmus? ☐ Yes ☑ No | Convergence: Right Eye ☑ Left Eye ☑

ONE LEG STAND: 13/30 (R) 13/30 (L)

ROMBERG BALANCE: 2" 3"

WALK AND TURN TEST

Cannot keep balance ✓✓✓ (4)

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	✓	✓
Misses Heel -Toe	✓✓ (2)	✓✓ (2)
Steps off Line	✓✓ (2)	✓✓ (2)
Raises Arms	✓	✓
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance ☒ Hopping ☑ Puts foot down

INTERNAL CLOCK: 48 Estimated as 30 sec. | Describe Turn: As instructed | Cannot do Test (explain): N/A | Type of Footwear: sock feet

○ Right △ Left — Draw lines to spots touched: Each attempt took approx 8-10 seconds

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.5	7.0	4.5
Right Eye	4.5	7.0	4.5

Rebound Dilation ☐ Yes ☑ No

NASAL AREA: Clear | ORAL CAVITY: Nothing noted | REACTION TO LIGHT: Slow

RIGHT ARM / LEFT ARM: Nothing

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 60 | TEMP: 35.9°

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "Clonazepam + other pills I don't remember" | How much? | Time of use? "This morning" | Where were the drugs used? (Location) "When I got my coffee at Tim's"

DATE/TIME OF ARREST: 2009-09-21 1600hrs | TIME DRE NOTIFIED: 1700hrs. | EVAL START TIME: 1737 hrs. | TIME COMPLETED: 1820 hrs

MEMBERS SIGNATURE: [signature] | SERIAL/REG. #: 63441 | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL ☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** York Regional Police HQ

(2) **Witnesses:** Constable Steven Marsh

(3) **Source:** The writer was contacted by radio to attend headquarters to conduct an evaluation on a suspected drug impaired driver for Constable Steven Marsh. Marsh indicated that he had been conducting a roadside checkpoint when the suspect – Tim Sanford approached. Sanford was asked basic questions and appeared confused and sluggish in his responses. Marsh also indicated Sanford was fumbling with his paperwork and would appear to forget what papers were requested of him mere seconds after being told. Marsh arrested Sanford for impaired driving, returned him to HQ and demanding breath samples, the result of which indicated a BAC of 0mg%.

(4) **First Observations of Subject:** The writer first observed Sanford in the Breath Room. He appeared confused, his speech was slow, and he slurred his words as he spoke to Marsh. He was unsteady on his feet and would sway/list to one side or the other when walking.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Sanford had a 3" sway side to side and a 2" sway front to back. He estimated 48 seconds to be 30 seconds. **Walk & Turn Test** – He could not keep his balance during the instruction stage, his feet breaking apart 4 times. On the way up the line, he raised his arms for balance, missed heel to toe on his 3rd & 4th steps, stepped off line on his 5th & 6th steps, and stopped after his 8th step. On the way back down the line, he stopped after his 1st step, then started again, missing heel to toe on his 3rd step, stepping off line on his 4th & 5th steps, missing heel to toe on his 7th step, and stepping off line on his 8th step. **One Leg Stand Test** – While balancing on his left leg he swayed, used arms, and put his foot down at his count of 7. While balancing on his right leg he swayed, used arms, and put his foot down on his count of 9. **Finger to Nose Test** – He was unable to touch the tip of his nose with the tip of his finger on all but his 5th attempt.

(6) **Clinical Signs:** Sanford had a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, and had an angle of onset of 40 degrees. His blood pressure and body temperature were all below the normal range. His reaction to light was slow, he exhibited a lack of convergence, and his muscle tone was flaccid.

(7) **Statements:** Sanford stated he took Clonazepam and "...other pills I don't remember" this date

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Robert Martin, a certified Drug Recognition Expert, that:

_____

(10) **Miscellaneous:** Sanford provided a blood sample for analysis.

SESSION X

CENTRAL NERVOUS SYSTEM STIMULANTS

SESSION X CENTRAL NERVOUS SYSTEM STIMULANTS

Upon successfully completing this session the student will be able to:

Explain a brief history of the CNS Stimulant category of drugs.

Identify common drug names and terms associated with this category.

Identify common methods of administration for this category.

Describe the symptoms, observable signs and other effects associated with this category.

Describe the typical time parameters, i.e. on-set and duration of effects, associated with this category.

List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs.

Correctly answer the "topics for study" questions at the end of this session.

A. Overview of Central Nervous System Stimulants

CNS Stimulants speed up the operation of the brain and spinal cord. It is important to emphasize that "speed up" does not mean "improve" or "enhance". The CNS Stimulants definitely do not make the brain work better. Rather, they cause the brain and the rest of the nervous system to work harder, and often to make more mistakes.

The "speeding up" caused by CNS Stimulants results in significantly increased heartbeat, respiration and blood pressure, all of which can lead to physical harm to the abuser. In addition, the stimulant user experiences nervousness, irritability and an inability to concentrate or think clearly.

There are three major subcategories of CNS Stimulants; Cocaine, the amphetamines and others.

Cocaine derives from the coca plant, an evergreen native to South America. Cocaine is made from the plant's leaves. There is archaeological evidence that natives of Peru chewed coca leaves 5,000 years ago.

Amphetamines are synthetic (i.e. manufactured) drugs. They were first produced near the end of the 19th Century. Amphetamines have a number of legitimate medical applications, including control of narcolepsy; control of certain hyperactive behavioral disorders in children; relief or prevention of fatigue to allow persons to perform essential tasks of long duration; treatment of mild depression; control of appetite; prevention and treatment of surgical shock; treatment of Parkinson's Disease; maintenance of blood pressure during surgery; enhancement of the action of certain analgesic drugs; and, to antagonize the effects of depressant drugs. Numerous pharmaceutical companies manufacture amphetamines that are prescribed for these purposes. But these pharmaceutical amphetamines often are abused, as well.

Examples of common pharmaceutical amphetamines include:

DEXEDRINE
(dextroamphetamine sulfate)
Common street names: "Dexies"; "Hearts"

BENZEDRINE
(amphetamine sulfate)
Common street names: "Bennies"; "Whites"; "Cartwheels"

DESOXYN
(methamphetamine hydrochloride, also known desoxyephedrine)

ADDERALL
(Combination of dextroamphetamine and amphetamine)

Pharmaceutical amphetamines are not the only source of abused amphetamines. Large quantities also are illegally manufactured in clandestine laboratories. The two most common amphetamines are Methamphetamine and Amphetamine sulfate.

Methamphetamine is also known as methedrine. Some common street names include "speed"; "crank"; "crystal"; "ice"; "meth"; and "water". Methamphetamine hydrochloride is a white to light brown crystalline powder, or clear chunky crystals resembling ice. Methamphetamine base is liquid. The majority of street methamphetamine is produced in clandestine laboratories (e.g. reduction of L-ephedrine or D-pseudoephedrine over red phosphorus with hydroiodic acid, or reduction with sodium or lithium in condensed liquid ammonia). Medicinally, methamphetamine is used in the treatment of narcolepsy, attention deficit disorder (ADD), and attention deficit hyperactivity disorder (ADHD). Typical doses are 10 mg/day or up to 40 mg daily, and a course of greater than six weeks is not recommended. Methamphetamine is infrequently used in the treatment of obesity, overeating disorders, and weight loss due to its abuse potential. Amphetamine is also used in ADD, narcolepsy and weight control. Recreationally, Methamphetamine is abused to increase alertness, relieve fatigue, control weight, treat mild depression and for its intense euphoric effects.

Methamphetamine abusers often inject or smoke the drug. However, it can also be snorted or taken orally.

The smokeable forms of methamphetamine are known as "Crystal Meth" or "Ice." They contain the same active chemical compound as powdered methamphetamine, but undergo a re-crystallization process in which some impurities are removed. It is abused in much the same way as "Crack", i.e. small bits of "Ice" are placed in the bowl of a pipe and flame from a lighter is applied to vaporize the drug; the smoker then draws the vapor into the lungs.

Other non-Cocaine and non-amphetamine CNS Stimulants include the prescription drugs Ritalin, Preludin, and the non-prescription drug Caffeine. Some CNS Stimulants are legally manufactured and distributed without prescription.

Ephedrine is a legally manufactured stimulant which is commonly used in diet aids and body building supplements. Ephedrine can also be found in some herbal preparations and numerous over the counter (OTC) substances. All have legitimate medical applications, but they also have the potential to be abused.

Other CNS Stimulants that are illicit and have no legitimate uses are Cathine and Cathinone. They are two psychoactive chemicals derived from the Khat plant, which originated from the sub-Sahara regions of Africa. Methcathinone is an illicitly manufactured stimulant made from common household chemicals. Its effects are very similar to methamphetamine.

There are various ways in which CNS stimulant abusers ingest their drugs. Cocaine and methamphetamine are commonly insufflated (snorted), smoked, injected or taken orally. Snorting may still be the most common method of ingesting Cocaine, although smoking has become increasingly popular.

In order to be smoked, a pure form of Cocaine is needed. Various chemical processes can be used to "free" the Cocaine from other elements to which it is chemically bonded. The pure Cocaine sometimes is called "freebase", and the practice of smoking it sometimes is called "freebasing".

One of the processes used to produce "freebase" produces the pure Cocaine in the form of small, hard chunks. The chunks are often called "Crack" or "Rock Cocaine". The term "Crack" derives from the cracking sound the chunks produce when they are smoked.

The pharmaceutical amphetamines are produced in the form of tablets, capsules and liquid elixirs, and so they are ingested orally. Illicitly manufactured amphetamine sulfate usually is produced in tablet form (the tablets sometimes are called "mini beans"), and ingested orally.

B. Possible Effects of CNS Stimulants

Cocaine, Methamphetamine and the amphetamines produce euphoria, a feeling that there are no problems. A feeling of super strength and absolute self confidence may also be present. With Cocaine, but not with the amphetamines, there is also an anesthetic effect, i.e. a dulling of pain.

Stimulant users tend to become hyperactive, e.g. nervous, extremely talkative and unable to stand still. CNS Stimulants also tend to release the user's inhibitions, and to impair the user's ability to perceive time and distance. Persons under the influence of CNS Stimulants become easily confused and lose the ability to concentrate or to think clearly for any length of time.

C. Onset and Duration of CNS Stimulants' Effects

1. Cocaine

In general, Cocaine is a fairly fast acting, but short duration drug.

When smoked, or "freebased", Cocaine goes very quickly to the brain. The smoker almost immediately feels a "rush", or very intense euphoria. However, the effects continue to be felt for only about 5-10 minutes.

When injected, the effects also begin very quickly, usually within just a few seconds, and the onset of effects is very intense. The effects usually continue to be felt for 45-90 minutes.

When insufflated or snorted, the onset of effects is still fairly rapid, although not so fast as with smoking or injection. The user generally feels the onset within about 30 seconds. A "rush" occurs, although it is not quite as intense as when the Cocaine is smoked or injected. The user generally continues to feel the effects for 30-90 minutes after snorting the Cocaine.

When taken orally, the user generally does not start to feel the effects of the Cocaine for 3-5 minutes, and, the effects are not as intense as they are with other methods of ingestion. For these reasons, oral ingestion is the least preferred method of using Cocaine. However, the

effects of Cocaine taken orally may last 15-30 minutes longer than they do when other methods of ingestion are used.

Because Cocaine's effects are of relatively short duration, a Cocaine user can present some difficulty to a DRE. The suspect may have been markedly impaired when first contacted by the arresting officer, but by the time the subject is brought to the DRE, the effects of Cocaine may have worn off to the point that the indicators of stimulant influence are no longer apparent. The DRE may be understandably frustrated when this occurs, but his or her conclusions as to the probable categories of drugs involved must reflect the observable evidence gleaned from the drug influence evaluation. The DRE should never "force" a conclusion as to an impairment that might have existed 30minutes or an hour ago when he or she has no personal, credible basis for that conclusion.

Subjects who have ingested both Cocaine and alcohol will produce a metabolite know as "Cocaethylene". This has a half-life of four hours, that possibly extends the effects of Cocaine longer than norm.

2. Methamphetamine

Methamphetamine also is a fairly fast acting drug, and its effects are very similar to Cocaine's. However, Methamphetamine's effects last a good deal longer.

When injected, Methamphetamine's effects begin to be felt within a very few seconds. The user experiences an intense "rush", which lasts at the high level of intensity for 5-30 seconds. Subsequently, the user stays "high" or "wired' for 4-8 hours, with residual effects lasting up to 12 hours.

When smoked, the "rush" is very rapid and intense, much like the "rush" produced by "Crack". However, the smoker usually will remain impaired for at least several hours.

When Methamphetamine is taken orally, the onset of effects is delayed, the "rush" is much less intense and the effects last longer.

When Methamphetamine is snorted, the onset of effects is not quite as rapid as with smoking or injecting. The onset of effects are within 30 seconds, the rush is not as intense and the effects last between 30 and 90 minutes.

D. Signs and Symptoms of Stimulant Overdose

The euphoria expected by a stimulant user can be replaced by panic if an overdose is taken. The user may become very confused, and suddenly aggressive. They can suffer convulsions, and possibly faint or pass into a coma. Heartbeat will increase, possibly dramatically, and heart arrhythmia (irregular beating) may develop. This may lead to cardiac arrest. Death can also occur from sudden respiratory failure.

Another danger is that users may attempt to counteract a stimulant overdose with barbiturates, possibly leading to an overdose of CNS Depressant.

Overdoses of Cocaine or Amphetamines can cause the pleasurable effects to turn into panic and often violent behavior. If the overdose is caused by Cocaine, it is commonly referred to as, Cocaine Psychosis or Cocaine Delirium. Hallucinations may occur and many overdose victims complain of the feeling that bugs are crawling under their skin. This is commonly known as "coke bugs".

E. Expected Results of the Evaluation

When a person under the influence of CNS Stimulants is evaluated by a DRE, the following results can generally be expected:

Horizontal Gaze Nystagmus - no

Vertical Gaze Nystagmus - no

Lack of Convergence - no

Pupil Size - dilated

Reaction to light - slow

Pulse Rate - up

Blood Pressure - up

Temperature - up

Muscle tone - rigid

Injection Sites might be found, e.g., on the arms, wrists, neck, etc., especially with Methamphetamine users but also with some Cocaine users. Other Cocaine users who routinely snort their drug may exhibit severe redness in the nasal area, and possibly scarring or erosion of the nasal septum.

General indicators:

- anxiety
- body tremors
- bruxism (grinding of the teeth)
- dry mouth
- euphoria
- exaggerated reflexes
- excited
- eyelid and leg tremors
- irritability
- increased alertness
- insomnia
- redness to nasal area
- restlessness

- runny nose
- talkative

Topics for Study

1. Why is it sometimes difficult for a DRE to obtain evidence of CNS Stimulant influence when examining a Cocaine user?

2. What kinds of illicitly manufactured Amphetamines are most commonly abused?

3. Name two CNS Stimulants other than Cocaine or the Amphetamine compounds.

4. How do CNS Stimulants usually affect the blood pressure and pulse rate?

5. True or false: A person under the influence of a CNS Stimulant alone usually will not exhibit Horizontal Gaze Nystagmus?

6. What is "bruxism"?

DRUG INFLUENCE EVALUATION

EVALUATOR: S/Sgt. P. MILNE | DRE NO. 4910 | ROLLING LOG NO. 167

RECORDER/ WITNESS: CST. D. SIVECKI

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property

FILE # S-Session 10-1

ARRESTEE'S NAME (LAST, FIRST, M): HEDLUND James R.

DOB (YY-MM-DD): 63-10-07 | AGE: 46 | SEX: M | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): CST. J. WHITE

DATE EXAMINED/TIME/LOCATION: 07 AUG 2009 - 2230 NWPD

BREATH RESULTS: ☐ Refused Results N/A Instrument #

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by: CST WHITE

What have you eaten today? CANDY BAR When ? AROUND NOON

What have you been drinking? How Much? NOTHING

Time of last drink? N/A

Time now? 8 o'clock | When did you last sleep? Last night | How long? 3 hours

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: COOPERATIVE

COORDINATION: POOR, STUMBLING

SPEECH: RAPID NERVOUS

BREATH: NORMAL

FACE: NORMAL

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☒ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 112 / 2240	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 108 / 2253	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 100 / 2305	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND 41/30 45/30

ROMBERG BALANCE: 3" 3" 0" 0"

WALK AND TURN TEST

Cannot keep balance ✓✓

Starts too soon ✓

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	✓✓✓	✓✓
Actual Steps Taken	9	9

HAD DIFFICULTY STANDING STILL DURING INSTRUCTION

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ Puts foot down

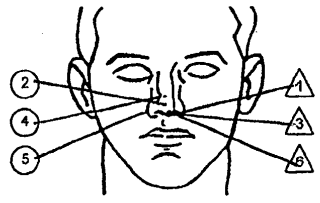
INTERNAL CLOCK: 15 Estimated as 30 sec.

Describe Turn: TURNED QUICKLY (SWIVEL)

Cannot do Test (explain): N/A

Type of Footwear: BOOTS

○ Right △ Left Draw lines to spots touched



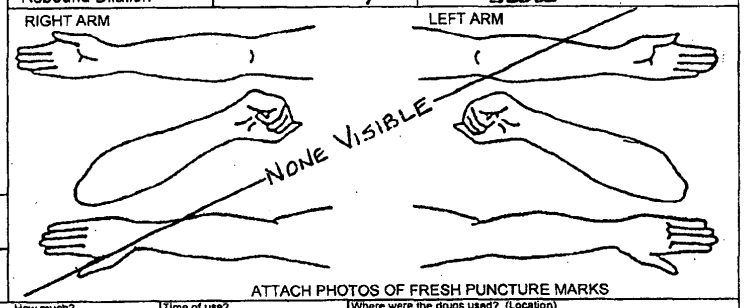
PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.0	8.5	6.0
Right Eye	6.0	8.5	6.0

Rebound Dilation ☐ Yes ☒ No

NASAL AREA: WHITE POWDER RESIDUE IN NOSE

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: SLOW



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 142 / 96 TEMP 37.7 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments:

What medicine or drug have you been using? NOTHING "I WON'T ANSWER THAT" | How much? | Time of use? N/A | Where were the drugs used? (Location) REFUSED

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
07 AUG 09 - 2200	2220	2230	2310

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT						
MEDICAL	ALCOHOL	STIMULANT	DISSOCIATIVE ANESTHETIC	INHALANT	☐ OPERATIONAL
	DEPRESSANT	HALLUCINOGEN	NARCOTIC ANALGESIC	CANNABIS	☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** New West Minster Police Service, 555 Columbia Street, New Westminster, BC.

(2) **Witnesses:** Constable Devon Sivecki

(3) **Source:** The writer was contacted by Dispatch and directed to the Columbia Street facility to conduct a drug evaluation for Constable Devon Sivecki. Upon arrival, Sivecki stated that he conducted a traffic stop on James Hedlund at 2200hrs after observing him travelling 150 km/h on Columbia Street without headlights on.Hedlund appeared excited, talkative, and very restless He performed poorly on the SFSTs and was read a demand for a drug evaluation by Sivecki.

(4) **First Observations of Subject:** The writer first observed Brown in the Breath Testing/DRE Room with Cst Sivecki. Hedlund was rocking back and forth in his chair and could not remain still. His speech was fast and his reflexes were quick and exaggerated.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Hedlund had a 3" sway front to back and estimated 15 seconds as being 30 seconds. **Walk & Turn Test** – Hedlund was unable to keep his balance twice during the instruction stage and had difficulty standing still. He started too soon once. During the walking stage he raised his arms for balance 3 times during the first nine steps and twice during last nine steps. He turned by making one quick swivel, contrary to instructions. **One Leg Stand Test** – While balancing on his left leg, Hedlund swayed while balancing, used his arms for balance, hopped twice, and put his foot down on his count of 23. He counted to 41 in 30 seconds. While balancing on his right leg, he swayed while balancing, used arms for balance, and put his foot down on his count of 21. He counted to 45 in 30 seconds. **Finger to Nose Test** – Hedlund missed the tip of his nose on all but the 6th attempt.

(6) **Clinical Signs:** Hedlund's pulse rate, blood pressure, and body temperature were all above the normal ranges, his pupils were dilated in room light and in direct light and his reaction to light was slow. His muscle tone was rigid. There was a white powdery residue in his nose.

(7) **Statements:** When asked about drug use today he stated "I won't answer that".

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Paul Milne, a certified Drug Recognition Expert, that:

---

(10) **Miscellaneous:** Hedlund provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Cst Randy Marshall | DRE NO. 10155 | ROLLING LOG NO. 262

RECORDER/ WITNESS: Cst. Kevin Leblanc

CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property

FILE #: S-Session 10-2

ARRESTEE'S NAME (LAST, FIRST, M): Elliott, John B.

DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
880601	21	m	W	Cst. Kevin Leblanc

DATE EXAMINED/TIME/LOCATION: 2009-05-11 2108hrs Sherwood Park, A.B

BREATH RESULTS: ☐ Refused — Results N/A — Instrument #

CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No — Given by: Cst. Kevin Leblanc

What have you eaten today? When? Tacos Lunch

What have you been drinking? How Much? I don't drink

Time of last drink: —

Time now? Don't know | When did you last sleep? How long? Today 2 hours

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No

ATTITUDE: Excited Fidgety

COORDINATION: Exaggerated, Quick, abrupt movements

SPEECH: Fast talking

BREATH: Nothing noted

FACE: Sweaty

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☑ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☑ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 116 / 2110	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 108 / 2130	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 112 / 2145	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☑ No

Convergence: Right Eye ☑ Left Eye ☑

ONE LEG STAND: Test stopped — Test stopped

ROMBERG BALANCE: 2" 2" 4" 4"

WALK AND TURN TEST: Test stopped during instruction stage

Cannot keep balance ✓✓✓ (3)

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	Ø	Ø
Actual Steps Taken	0	0

☑ Sways while balancing ☐ Uses arms to balance ☐ Hopping ☑ Puts foot down

INTERNAL CLOCK: N/A Estimated as 30 sec.

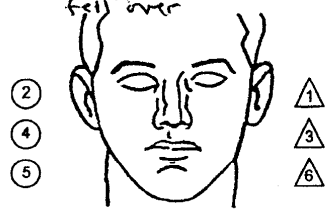
Describe Turn: N/A

Cannot do Test (explain): Could not maintain balance for instructions

Type of Footwear: Combat boots

○ Right △ Left — Draw lines to spots touched

Test stopped when nearly fell over



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	8.5	6.0
Right Eye	6.5	8.5	6.0

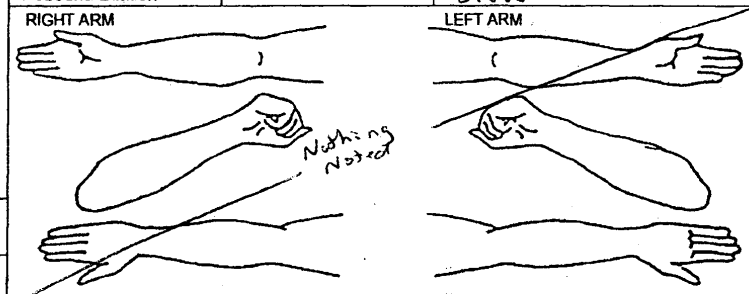
NASAL AREA: Nothing noted

ORAL CAVITY: fresh ground flat in top - bruxism

REACTION TO LIGHT: Slow

Rebound Dilation: ☐ Yes ☑ No

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 156 / 102 TEMP: 37.6

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☑ Rigid

Comments:

What medicine or drug have you been using? None | How much? None | Time of use? — | Where were the drugs used? (Location) No answer

DATE/TIME OF ARREST: 2009-05-11 2030hrs

TIME DRE NOTIFIED: 2045 hrs.

EVAL START TIME: 2108 hrs.

TIME COMPLETED: 2158 hrs.

MEMBERS SIGNATURE: R. Marshall

SERIAL/REG. #: 112176

REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Sherwood Park RCMP Detachment, 911 Bison Way, Alberta

(2) **Witnesses:** Constable Kevin Leblanc

(3) **Source:** The writer was dispatched to the Sherwood Park RCMP detachment to conduct a drug evaluation on a subject who was brought in by Constable Kevin Leblanc for driving while being impaired by drug. Leblanc indicated he conducted a traffic stop on John Elliott who had been driving 110 km/h in a 30 km/h zone and failed to stop at 2 red lights. Elliott was very talkative and restless. He spoke very fast. He performed poorly on the SFSTs and was arrested for driving while impaired by drug.

(4) **First Observations of Subject:** Elliott was first observed in the holding room at the Sherwood Park detachment. He was pacing back and forth, running his hands through his hair constantly and rubbing his face. He appeared agitated. His pupils appeared dilated. When spoken to, he responded with quick, abrupt answers that he would repeat over and over. He appeared excited.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Elliott had a 2" sway front to back and a 4" sway side to side. He could not retain his balance and the test was stopped after 15 seconds for safety reasons. **Walk & Turn Test** – Elliott was unable to stand heel-to-toe during the instruction stage. The test was stopped for safety reasons after he lost his balance 3 times. **One Leg Stand Test** – While balancing on his left leg, Elliott swayed while balancing, used his arms for balance, and put his foot down at his counts of 1, 2, & 3. The test was stopped at that point for safety reasons. During the instruction stage for testing his right leg, he was unable to stand in the heels-and-toes together position and the test was stopped for safety reasons. **Finger to Nose Test** – Elliott was unable to maintain the heels-and-toes-together position during the instructions stage and the test was stopped for safety reasons.

(6) **Clinical Signs:** Elliott's pulse rate, blood pressure, and body temperature were all above their normal ranges. His pupils were dilated in room light, near total darkness, and in direct light. His reaction to light was slow. Elliott's muscle tone was rigid. His upper and lower teeth appeared to be ground down flat.

(7) **Statements:** When asked about drug use he indicated he didn't take anything. He would not provide a response when asked where he took the drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Randy Marshall, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Elliott provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. R. RIFFEL | DRE NO.: 7264 | ROLLING LOG NO.: 198

RECORDER/ WITNESS: SGT. D. TURNER | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 10-3

ARRESTEE'S NAME (LAST, FIRST, M): Kohlhepp Kim. J. | DOB (YY-MM-DD): 73-08-24 | AGE: 26 | SEX: F | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. H. LYSAK

DATE EXAMINED/TIME/LOCATION: 10 OCTOBER 09 - 2315 - #1 DISTRICT | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by: CST. H. LYSAK	What have you eaten today?: Hot dog	When ?: 1pm	What have you been drinking? How Much?: "Nothing" — Time of last drink?: N/A
Time now?: Midnight " — When did you last sleep?: yesterday — How long?: 4hrs	Are you sick or injured? ☐ Yes ☒ No		Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No	Do you have any physical disabilities? ☐ Yes ☒ No		Are you under the care of a doctor/dentist? ☐ Yes ☒ No
Are you taking any medication or drugs?: "I don't do drugs" ☐ Yes ☒ No	ATTITUDE: Cooperative, Restless		COORDINATION: Poor, Jittery, Stumbling
SPEECH: very talkative, Rapid	BREATH: Normal		FACE: Normal

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2320	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 108 / 2331	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 104 / 2343	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: 24/30 (23) — 24/30 (22)

ROMBERG BALANCE: 0" 0" — 2" 2"

LEG TREMORS

EYELID TREMORS

WALK AND TURN TEST

Cannot keep balance

Starts too soon

	1st Nine	2nd Nine
Stops Walking		
Misses Heel-Toe		
Steps off Line	✓	✓
Raises Arms	✓✓	✓
Actual Steps Taken	9	9

☑ Sways while balancing
☑ Uses arms to balance
☑ Hopping
☑ Puts foot down

INTERNAL CLOCK: 12 Estimated as 30 sec.

Describe Turn: swivel turn, one quick motion

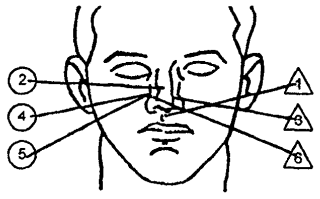
Cannot do Test (explain): N/A

Type of Footwear: Heels (Removed)

○ Right △ Left

Draw lines to spots touched

EYELID + LEG TREMORS.



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	9.0	6.0
Right Eye	6.5	9.0	6.0

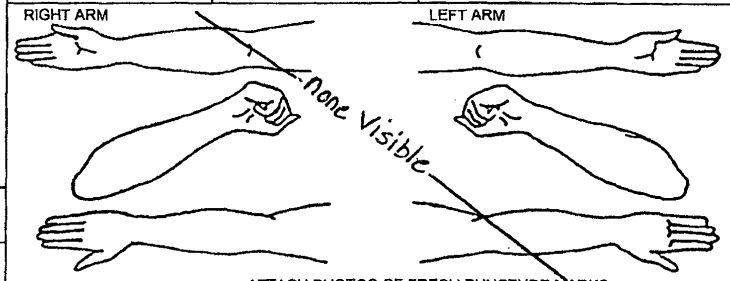
NASAL AREA: Red, ulcerated

ORAL CAVITY: clear

Rebound Dilation: ☐ Yes ☒ No

REACTION TO LIGHT: slow

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 144 / 104 — TEMP: 37.7 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using?: "I don't do drugs anymore" | How much? | Time of use?: Refused | Where were the drugs used? (Location): Refused

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
10/OCT/09 - 2240	2305	2315	2345

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT: MEDICAL	ALCOHOL	STIMULANT	DISSOCIATIVE ANESTHETIC	INHALANT	☐ OPERATIONAL
	DEPRESSANT	HALLUCINOGEN	NARCOTIC ANALGESIC	CANNABIS	☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Winnipeg Police District #1 Booking, Winnipeg, Man

(2) **Witnesses:** Sgt Damian Turner

(3) **Source:** The writer was contacted by Sgt Damian Turner and asked to attend the District 1 office to conduct a drug evaluation. Upon arrival, Sgt Turner stated he stopped the drive – Kim Kohlhepp for driving 90 km/h in a 50 km/h zone and taking turns and such speeds that her tires would squeal. Upon approach by Turner, she spoke very quickly and was restless. She did not perform well on the SFSTs and believing she was impaired by drug, she was read a demand for a drug evaluation and returned to the office for a drug evaluation.

(4) **First Observations of Subject:** Kohlhepp was first observed in the prisoner holding room. She was fidgety, jittery and stumbled a couple of times in the room before being summoned to the DRE Room. Once there, she spoke non-stop in an excited manner. When told to sit down, she would do so for 5-10 seconds, then get back up and pace around. This occured a number of times.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Kohlhepp had a 2" side to side sway, exhibited leg tremors, eyelid tremors, and estimated 12 seconds as being 30 seconds. **Walk & Turn Test** – Kohlhepp stepped off line on step 4 and raised her arms during the first 9 steps, made a single quick swivel to turn, and stepped off line on step 2 and raised her arms during the last 9 steps. **One Leg Stand Test** – While balancing on her left leg, Kohlhepp swayed while balancing, used arms for balance, hopped once, and put her foot down at her count of 23. While balancing on her right leg, she swayed while balancing, used arms for balance, and put her foot down on her count of 22. **Finger to Nose Test** – Kohlhepp missed the tip of her nose with all 6 attempts. She also exhibited eyelid tremors and leg tremors.

(6) **Clinical Signs:** Elliott's pulse rate, blood pressure, and body temperature were all above their normal ranges. Her pupils were dilated in room light, near total darkness, and in direct light. Her reaction to light was slow. The inside of her nose was red, raw, and ulcerated.

(7) **Statements:** She maintained throughout the evaluation that she didn't do drugs anymore.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Rob Riffel, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Kohlhepp provided a urine sample for analysis.

SESSION XI

PRACTICE: EYE EXAMINATIONS

SESSION XI PRACTICE: EYE EXAMINATIONS

Upon successfully completing this session the student will be able to:

Conduct examinations of pupil size and reaction to light under both lighted and darkened room conditions.

Describe the eye examination procedures.

Document the results of the eye examinations.

In this session, you will practice estimating pupil size and assessing pupil reaction to light. You will work in a team with fellow students, taking turns examining each other's eyes.

When it is not your turn either to administer the eye exams or serve as the examination subject, you should try to monitor the work of your teammate who is administering the exams and coach him or her as appropriate. In this way you can assist each other in developing skills.

To prepare for this session, make sure you can correctly answer the following questions:

1. How can you produce the faint, reddish light needed for the estimation of pupil size under near-total darkness?

2. How far in front of the subject's eye should the pen light be held during the direct light examination?

3. How long must you shine the light into the subject's eye to evaluate the pupil's reaction to light?

(The information needed to answer these questions can be found in Part "G" of Session IV)

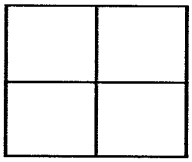
4. What is the technical term meaning "constricted pupils"?

5. What is the technical term meaning "dilated pupils"?

6. What is the technical term meaning "droopy eyelids"?

(The information needed to answer these questions can be found in Session V.)

EYE EXAMINATIONS DATA SHEET



Subject _____

Under Room Light

	Left	Right
Room Light		
Direct Light		

Reaction:

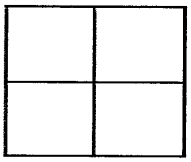
_____

In the Dark Room

	Left	Right
Near Total		
Direct Light		

Reaction:

_____



Subject _____

Under Room Light

	Left	Right
Room Light		
Direct Light		

Reaction:

_____

In the Dark Room

	Left	Right
Near Total		
Direct Light		

Reaction:

_____

Subject _____

Under Room Light

	Left	Right
Room Light		
Direct Light		

Reaction:

_____

In the Dark Room

	Left	Right
Near Total		
Direct Light		

Reaction:

_____

SESSION XII

ALCOHOL WORKSHOP

SESSION XII ALCOHOL WORKSHOP

Upon successfully completing this session the student will be able to:

- Correctly administer the preliminary clinical examinations and psychophysical tests used in the drug influence evaluation procedure.
- Observe and record the subject's performance on the preliminary clinical examinations and psychophysical tests.
- Determine the level of impairment based on the results of the subject's preliminary clinical examinations and psychophysical tests.

In this session, you will have the opportunity to practice administering portions of the Drug Evaluation and Classification drug influence evaluation to persons who are actually under the influence of a drug. The drug involved is Alcohol, which is the most familiar and most frequently abused drug in our society. Alcohol belongs to the category of drugs known as Central Nervous System Depressants. The behaviors, signs and symptoms you observe in the volunteer drinkers participating in this session will, in many respects, be similar to what you will observe when you encounter persons under the influence of Barbiturates, Tranquilizers or other CNS Depressants.

Working in a team with fellow students, you will administer the following tests to each volunteer:

- Pupil Size Estimation (in room light)
- Horizontal Gaze Nystagmus (including estimation of onset angle)
- Vertical Gaze Nystagmus
- Lack of Convergence
- Romberg Balance
- Walk and Turn
- One Leg Stand (each volunteer will take this test twice, once on each leg)
- Finger to Nose
- Pulse Rate

You will record the results of these tests on the appropriate segments of the Drug Influence Evaluation form.

To prepare for this session, make sure that you know how to administer these tests, and that you know what clues to look for and how to recognize them. It will be a good idea to practice administering these tests (e.g. to fellow students, family members, etc.) to sharpen your skills in preparation for this session.

SESSION XIII

RESOURCE MATERIALS AND SOURCES FOR EVALUATING OFFICERS

SESSION XIII RESOURCE MATERIAL AND SOURCES FOR EVALUATING OFFICERS

Upon successfully completing this session the student will be able to:

- Explain how the various sections of the CPS can provide information that will:
  - Aid in the drug influence evaluation;
  - Aid in courtroom testimony.
- Describe other reference resources available to assist DRE's.

A. The Compendium of Pharmaceuticals and Specialties as a Resource

The Compendium of Pharmaceuticals and Specialities (CPS) is a useful reference source for a DRE. It provides detailed information, including photographs, on virtually every drug available for prescription in the country. Many of these drugs are either CNS Depressants or CNS Stimulants, and others are Narcotic Analgesics, while others are combinations of these. Numerous trade names exist for certain drugs, since many manufacturers offer competing products.

During the course of an arrest and evaluation of a suspected drug impaired driver, it is not uncommon to discover pills, tablets, etc. on the subject. Reference to the CPS and other resources usually can help to establish the identity and category of these drugs.

The CPS is published annually. Throughout the year, periodic supplements are published as new products come on the market.

B. The Contents of The CPS

The CPS contains the following color coded sections.

- Brand and Generic Names (Green Pages)
- Clinical Information (Which includes)
    - Dosing Tools
    - Clinical Monitoring Tools
    - Drug Use Guides
    - Therapeutic Summaries
    - Drug Interactions
    - Nutrient Requirements
    - Non Medicinal ingredients

(3) Directory (Yellow Pages)

- Poison Control Centres for all Provinces and Territories
- Health Organizations
- Manufacturing Information

(4) Product Monographs (White Pages)

- Provides the Name of the Drug
- Manufacturer
- Applications for the Drug
- Contraindications
- Warnings and Pre-Cautions
- Drug Interactions
- Adverse effects
- Miscellaneous
- Overdose and Dosage recommendations

(5) Patient Information (Blue Pages)

- Provides information for the patient as well as side effect information

(6) Product Information (Color Photographs)

- Provides a color Photograph of the Drugs.

(7) Therapeutic Guide (Pink Pages)

- Lists human conditions and provides names and information on drugs to treat these conditions.

C. Location and acquisition of agency's CPS(s)

The CPSs can be obtained from a number of locations. Physicians, hospitals, detention unit, or your agency's Drug Unit may have a copy that can assist a Drug Recognition Expert.

It should be noted that is not essential to have the current version for these types of investigations.

Any changes made in the CPS are done on a yearly basis due to the fact they are limited. As a result, older versions of the CPS are very useful for Drug Evaluations.

D. Other Resources

Using the CPS as an Identification Resource is only one in a number of resources that a DRE can use. Additional information regarding Drugs and how they react on the human body can be obtained from a number areas. These include:

- "Provincial Drug Evaluation and Classification Program Coordinator.
- "The DRE" Newsletter.
    - Published by the Phoenix City Prosecutor's Office, Phoenix, Arizona.
    - Produced by U.S. DOT-NHTSA, Report No. DOT 809 725, March 2004.
- Newspaper and magazine articles on drugs and drug impaired driving, including counter-culture magazines such as "High Times."
- Software programs such as Pharmacists, Body Works, Mosbey's Medical Dictionary and other programs are available on disks and CDs.
- Various resources are available through online services and the Internet.
- Forensic Laboratory Toxicology Section
- Health Canada's Drug Product Database
  http://webprod.hc-sc.gc.ca/dpd-bdpp/index-eng.jsp
  This database can be searched by drug product or trade name to find a product monograph and it's availability in Canada.

D. The Internet

The Internet is a valuable resource when attempting to identify and categorize different types of drugs. Choosing a website should be done carefully. While there are a number of websites that contain information that is factual and can be considered to be credible, there are a number of "User" websites that are not.

While websites such as these contain, what appears to be factual accounts from people who have used the drug in question, care must be taken when using this type of information.

Some useful Websites to consider are:

The IACP Drug Evaluation and Classification Program website is www.decp.org

- www.erowid.org *User site* Use caution.
- www.nhtsa.org
- http://www.ccsa.ca
- www.ndaa-apri.org
- http://www.sobrietytesting.org
- http://www.nida.nih.gov
- www.clubdrugs.gov *User site* Use caution
- www.drugs.com Select "Pill Identifier"
  Type in Pill Markings, then Color, then shape and search.

Other published texts that may be of assistance include:

- Discuss some other useful and reliable texts known to you.
- Uppers, Downers and all Arounders
- The "Pill" Book
- The Drug Identification Biblewww.drugidbible.com
- Uncle Festers "Secrets of Methamphetamine Manufacture"

SESSION XIV

HALLUCINOGENS

SESSION XIV HALLUCINOGENS

Upon successfully completing this session the student will be able to:

Explain a brief history of the Hallucinogen category of drugs.

Identify common drug names and terms associated with this category.

Identify common methods of administration for this category.

Describe the symptoms, observable signs and other effects associated with this category.

Describe the typical time parameters, i.e. onset and duration of effects, associated with this category.

List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs.

Correctly answer the "topics for study" questions at the end of this session.

A. Overview of Hallucinogens

Hallucinogens are drugs or substances that affect a person's perceptions, sensations, thinking, self awareness and emotions. They may also cause hallucinations. A hallucination is a sensory experience of something that does not exist outside the mind. It may involve hearing, seeing, smelling, tasting or feeling something that isn't really there. Or, it may involve distorted sensory perceptions, so that things look, sound, smell, taste or feel differently from the way they actually are.

Hallucinogenic drugs usually produce so called pseudo-hallucinations. This means that the user typically knows that what he or she is seeing, hearing, smelling, etc. is not real, but is a product of the drug.

One common type of hallucination produced by these drugs is called synesthesia, a sensory perception disorder, in which an input via one sense is perceived by the brain as an input via another sense. In its simplest terms, it is a transposition of senses. For example, seeing a particular sight may cause the user to perceive a sound. Hearing a sound may cause him or her to perceive an odour. Thus, a person under the influence of an hallucinogen might hear a telephone ring, and "see" a flash of brilliant color. Or, he or she might look at something colored yellow and "smell" the fragrance of roses. Sometimes hallucinogen users will make statements indicating that they are experiencing synesthesia (examples: "That chair sounds beautiful!" "Look at those fantastic odours!"). DREs should be alert for such statements, and be aware that they are significant indicators of this drug category.

Sometimes, the hallucinations can be very frightening to the user. The user may be panic stricken by what he or she is seeing or hearing, and may become uncontrollably excited, or even try to flee from the terror. Hallucinogen users call these kinds of experiences "bad trips". These experiences have bee known to precipitate mental illness.

A terrifying "bad trip" sometimes may be re-experienced as a flashback. Hallucinogen flashbacks apparently do not occur because of a residual quantity of drug in the user's body. Rather, flashbacks apparently are vivid recollections of a portion of a previous hallucinogenic experience. Essentially, flashbacks are very intense, and very frightening, day dreams.

There are three types of flashback; emotional, somatic, and perceptual. The emotional flashback is the most dangerous. It brings back strong feelings of panic, fear and loneliness, and creates an intense and very real recollection of the original "bad trip". A somatic flashback consists of altered bodily sensations, e.g., tremors, weakness, nausea, dizziness, etc. that were part of the original "trip". In a perceptual flashback, the user re-experiences some of the sensory distortions of the original "trip".

Some users experience delusions which are false beliefs (I am an elephant!), others experience illusions which are false perceptions (I see an elephant!), while others may experience both.

Naturally occurring Hallucinogens: some common examples.

Peyote is a small, spineless cactus containing the active hallucinogenic ingredient called mescaline. The crowns, or "buttons", of the cactus can be collected and dried, and eaten. Certain American Indian tribes have used peyote in religious ceremonies for thousands of years. Peyote currently is used legally in religious ceremonies of the Native American church.

Psilocybin is a drug found in a number of different species of mushrooms. An unstable derivative of psilocybin, called psilocin, also has hallucinogenic properties and also is found in these mushrooms. Psilocybin mushrooms also have a long history of use in Indian religious rituals.

Other naturally occurring Hallucinogens include nutmeg, jimson weed, morning glory seeds, salvia divinorum, and Bufotenine. The last of those is an hallucinogenic substance found in the glands of certain toads. Bufotenine is toxic; the toad secretes Bufotenine through its skin as a defensive mechanism, to make it too unpleasant for a predator to eat the toad. But you guessed it: there are people who actually lick toads to get high from Bufotenine.

Salvia divinorum is a perennial herb in the mint family native to certain areas of Mexico. The plant, which can grow to over three feet in height, has large green leaves, hollow square stems and white flowers with purple calyces, can also be grown successfully outside of this region. Salvia divinorum has been used by the Mazatec Indians for its ritual divination and healing. The active constituent of Salvia divinorum has been identified as Salvinorin A. It was not until August 2002 that researchers discovered that Salvia divinorum acts at the kappa opiate receptor (KOR) site, where much of human reception is regulated.

According to a National Survey on Drug Use and Health Report published by SAMHSA in February 2008, it is estimated that 1.8 million persons aged 12 or older used Salvia divinorum in their lifetime.

There are numerous methods of ingesting Salvia with varying durations of hallucinogenic effects. It can be smoked, chewed, vaporized and boiled into a tea.

Effects of Salvia divinorum include: intense hallucinations; feelings of floating through space or flying; twisting and spinning. Physical effects include dizziness; nausea; lack of coordination; slurred speech, and confused sentence patterns; decreased heart rate and chills.

Some common street names for Salvia divinorum include: Salvia, Sally D, Magic Mint, Maria Pastora, and Diviner's Sage.

Salvia is not a listed Controlled Drugs and Substances Act (CDSA) or approved for medical use.

Synthetically manufactured hallucinogens: some common examples.

LSD probably is the most famous synthetic Hallucinogen. "LSD" is an abbreviation of Lysergic Acid Diethylamide.
It is a white powder or a clear, colorless liquid. Street names include; acid, animal, barrels, beast, blotter, 'cid, dots, kool aid, LSD-25, lysergide, microdots, panes, sandoz, tabs, trips, window panes.

LSD is manufactured from lysergic acid which occurs naturally in the ergot fungus that grows on wheat and rye. It is a Schedule I controlled substance, available in liquid, powder, tablet (microdots), and capsule form. The liquid is often applied to blotter paper squares (frequently with colorful designs), stickers, sugar cubes, candy, or soda crackers. LSD is also available in dropper bottles or in the form of gelatin sheets/shapes (window panes).

MDA, MDMA, MMDA, TMA, STP, DET, and DMT are other synthetic Hallucinogens. They are sometimes referred to as "Psychedelic amphetamines" or "psychotomimetic amphetamines". Their effects are often similar to those of high doses of CNS Stimulants.

MDA is an abbreviation for 3,4-Methylenedioxyamphetamine. Its users sometimes refer to MDA as the "Mellow Drug of America". It is normally produced as a clear liquid, or as a white powder in capsule or tablet form. MDA often is mixed with amphetamine, cocaine, methamphetamine, LSD or STP, or occasionally with strychnine. MDA probably is the most widely abused of the "Psychedelic amphetamines".

2 CB is an abbreviation for 4-Bromo-2,5-Dimethoxyphenethylamine. 2 CB is also known as "Venus", "Nexxus", and "bromo-mescaline". 2CB was first synthesized in 1974. 2CB is a white powder usually found in pressed tablets or gel caps. It is almost always taken orally.

MDMA is an abbreviation for 3,4-methylenedioxymethamphetamine and is commonly referred to as "Ecstasy". It is an hallucinogen that also acts as a stimulant. It produces an energizing effect, as well as distortions in time and perception and enhanced enjoyment from tactile experiences. Its effects are similar to those of MDA or peyote. MDMA can affect the brain by altering the activity of chemical messengers, or neurotransmitters, which enable nerve cells in many regions of the brain to communicate with one another. MDMA also causes the release of another transmitter, norepinephrine, which is likely what causes an increase in heart rate and blood pressure.

Materials in its illicit manufacture include Isosafrole (Leuckart reaction) and Safrole (Merck patent). MDMA is most commonly found in tablet forms of various colors, carrying distinctive markings on one side such as a dove, E, yin/yang symbol, Mitsubishi symbol, etc. It was developed in Germany in the early 1900's as a parent compound to be used to synthesize other pharmaceuticals. It was patented in the United States as an appetite suppressant and used as a possible adjunct to psychotherapy. However, it was banned 1985. It has no legitimate medical application in Canada and is listed in Schedule III of CDSA.

TMA is an abbreviation for 3,4,5-Trimethoxyamphetamine. Its effects are also similar to those of MDA or peyote.

STP is an abbreviation for "Serenity, Tranquility and Peace". It is also known by the chemical name DOM, or 2, 5-dimethoxy-4-methylamphetamine.

DET is diethyltryptamine.

DMT is dimethyltryptamine. It is sometimes known as the "businessman's trip" because its effects last only about one hour (i.e. short enough to occupy a "businessman's lunch").

An important fact about many Hallucinogens is that they are not addictive. Nevertheless, many Hallucinogen abusers frequently use these drugs, because they enjoy the effects.

The most common method of ingesting Hallucinogens is orally. Psilocybin mushrooms and peyote "buttons" can be eaten "as is". LSD often is placed on bits of paper, or on sugar cubes, and eaten.

Some Hallucinogens can be smoked.

Some MDA users snort that drug.

Some LSD users inject that drug.

B. Possible Effects of Hallucinogens

In general, Hallucinogens intensify whatever mood the user is in when the drug is ingested. If the user is depressed, the drug will deepen the depression. If the user is feeling pleasant, the drug usually will heighten that feeling. If the user expects that the drug will help him or her achieve new insights or an expanded consciousness, the drug will seem to have that effect. However, use of Hallucinogens often uncovers mental or emotional flaws of which the user was unaware. Such flaws can result in the panic and terror of a "bad trip" even though the user was expecting a pleasurable experience.

The most common effect of an Hallucinogen is hallucination. The user's perception of reality is severely distorted, often to the point of synesthesia. This makes it virtually impossible for the Hallucinogen-influenced person to function in the real world.

C. Onset and Duration of Hallucinogens' Effects

1. Peyote's effects generally begin to be felt within one-half hour after eating the cactus "buttons". The initial effects often include nausea, possible vomiting, mild rise in blood pressure, pulse rate and temperature. And, the pupils dilate. After about one hour, sensory changes begin. The user experiences visual distortions, accompanied by rich colors. Objects take on new forms and begin to move. Shapes "come alive". The sensory changes reach their peak in about 3-4 hours, with synesthesia occurring at about that time period. After about 10 hours there will be a gradual decline in effects, with near total recovery in about 12 hours.

2. Psilocybin's effects also start to develop in about one-half hour. The user first experiences dizziness, a light headed feeling, and giddiness. The extremities (hands, feet, etc.) begin to feel very light or very heavy. After about 30-60 minutes, vision blurs. Colors become brighter and leave longer lasting after images. Objects take on sharp visual definition and hearing becomes more acute.

Sixty to ninety minutes after eating the mushrooms, color patterns and shapes start to develop. The surfaces of objects become wavy. Feelings of euphoria develop. Shortly thereafter, body sensations increase, along with mental perceptions. The user often becomes introspective.

After 2-3 hours, the effects begin to diminish.

3. Salvia divinorum effects can begin within minutes when smoked and can last up to 15-30 minutes. When the leaves are chewed, effects can last up to one hour.

4. LSD's effects begin to be felt in 30-45 minutes. Pulse rate, blood pressure and temperature rise. The pupils dilate. The hair starts to stand on end (piloerection). Nausea, dizziness and headache develop. The effects reach their peak in about 4-6 hours. After 7-9 hours, the effects diminish. The user generally feels normal after 10-12 hours.

5. MDMA's (Ecstasy) effects usually begin within several minutes to a half hour if taken orally. It often results in severe dehydration and heat stroke in the user. The drug can heat the user's body up to a temperature well over 38 degrees. It causes hyperthermia, muscle breakdown, seizures, stroke, kidney and cardiovascular system failure, as well as permanent brain damage from repetitive use. The psychological effects of Ecstasy include confusion, depression, anxiety, sleeplessness and paranoia. The duration of effects can last from 1-12 hours depending on the dosage.

6. MDA's effects usually begin within 40-60 minutes. The pupils dilate. Pulse rate and blood pressure increase. The effects reach their peak in about 90-120 minutes, and usually have dissipated within 8 hours.

7. 2CB's effects normally begin within 30-45 minutes. At lower doses (5-15 mg), it produces enhanced sensual sensations and feelings of being "in one's body". At higher doses (15-30 mg) it produces intense visual effects. The effects can last for approximately 2 -3 hours.

D. Signs and Symptoms of Hallucinogen Overdose

It is unlikely that Hallucinogens directly are life threatening. However, overdoses have often indirectly resulted in death. For example, one LSD user was killed when he attempted to stop a train, bare handed. The extreme panic and agitation of a "bad trip" have been known to lead to suicide, or to accidental deaths as users have tried to flee from their hallucinations.

The most common danger of an Hallucinogen overdose is an intense "bad trip", which can result in severe and sometimes permanent psychosis.

There is some evidence that prolonged use of LSD may produce organic brain damage, leading to impaired memory, reduced attention span, mental confusion, and impaired ability to deal with abstract concepts.

E. Expected Results of the Evaluation

When a person under the influence of an Hallucinogen is evaluated by a DRE, the following results can generally be expected:

Horizontal Gaze Nystagmus - no

Vertical Gaze Nystagmus - no

Lack of Convergence - no

Pupil size - dilated

Pulse rate - up

Reaction to light - normal. However, certain Psychedelic amphetamines may cause slowing of the pupil's reaction to light.

Blood pressure - up

Temperature - up

Muscle tone – rigid

Injection sites generally will not be found. However, some LSD users do inject the drug.

General Indicators:

- body tremors
- dazed appearance
- difficulty with speech
- disoriented
- flashbacks
- hallucinations
- memory loss
- nausea
- paranoia
- perspiring
- poor perception of time and distance
- synesthesia
- uncoordinated

Topics for Study

1. What does "synesthesia" mean?

2. What is a "flashback"? What are the three types of "flashback"?

3. Name two naturally occurring Hallucinogens.

4. What is a "bad trip"?

5. What does "psychotomimetic" mean?

6. What is an "illusion"? What is a "delusion"?

7. What is the difference between "hallucinations" and "pseudo-hallucinations"?

8. What is "piloerection"?

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. MOSCHANSKY | DRE NO.: 10326 | ROLLING LOG NO.: 276

RECORDER/ WITNESS: CST. B. KRULL | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 14-1

ARRESTEE'S NAME (LAST, FIRST, M): HOECKLE, REBECCA S. | DOB (YY-MM-DD): 62-09-23 | AGE: 47 | SEX: F | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. I BROOKS

DATE EXAMINED/TIME/LOCATION: 28/JULY/09 - 2030HRS - Edmonton P.S. M.R. | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by:

What have you eaten today? When? "NOTHING, I'm FASTING" | What have you been drinking? How Much? "I DON'T DRINK" | Time of last drink? N/A

Time now? ABOUT 7PM | When did you last sleep? LAST NIGHT | How long? 6-7HRS

Are you sick or injured? ☒ Yes ☐ No — UPSET STOMACH

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: WITHDRAWN, DISTRACTED

COORDINATION: VERY POOR, BARELY CAN STAND

SPEECH: RAPID, STUTTERING

BREATH: SOUR, RANCID

FACE: FLUSHED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☒ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 104 / 2040	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 112 / 2057	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 104 / 2112	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: TEST STOPPED

ROMBERG BALANCE: TEST STOPPED — UNABLE TO STAND

WALK AND TURN TEST: TEST STOPPED

Cannot keep balance: JJJ

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	Ø	Ø
Actual Steps Taken	Ø	Ø

Ø Sways while balancing
Ø Uses arms to balance
Ø Hopping
JJJ Puts foot down

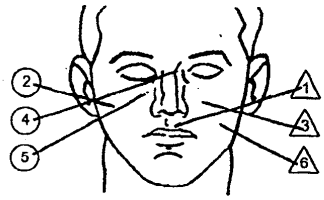
INTERNAL CLOCK: N/A Estimated as 30 sec.

Describe Turn: N/A

Cannot do Test (explain): TEST STOPPED FOR SAFETY REASONS

Type of Footwear: MOCCASINS

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	7.0	8.5	8.0
Right Eye	7.0	8.5	8.0

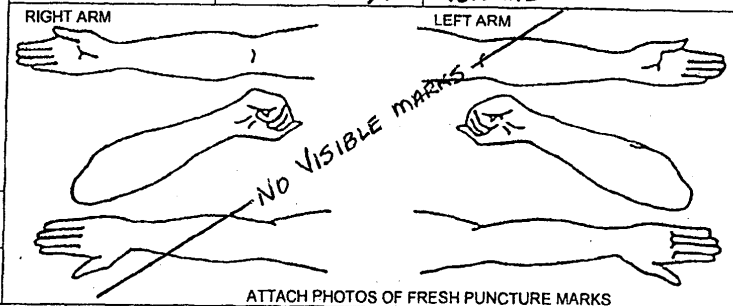
Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: NORMAL

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 148 / 104 | TEMP: 37.8 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments: RIGIDITY IN ARMS

What medicine or drug have you been using? "MY MEDIUM DOESN'T PERMIT DRUGS" | How much? | Time of use? N/A | Where were the drugs used? (Location) N/A

DATE/TIME OF ARREST: 28/JULY/09 - 1930HRS | TIME DRE NOTIFIED: 2010 HRS | EVAL START TIME: 2030 HRS | TIME COMPLETED: 2135HRS

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT MEDICAL	ALCOHOL DEPRESSANT	STIMULANT HALLUCINOGEN	DISSOCIATIVE ANESTHETIC NARCOTIC ANALGESIC	INHALANT CANNABIS	☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Edmonton Police Headquarters, Edmonton, Alberta

(2) **Witnesses:** Constable Bill Krull

(3) **Source:** The writer's attendance was requested in the booking area to conduct a drug influence evaluation on Rebecca Hoeckle who was the subject of a traffic stop by Cst Krull 45 minutes prior. Krull indicated that Hoeckle was driving along the shoulder of the road and passing other vehicles. Once stopped, she was incoherent, appeared to be speaking to people who weren't present, and suggested that Cst Krull's baton on his duty belt was a snake climbing up his side. She was arrested for driving while impaired by drug. No breath testing was conducted as there were no grounds to believe she had alcohol in her body.

(4) **First Observations of Subject:** The writer first observed Hoeckle sitting in the holding room and appeared disoriented, confused, and paranoid. At one point she pointed to the clock on the wall outside the holding room and yelled "Keep that off me, keep it away!" Her pupils appeared dilated.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Hoeckle was unable to stand up long enough to be given the full instructions. The test was stopped for safety reasons. **Walk & Turn Test** – Hoeckle could not keep balance during the instruction stage, breaking her feet apart 3 times. The test was stopped at that point for safety reasons. **One Leg Stand Test** – While balancing on her left leg, Hoeckle put her foot down on her counts of 1, 2, & 3 within the first 4 seconds of the balance & counting stage and the test was stopped for safety reasons. While in the instruction stage to have her balance on her right leg, she was unable to keep her heels and toes together and the test was stopped for safety reasons. **Finger to Nose Test** – Hoeckle missed the tip of her nose on all six attempts, only touching her nose once (on the bridge near her left eye). After the 4th attempt, she yelled in panic "I can't find my face, my face is missing!"

(6) **Clinical Signs:** Hoeckle's pupils were dilated in room light and direct light, pulse rate was up, her blood pressure was up, her temperature was up, and her muscle tone was rigid.

(7) **Statements:** Hoeckle indicated she didn't take any drugs, stating "My medium doesn't permit drugs".

(8) **Medical Problems/Treatment:** Hoeckle indicated she had an upset stomach but no other medical issues.

(9) **Opinion:** It is the opinion of Conrad Moschansky, a certified Drug Recognition Expert, that:

_____.

(10) **Miscellaneous:** Hoeckle provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Scott O. Macdonald | DRE NO.: 12505 | ROLLING LOG NO.: 89

RECORDER/ WITNESS: Scott O Macdonald / Roy Turner

CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE #: 5-Session 14-2

ARRESTEE'S NAME (LAST, FIRST, M): BUCHANAN, Lew B.

DOB (YY-MM-DD): 660619 | AGE: 44 | SEX: m | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): BROWN, Donnie

DATE EXAMINED/TIME/LOCATION: 2010-05-20 0115hrs. HRPG ottingen St. 1975

BREATH RESULTS: ☐ Refused | Results: 50mg% | Instrument #: 955115

CHEMICAL TEST: ☐ Refused | ☐ Urine ☐ Oral fluid ☑ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No | Given by: Don Brown

What have you eaten today? When ? Pizza 6pm

What have you been drinking? How Much? Nothing | Time of last drink?

Time now? 10 pm | When did you last sleep? How long? Last night 3hrs.

Are you sick or injured? ☑ Yes ☐ No — I think I might barf

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No

ATTITUDE: Withdrawn, Cooperative

COORDINATION: Very poor, staggering

SPEECH: Rambling, difficulty in speaking

BREATH: Normal

FACE: Dazed, perspiring heavily

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☑ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☐ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☐ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 116 / 0130	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 112 / 0147	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 104 / 0200	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☑ No

Convergence: Right Eye ② Left Eye ←

ONE LEG STAND: Test stopped (R) Test stopped (L)

ROMBERG BALANCE: 3" 3" 3" 3"

WALK AND TURN TEST: Test stopped. Couldn't maintain stance. Stated the white line looks like a lazy snake

Cannot keep balance ✓✓

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	Ø	Ø
Actual Steps Taken	0	0

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ (3) ☑ Puts foot down

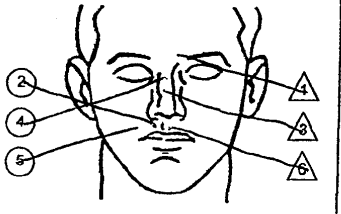
INTERNAL CLOCK: 35 Estimated as 30 sec.

Describe Turn: Ø

Cannot do Test (explain): Could not maintain balance during instructions

Type of Footwear: Running Shoes

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	9.0	6.0
Right Eye	6.5	9.0	6.0

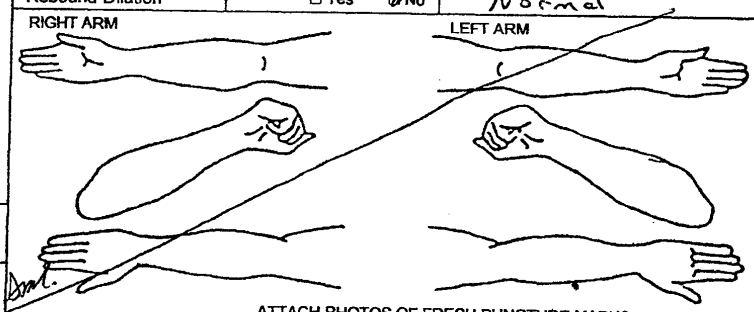
Rebound Dilation: ☐ Yes ☑ No

NASAL AREA: Clear

ORAL CAVITY: Clear

REACTION TO LIGHT: Normal

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 146 / 102 | TEMP: 38.5 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☑ Rigid

Comments:

What medicine or drug have you been using? Nothing | How much? No answer | Time of use? No answer | Where were the drugs used? (Location) No answer

DATE/TIME OF ARREST: 2010-05-20 0020hrs.

TIME DRE NOTIFIED: 0100

EVAL START TIME: 0115

TIME COMPLETED: 0205

MEMBERS SIGNATURE: [signature]

SERIAL/REG #: 667563

REVIEWED BY: K. Rutherford

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** HRP 1975 Gottingen Street, Halifax

(2) **Witnesses:** Ray Turner

(3) **Source:** Ray Turner requested the writer attend the HRP DRE Room to conduct an evaluation on Lew Buchanan who he had observed diving 20 miles under the posted 50km/h speed limit on Dunbrack Street, Halifax. He observed Buchanan's vehicle drifting from lane to lane. Buchanan performed poorly on the SFSTs at roadside and was arrested for impaired driving.

(4) **First Observations of Subject:** The writer first observed Buchanan in the DRE Room. He was swaying slightly as he stood and appeared dazed and disoriented. He responded slowly to my greeting but was generally cooperative and responsive to my questions. He was perspiring heavily and had rambling speech.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Buchanan had a 3" circular sway during the test. **Walk & Turn Test** – Buchanan could not keep his balance during the instruction stage and the test was stopped for safety reasons after his feet broke apart the 3rd time. Buchanan commented that the line looked like a lazy snake. **One Leg Stand Test** – While balancing on his left leg, Buchanan put his foot down on his counts of 1, 2, & 3 and swayed while balancing. The test was stopped for safety reasons. While balancing on his right leg, he counted to 1, put his foot down, counted 1 again and put his foot down before the test was stopped for safety reasons. **Finger to Nose Test** – Buchanan was unable to touch the tip of his nose on any of his attempts.

(6) **Clinical Signs:** Buchanan exhibited a lack of smooth pursuit, a lack of convergence, and his pupils were dilated in room light, near total darkness & in direct light. Reaction to light was normal. His pulse rate, blood pressure, and body temperature were all above the normal ranges.

(7) **Statements:** Buchanan denied taking any drugs or alcohol.

(8) **Medical Problems/Treatment:** Buchanan stated during the preliminary examination, "I think I might barf" but reported no specific medical issues.

(9) **Opinion:** It is the opinion of Scott D Macdonald, a certified Drug Recognition Expert, that:
_____.

(10) **Miscellaneous:** Buchanan provided a blood sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Cst. Jim WALSH | DRE NO.: 15077 | ROLLING LOG NO.: 89

RECORDER/ WITNESS: Cst. Karen Didham | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session.14-3

ARRESTEE'S NAME (LAST, FIRST, M): SMITH Darcy | DOB (YY-MM-DD): 690201 | AGE: 40 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Brad Saint

DATE EXAMINED/TIME/LOCATION: 2009-07-19 - 0715hrs - RNC Central Booking | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No — Given by: Brad Saint

What have you eaten today? Pizza — When ? 6p.m

What have you been drinking? How Much? Nothing — Time of last drink?

Time now? 10p.m | When did you last sleep? How long? Last night 8hours.

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No

ATTITUDE: Dazed

COORDINATION: Poor, Staggering

SPEECH: Incoherent

BREATH: Normal

FACE:

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☑ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☐ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☑ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 104 / 0725	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 104 / 0738	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 102 / 0753	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☐ No

Convergence — Right Eye / Left Eye

ONE LEG STAND — Test Stopped — Test Stopped

ROMBERG BALANCE

WALK AND TURN TEST

Cannot keep balance

Starts too soon

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	(8)	(8)
Steps off Line	Ø	Ø
Raises Arms	(4)	Comment
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance ☐ Hopping ☑ Puts foot down

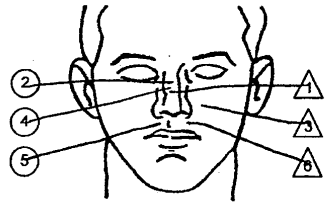
INTERNAL CLOCK: 38 Estimated as 30 sec.

Describe Turn: Lifted both feet + walked around

Cannot do Test (explain): Ø

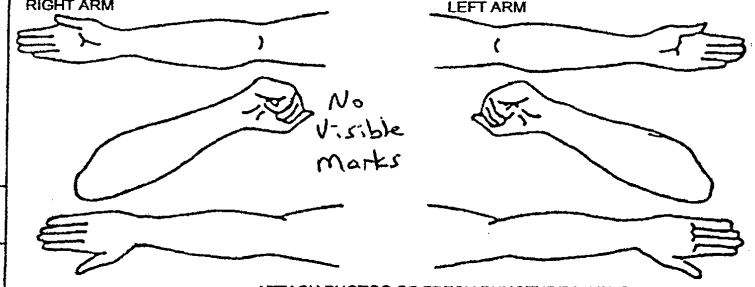
Type of Footwear: loafers

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)	NASAL AREA
Left Eye	6.0	9.5	7.0	Nothing noted
Right Eye	6.0	9.5	7.0	ORAL CAVITY: Nothing noted
Rebound Dilation	☐ Yes ☑ No			REACTION TO LIGHT: Normal

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 150 / 102 | TEMP: 38.2 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☑ Rigid

Comments:

What medicine or drug have you been using? "I dont do drugs" | How much? No answer | Time of use? "I did use" | Where were the drugs used? (Location) "I don't use"

DATE/TIME OF ARREST: 2009-07-19 0630hrs. | TIME DRE NOTIFIED: 0650 hrs. | EVAL START TIME: 0715hrs. | TIME COMPLETED: 0759 hrs.

MEMBERS SIGNATURE: J. Walsh | SERIAL/REG. #: 653 | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** RNC Headquarters, St John's NFLD.

(2) **Witnesses:** Constable Karen Didham

(3) **Source:** The writer was contacted by Constable Karen Didham to conduct a drug influence evaluation on D'Arcy Smith who Didham had found in the driver's seat of his vehicle stopped at a green traffic light in downtown St. John's. Smith appeared dazed and disoriented. He pointed to the traffic light and stated "God is the light and the light is God". He was unable to perform the standardized field sobriety tests and was arrested for impaired driving.

(4) **First Observations of Subject:** Smith was seated on a bench in the holding room staring straight ahead. He slowly turned to the writer and asked, "Are you God?" The writer responded by introducing himself and asked if he knew why he was at police facilities. He replied with "God sent you so you must be good". His speech was rapid and he was stuttering slightly.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test –Smith had a 3" sway front to back and 2" sway side to side. **Walk & Turn Test** – Smith could not keep balance during the instruction stage twice, missed heel to toe 8 times on the first 9 steps, used arms for balance 4 times, and made his turn by lifting both feet and walking around, missed heel to toe 8 times during the second 9 step. He raised arms constantly. **One Leg Stand Test** – While balancing on his left leg, Buchanan put his foot down on his counts of 2, 2, 2, & 2 and swayed while balancing. The test was stopped for safety reasons. While balancing on his right leg, he put his foot down on his count of 1, 2, & 3 before the test was stopped for safety reasons. He also swayed for balance and used arms for balance throughout each test. **Finger to Nose Test** – Smith was unable to touch the tip of his nose on any of his attempts.

(6) **Clinical Signs:** Smith's pupils were dilated in room light, in near total darkness, and in direct light. Reaction to light was normal. His pulse rate, blood pressure, and body temperature were all above the normal ranges. Muscle tone was rigid.

(7) **Statements:** Smith denied taking any drugs or alcohol.

(8) **Medical Problems/Treatment:** Smith indicated he had no medical issues.

(9) **Opinion:** It is the opinion of Tim Walsh, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Buchanan provided a blood sample for analysis.

SESSION XV

PRACTICE: TEST INTERPRETATION

SESSION XV **PRACTICE: TEST INTERPRETATION**

Upon successfully completing this session the student will be able to:

Analyze the results of a complete drug influence evaluation and identify the category or categories of drugs affecting the individual examined.

Articulate the basis for the drug category identification.

In this session, you will have an opportunity to review some drug influence evaluation report forms. These "exemplars" are not based on evaluations of actual subjects, but the "findings" they display are realistic simulations of what you will observe when you evaluate suspected drug impaired drivers in the future.

Your task is to review the forms, consider all of the "evidence" they provide, and decide what category of drug(s), if any is involved in each case. Some information is purposely omitted in the narrative report. Naturally, since we have only covered three categories thus far in our training, the "exemplars" only reflect those categories. Also, to make this practice session relatively easy, no combinations of categories have been included in these "exemplars".

In subsequent practice sessions of this type, you will be exposed to "exemplars" reflecting additional drug categories and combinations of categories.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. SCOTT MCDONALD. | DRE NO. 12505 | ROLLING LOG NO. 102

RECORDER/ WITNESS: CST. K. Burton

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property

FILE #: S-Session 15-A-1

ARRESTEE'S NAME (LAST, FIRST, M)	DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
ADAMS, Karl	59-09-14	50	M	W	CST. H. Smith

DATE EXAMINED/TIME/LOCATION: 10/06/09 - 10:30pm HRP-W. DIV.

BREATH RESULTS: ☐ Refused Results 0 mg% Instrument # J13568

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by:

What have you eaten today? HAMBURGER When? NOON

What have you been drinking? How Much? WATER

Time of last drink? N/A

Time now? 9:30PM

When did you last sleep? How long? LAST NIGHT 5HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: COOPERATIVE

COORDINATION: POOR, STUMBLING, STAGGERING

SPEECH: SLOW, SLURRED, THICK

BREATH: NOTHING NOTED

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 60 / 10:35	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 56 / 10:52	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 60 / 11:05	Angle of Onset	35°	35°

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye ☐ Left Eye ☐

ONE LEG STAND: 27/30 (22) | 29/30 (27)

ROMBERG BALANCE: 30 sec. / 30 sec.

WALK AND TURN TEST

Cannot keep balance: √√

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	√√	√
Misses Heel -Toe	√√√	√√
Steps off Line	√	√√
Raises Arms	√√√	√√√
Actual Steps Taken	9	8

☒ Sways while balancing ☒ Uses arms to balance ☐ Hopping ☒ Puts foot down

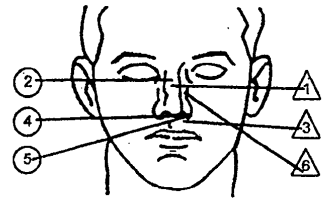
INTERNAL CLOCK: 55 Estimated as 30 sec.

Describe Turn: TURNED BACKWARDS

Cannot do Test (explain): N/A

Type of Footwear: WORK BOOTS

○ Right △ Left — Draw lines to spots touched



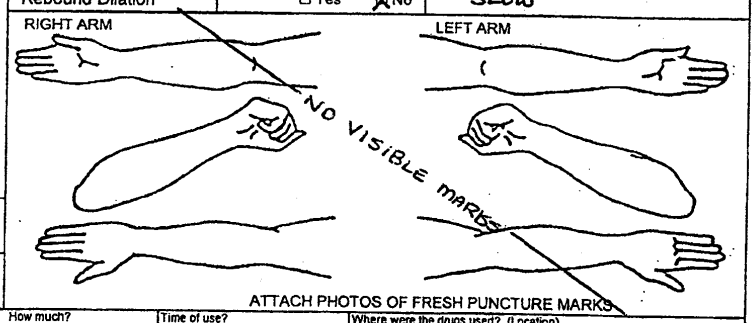
PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.0	3.0
Right Eye	4.0	6.0	3.0

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

Rebound Dilation: ☐ Yes ☒ No

REACTION TO LIGHT: SLOW



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 104 / 64 TEMP: 36.5 °

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments: VERY RELAXED

What medicine or drug have you been using? "NONE" | How much? REFUSED | Time of use? REFUSED | Where were the drugs used? (Location) REFUSED

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
10/06/09 - 9:50PM	10:10PM	10:30PM	11:30PM

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL
☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Halifax Regional Police - West Division Office

(2) **Witnesses:** Constable Ken Burton

(3) **Source:** Writer spoke with Constable Holly Smith who advised that she observed the subject – Karl Adams driving southbound on Maple Avenue at Pine Drive. Adams had crossed the centre line 3 times in a 4 block stretch of road and went through a stop sign at Pine Drive before he was pulled over. When speaking to Adams, his movements were sluggish and his speech was slurred. He was brought back to the West Office and provided breath samples of 0mg% then DRE demand was read.

(4) **First Observations of Subject:** The writer first observed Adams in the interview room. His head was tilted forward, his eyes were closed, and his breathing was deep and slow. Adams responded slowly to questions and his speech was slow, slurred, and thick. Adams' eyelids were droopy.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Adams had a 3" sway side to side and estimated 55 seconds as 30 seconds. **Walk & Turn Test** – Adams was unable to keep his balance 2 times during the instruction stage. On his way up the line, he raised arms, stepped off line on step 2, missed heel to toe on step 4, missed heel to toe on step 5, stopped after step 7, and missed heel to toe on step 9. He turned backwards, then on the way back, he stepped off line on step 2, missed heel to toe & stepped off line on step 3, stopped after step 4, missed heel to toe on step 7, and stopped after step 8, not taking a 9th step to finish as per instructions. **One Leg Stand Test** – While balancing on his left leg he swayed, used arms, and put his foot down at his count of 22. While balancing on his right leg he swayed, used arms, and put his foot down on his count of 27. **Finger to Nose Test** – He was unable to touch the tip of his nose with the tip of his finger with any of his 6 attempts.

(6) **Clinical Signs:** Adams had a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, and had an angle of onset of 35 degrees. His pulse rate & blood pressure were below the normal range. His reaction to light was slow, he exhibited a lack of convergence, and his muscle tone was flaccid. He also had ptosis.

(7) **Statements:** Adams indicated he had not taken any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Scott McDonald, a certified Drug Recognition Expert, that:

_____

(10) **Miscellaneous:** Adams provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Cst. B. Blackburn | DRE NO.: 4915 | ROLLING LOG NO.: 114

RECORDER/ WITNESS: Cst. R. Beisel

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 15-A-2

ARRESTEE'S NAME (LAST, FIRST, M): BAKER, ERNIE

DOB (YY-MM-DD)	AGE	SEX	RACE
48-06-03	61	M	W

ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. R. Beisel

DATE EXAMINED/TIME/LOCATION: 02/FEB/08. 10:15pm - Nanaimo - Cells

BREATH RESULTS: ☐ Refused Results: 0 mg% Instrument #: 43121

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No | Given by:

What have you eaten today? 2 Tacos | When? 2hrs ago

What have you been drinking? How Much? Nothing N/A | Time of last drink? N/A

Time now? 11:00pm | When did you last sleep? Yesterday | How long? 4-5hrs

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: Carefree, Cooperative

COORDINATION: Poor, Jittery, stumbling

SPEECH: Rapid

BREATH: Normal

FACE: Normal

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☒ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME

1. 100 | 10:15pm
2. 104 | 10:30pm
3. 100 | 10:42pm

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: 41/30 | 42/30

ROMBERG BALANCE

WALK AND TURN TEST

Cannot keep balance ✓

Starts too soon ✓✓

	1st Nine	2nd Nine
Stops Walking	✓	∅
Misses Heel -Toe	∅	∅
Steps off Line	∅	∅
Raises Arms	✓✓	✓✓
Actual Steps Taken	9	9

✓✓ Sways while balancing
∅ Uses arms to balance
∅ Hopping
☒ Puts foot down

INTERNAL CLOCK: 15 Estimated as 30 sec.

Describe Turn: As instructed

Cannot do Test (explain): N/A

Type of Footwear

○ Right △ Left
Draw lines to spots touched

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	8.5	6.0
Right Eye	6.5	8.5	6.0

Rebound Dilation ☐ Yes ☒ No

NASAL AREA: Redness

ORAL CAVITY: Nothing noted

REACTION TO LIGHT: Slow

RIGHT ARM / LEFT ARM

Four puncture wounds had red dots

XXXX

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 140 | 96 TEMP: 37.5 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? None | How much? N/A | Time of use? No answer | Where were the drugs used? (Location) No answer

DATE/TIME OF ARREST: 02 FEB 08 - 9:25pm

TIME DRE NOTIFIED: 10:00 Pm

EVAL START TIME: 10:15pm

TIME COMPLETED: 11:20Pm

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Nanaino RCMP detachment

(2) **Witnesses:** Constable Ron Beisel

(3) **Source:** The writer spoke with Constable Ron Beisel who advised that the subject – Ernie Baker was stopped after a police pursuit when Baker drove through a checkpoint. Baker was restless and had exaggerated reflexes. He was very talkative and his speech was rapid. He performed poorly on the SFSTs and was arrested for impaired driving and flight from police.

(4) **First Observations of Subject:** The writer first observed Baker in the interview room. He was smiling and joking with Constable Beisel. Baker's speech was rapid and loud. He seemed boisterous and unconcerned about being under arrest. His coordination was poor and jittery.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – The subject had a 2" sway side to side and estimated 15 seconds to be 30 seconds. **Walk & Turn Test** – During the instruction stage, Baker lost his balance and on two occasions, started before the instructions were finished. During the walking stage, he stopped walking after the 5th step up the line, eventually continuing again. He raised his arms on the way up the line and also on the way back. **One Leg Stand Test** – While balancing on his left leg Baker swayed while balancing. While balancing on his right leg he swayed and put his foot down on his count of 5. **Finger to Nose Test** –He missed the tip of his nose with the tip of his finger on every attempt.

(6) **Clinical Signs:** Baker's pulse & blood pressure were both above the normal ranges. His pupils were dilated above the normal range in room light and in direct light. His reaction to light was slow. He had 4 puncture wounds on his left forearm.

(7) **Statements:** Baker indicated he had not taken any drugs and when pressed about when and where he took drugs he would not answer.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Beth Blackburn, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Baker provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: Len Stefaniuk | DRE NO. 16329 | ROLLING LOG NO. 51

RECORDER/ WITNESS: Constable Andrew Harnett

CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE # 5-Session 15-B-1

ARRESTEE'S NAME (LAST, FIRST, M): CHARLES, Mark

DOB (YY-MM-DD)	AGE	SEX	RACE
80-10-01	30	M	W

ARRESTING OFFICER (NAME, SERIAL/REG #): Constable Andrew Harnett

DATE EXAMINED/TIME/LOCATION: 2011-02-22 2215hrs. Calgary P.S. District 1 office

BREATH RESULTS: ☐ Refused Results N/A Instrument #

CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: A. Harnett

What have you eaten today? When ? Subsandwich 2hours ago

What have you been drinking? How Much? Nothing

Time of last drink?

Time now? 11 pm | When did you last sleep? Yesterday | How long? 4-5hrs.

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No

ATTITUDE: Carefree, cooperative

COORDINATION: Poor, jittery, stumbling

SPEECH: Rapid

BREATH: Normal

FACE: Normal

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☑ Normal ☐ Bloodshot ☐ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☑ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2220	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 104 / 2230	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 100 / 2242	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☐ No

Convergence: Right Eye → Left Eye ←

ONE LEG STAND: 18/30 | 17/30

ROMBERG BALANCE: 0 0 2" 2" LEG TREMORS

WALK AND TURN TEST: Walked quickly

Cannot keep balance ✓

Starts too soon ✓✓

	1st Nine	2nd Nine
Stops Walking	✓	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	✓✓✓	✓✓✓
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Ø Uses arms to balance ☑ Ø Hopping ☑ ☑ Puts foot down

INTERNAL CLOCK: 16 Estimated as 30 sec.

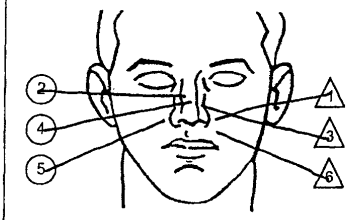
Describe Turn: As instructed

Cannot do Test (explain): N/A

Type of Footwear: Running shoes

○ Right △ Left

Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	8.5	6.0
Right Eye	6.5	8.5	6.0

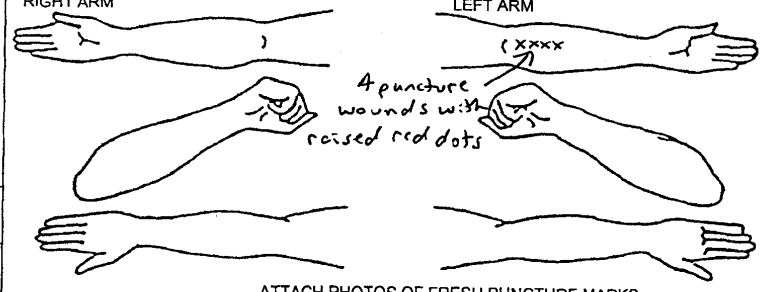
Rebound Dilation: ☐ Yes ☑ No

NASAL AREA: Redness

ORAL CAVITY: Clear

REACTION TO LIGHT: Slow

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 140 / 96 TEMP 38.5 °

MUSCLE TONE: ☑ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? None | How much? N/A | Time of use? N/A | Where were the drugs used? (Location) N/A

DATE/TIME OF ARREST: 2011-02-22 2125hrs

TIME DRE NOTIFIED: 2140hrs.

EVAL START TIME: 2215

TIME COMPLETED: 2255 hrs.

MEMBERS SIGNATURE: L. Stefaniuk

SERIAL/REG. #: 73176

REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL
☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** District 1 Office, Calgary, Alberta

(2) **Witnesses:** Constable Andrew Harnett

(3) **Source:** Constable Andrew Harnett contacted the writer and requested that the writer attend to conduct a drug evaluation on the subject – Mark Charles. Patrol members had attempted to conduct a traffic stop on Charles who fled at high speed. Members eventually stopped him 10 minutes later upon arrival at his residence. Charles was very restless and had exaggerated reflexes. He was talkative and his speech was rapid. He performed poorly on the SFSTs and was arrested.

(4) **First Observations of Subject:** The writer first saw the suspect in the interview room. He was smiling and joking with Harnett. His speech was rapid and loud. He seemed boisterous and unconcerned about being under arrest.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Charles had a 2" sway side to side and estimated 16 seconds as being 30 seconds and had leg tremors. **Walk & Turn Test** – Charles lost his balance once during the instruction stage. During the walking stage, he raised his arms constantly, stopped after his 5th step on the way up the line. He walked very quickly. **One Leg Stand Test** – While balancing on his left leg he swayed and put his foot down on his counts of 5 & 7. While balancing on his right leg he swayed and put his foot down on his count of 2 & 1. **Finger to Nose Test** – He missed the tip of his nose with the tip of his finger on all attempts.

(6) **Clinical Signs:** Charles' pulse rate, blood pressure, and temperature all above the normal range. His pupils were dilated in room light and in direct light. He had a slow reaction to light. He also had 4 fresh injection marks on the inside of his left forearm.

(7) **Statements:** Charles denied taking any drugs this date. .

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Len Stefaniuk, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Charles provided a urine sample..

DRUG INFLUENCE EVALUATION

EVALUATOR: Cst Lori Wright | DRE NO.: 14867 | ROLLING LOG NO.:

RECORDER/ WITNESS: Cst. Ron MILLER

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property

FILE #: S-Session 15-B-2

ARRESTEE'S NAME (LAST, FIRST, M): DODGE, Mary C.

DOB (YY-MM-DD): 720613 | AGE: 37 | SEX: F | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Ron Miller

DATE EXAMINED/TIME/LOCATION: 2009-03-17 0045hrs. T.B.P.S.

BREATH RESULTS: ☐ Refused Int x 8000 Results 70mg% Instrument # 212005

CHEMICAL TEST: ☐ Refused ☐ Urine ☐ Oral fluid ☐ Blood N/A

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: Cst. Ron Miller

What have you eaten today? Pizza — When? 10pm

What have you been drinking? How Much? "Couple of beers"

Time of last drink? 10pm

Time now? 11:30pm

When did you last sleep? How long? Last Night 7hours

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☒ Yes ☐ No — "Birth control pills"

ATTITUDE: Cooperative

COORDINATION: Poor, staggering

SPEECH: Slurred

BREATH: Moderate odour of alcoholic beverages

FACE: Flushed

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☒ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 68 / 0050	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 64 / 0105	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 72 / 0117	Angle of Onset	40°	40°

Vertical Nystagmus? ☐ Yes ☐ No

Convergence: Right Eye ☒ Left Eye ☒

ONE LEG STAND: 27/30 — 28/30

ROMBERG BALANCE: 2" 2" 2" 2" — circular sway

WALK AND TURN TEST: Appeared rubber-legged

Cannot keep balance: ✓✓ (2)

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	✓	Ø
Misses Heel -Toe	✓✓ (2)	Ø
Steps off Line	Ø	Ø
Raises Arms	Constant	Constant
Actual Steps Taken	9	9

☒ Always while balancing ☒ Uses arms to balance ☐ Hopping ☒ Puts foot down

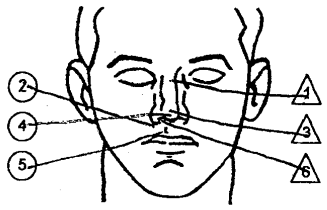
INTERNAL CLOCK: 40 Estimated as 30 sec.

Describe Turn: Lost balance / Staggered

Cannot do Test (explain): N/A

Type of Footwear: Tennis Shoes

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.5	6.5	3.5
Right Eye	4.5	6.5	3.5

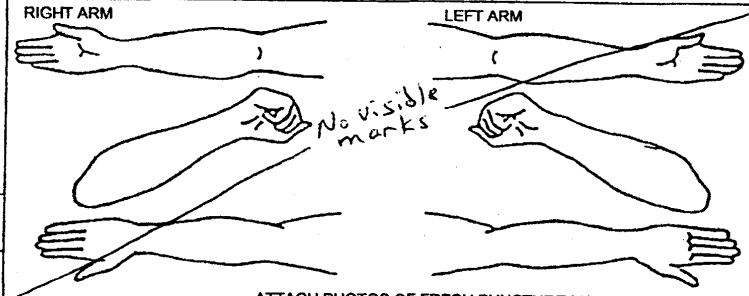
Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: Nothing noted

ORAL CAVITY: Nothing noted

REACTION TO LIGHT: Slow

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 76 TEMP: 36.6°

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "None, Just my pill" — How much? No answer — Time of use? N/A — Where were the drugs used? (Location) No answer

DATE/TIME OF ARREST: 2009 03 17 - 0010hrs.

TIME DRE NOTIFIED: 0025 hrs.

EVAL START TIME: 0045 hrs.

TIME COMPLETED: 0125 hrs.

MEMBERS SIGNATURE: [signature] — SERIAL/REG. #: 77631 — REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Thunder Bay Police Service Cellblock

(2) **Witnesses:** Constable Ron Miller

(3) **Source:** The writer spoke with Constable Ron Miller who stated he received a report of a possible impaired driver on Red River Road near Algoma Street. The driver – Mary Charles was unable to maintain a single lane of travel, weaving and straddling the two southbound lanes. Traffic was backing up behind her. Miller conducted a traffic stop. Charles' movements were slow, she had sluggish reactions, and slurred speech. She performed poorly on the SFSTs and was arrested for impaired driving. She was returned to the cell block and breath testing results were both 70mg%. Given her gross signs of impairment, a drug evaluation was requested.

(4) **First Observations of Subject:** Charles was swaying and unsteady on her feet. Her eyelids were droopy and she blinked often. Her eyes were bloodshot, her speech was slow, she was thick-tongued, and she had a moderate smell of liquor from her breath. Her face was flushed.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Charles had a 2" front to back & side to side sway. **Walk & Turn Test** – Charles lost her balance twice during the instruction stage. On her way up the line, she missed heel to toe on her 3rd step, then stopped. She also missed heel to toe on her 8th step. During her turn, she staggered and lost her balance. During the entire test, she used her arms for balance and appeared rubber-legged. **One Leg Stand Test** – While balancing on her left leg she swayed, used arms for balance, and put her foot down at her count of 8. While balancing on her right leg she swayed, used arms, and put her foot down on her count of 3 & 26. **Finger to Nose Test** – She missed the tip of her nose with the tip of her finger on attempts 1, 2, 5, & 6.

(6) **Clinical Signs:** Charles had a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, and had an angle of onset of 40 degrees. Her blood pressure was below the normal range. Her reaction to light was slow, she exhibited a lack of convergence, and her muscle tone was flaccid. She also had ptosis.

(7) **Statements:** Charles indicated she had not taken any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Lori Wright, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** No toxicological sample was provided.

DRUG INFLUENCE EVALUATION

EVALUATOR: Patrick KELLAR | DRE NO.: 16084 | ROLLING LOG NO.: 65

RECORDER/ WITNESS: Cst. ROBERT TRAVERS | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE #: 5-Session 15-B-3

ARRESTEE'S NAME (LAST, FIRST, M): EDWARDS, TERRI | DOB (YY-MM-DD): 750102 | AGE: 36 | SEX: F | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Robert TRAVERS

DATE EXAMINED/TIME/LOCATION: 2011-01-07 2300hrs BELLEVILLE POLICE CELLS | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: ROBERT TRAVERS | What have you eaten today? NOTHING | When? N/A | What have you been drinking? How Much? NOTHING | Time of last drink?

Time now? "DON'T KNOW" | When did you last sleep? How long? "I DON'T REMEMBER" | Are you sick or injured? "SICK TO MY STOMACH" ☐ Yes ☐ No | Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No | Do you have any physical disabilities? ☐ Yes ☑ No | Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No | ATTITUDE: DAZED BUT COOPERATIVE | COORDINATION: POOR, UNSTEADY

SPEECH: RAMBLING, SLURRED | BREATH: NORMAL | FACE: SWEATY, DAZED APPEARANCE

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft | Eyes: ☑ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery | Blindness: ☑ None ☐ L. Eye ☐ R. Eye | Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain) | Nystagmus Present: ☐ Yes ☑ No | Able to follow stimulus: ☑ Yes ☐ No | Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2310	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 108 / 2325	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 104 / 2337	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☑ No

Convergence: Right Eye → Left Eye ←

ONE LEG STAND: TEST STOPPED (1 3 4 R) | TEST STOPPED (1 2 4 L)

ROMBERG BALANCE: 1" 1" 3" 3"

WALK AND TURN TEST

Cannot keep balance ✓✓

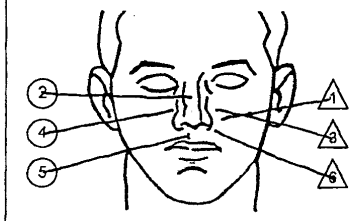
Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	(10)	(9)
Steps off Line	(60)	(9)
Raises Arms	Constant	Constant
Actual Steps Taken	10	9

☑ Sways while balancing ☑ Uses arms to balance ☐ Hopping ☑ Puts foot down

INTERNAL CLOCK: 90 Estimated as 30 sec. | Describe Turn: TURNED WRONG DIRECTION | Cannot do Test (explain): N/A | Type of Footwear: Flip-flops

○ Right △ Left — Draw lines to spots touched

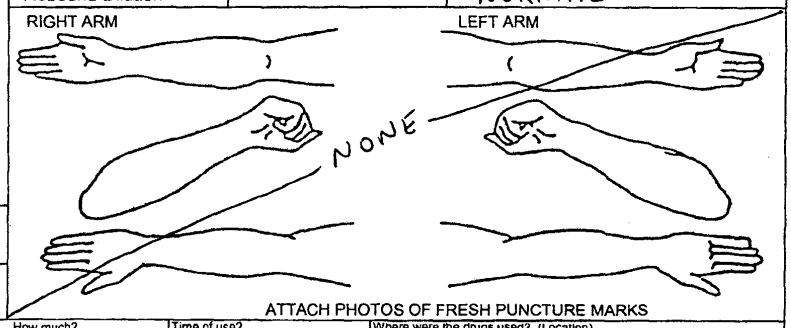


PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	9.0	6.5
Right Eye	6.5	9.0	6.5

Rebound Dilation ☐ Yes ☑ No

NASAL AREA: CLEAR | ORAL CAVITY: NOTHING NOTED | REACTION TO LIGHT: NORMAL

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 150 / 110 | TEMP: 38.4 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☑ Rigid

Comments:

What medicine or drug have you been using? "NOTHING" | How much? NO ANSWER | Time of use? NO ANSWER | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
11-01-07 2235 hrs	2245 hrs	2300	2355

MEMBERS SIGNATURE: P. Kellar | SERIAL/REG. #: 667563 | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Belleville Police Cells

(2) **Witnesses:** Constable Robert Travers

(3) **Source:** The writer was contacted by dispatch and advised to contact Constable Robert Travers at Cells for a drug evaluation. Cst Travers indicated he had found the subject – Terri Edwards standing on the hood of her car in the intersection of Latchford & Lynwood Streets. She was waving her arms and screaming at cars as they drove by. It was determined that she had driven her car to that location. She was read a DRE demand and transported back to cells for a drug evaluation.

(4) **First Observations of Subject:** The writer first saw the suspect in the interview room. She appeared dazed, disoriented, and had difficulty standing.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Edwards had a 1" sway front to back and a 3" sway side to side while estimating 90 seconds as being 30 seconds. **Walk & Turn Test** – Edwards lost her balance twice during the instruction stage. During the walking stage, she raised her arms constantly, missed heel to toe and stepped off line on every step, and turned the wrong direction after taking 10 steps up the line. **One Leg Stand Test** – While balancing on her left leg she swayed, used arms for balance, and put her foot down at her count of 1, 3, and 4 before the test was stopped for safety reasons.. While balancing on her right leg she swayed, used arms, and put her foot down on her count of 1, 2, and 4 before the test was stopped for safety reasons. **Finger to Nose Test** – She missed the tip of her nose with the tip of her finger on all attempts.

(6) **Clinical Signs:** Edwards' pulse rate, blood pressure, and body temperature were all above the normal range. Her pupils were dilated in room light, near total darkness, and in direct light. Reaction to light was normal.

(7) **Statements:** Edwards stated she didn't take any drugs today. .

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Patrick Kellar, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Edwards provided a urine sample.

SESSION XVI

DISSOCIATIVE ANESTHETICS

SESSION XVI DISSOCIATIVE ANESTHETICS

Upon successfully completing this session the student will be able to:

Explain a brief history of Dissociative Anesthetics and specifically PCP and its analogs.

Identify common drug names and terms associated with this drug category.

Identify common methods of administration for this drug category.

Explain the symptoms, observable signs and other effects associated with this drug category.

Describe the typical time parameters, i.e. onset and duration of effects, associated with this drug category.

List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category.

Correctly answer the "topics for study" questions at the end of this session.

A. Overview of the Category

Dissociative Anesthetics include drugs that inhibit pain by cutting off or dissociating the brain's perception of pain. The drugs within this category normally will induce a state of sedation, immobility, amnesia, and marked analgesia.

The term Dissociative Anesthesia is derived from the strong feeling of dissociation from the environment that is experienced by the user.

Phencyclidine (PCP) was the first drug used for this purpose, but the frequent occurrence of unpleasant hallucinations and psychological problems soon led to its discontinued legal use. Ketamine and Ketalar, two analogs of PCP, also are considered Dissociative Anesthetics.

Phencyclidine (PCP)

The formal chemical name for this drug is Phenyl Cyclohexyl Piperidine, from which the initials PCP are derived. "Phencyclidine" is simply a contracted form of the actual chemical name.

PCP, or Phencyclidine and its analogs are sometimes referred to as "psychedelic anesthetics" because of the bizarre and varying effects they can cause in the user. In some respects, PCP and its analogs can be similar to a CNS Depressant, and in some respects, they act like a CNS Stimulant. In other respects, they act like an hallucinogen, and they are frequently classed as an Hallucinogen in medical texts and scientific/research reports.

The drug PCP was first developed in the 1950's as an intravenous anesthetic. It was patented and marketed in 1963 under the trade name Sernyl. Within a few years, as evidence of PCP's very undesirable side effects accumulated, its use as an anesthetic for humans was discontinued in 1967. In 1968 it was re-patented as a veterinary anesthetic under the trade name Sernylan.

There are numerous slightly different drugs that are similar to PCP. These drugs are the analogs of PCP. In this case, an analog is a chemical that is similar to the drug in terms of molecular structure or psychoactive effects.

PCP is relatively easy to manufacture, using readily available chemicals. The formula for producing PCP has been widely publicized. However, although easy to make, it is also dangerous to make. A lack of caution in the production process could release the same deadly gas that is used for executions in gas chambers. Also, liquid PCP is especially dangerous because it can be absorbed through the skin.

PCP has numerous "street names". The chart below lists some of the more common "street names" for PCP.

Water	Crystal	Monkey Dust	Elephant Tranquilizer
Ace	Krystal	Green	Horse Tranquilizer
Amoeba	Crystal Joint	Green Leaves	Animal Tranquilizer
Trank	KJ (or CJ)	Kools	Super Weed
Jet Fuel	Embalming Fluid	Super Kools	Zombie Weed
Juice	Tic Tac	Sherms	Peace Weed
Dust	Peace	Super Grass	Mint Weed
Angel Dust	Paz	Killer Weed Lovely	
Devil Dust	Peace Pill		
Magic Dust			

Methods of Ingestion

Many users ingest PCP by smoking. These drugs can be applied in either liquid or powder form to a variety of vegetable or leafy substances, such as mint leaves, parsley, oregano, tobacco or marijuana. The substances then can be smoked in a pipe or cigarette. PCP smoke is very hot and can irritate the mouth and tongue, so many smokers prefer to use mint leaves and similar material to cool the smoke. For the same reason, PCP smokers whoadulterate commercial cigarettes prefer to use mentholated brands, such as "Kools" and "Shermans".

The powdered forms of PCP can also be snorted or taken orally. Liquid PCP and its analogs can be injected, or administered directly to the eyes, via an eyedropper. These drugs can also be ingested transdermally, i.e. through the skin.

Ketamine

A frequently abused analog of PCP is Ketamine. It is chemically related to PCP, and is used to produce rapid general anesthesia for medical procedures of short duration, or as an initial surgical anesthetic. It is available in liquid form for human use (Ketalar), and for veterinary use (Ketaved, Ketaset, Vetamine, and Vetalar). Liquid Ketamine may vary in color from clear to yellow. Ketamine in powdered form is normally a white, crystalline powder. It is commercially available as a veterinary anesthetic. It is listed in Schedule I CDSA.

Street names for Ketamine include "Vitamin K," "Special K,""Kitty," "Super K," "Kit Kat," Jet,""K," "Lady K," "Super acid," and "Cat Valium."

Methods of Ingestion

Many users ingest Ketamine by smoking. This drug can also be applied in either liquid or powder form to a variety of vegetable or leafy substances, similar to PCP.

The Ketamine then can be smoked in a pipe or cigarette. Ketamine smoke is also very hot and can irritate the mouth and tongue, so many smokers will try and cool the smoke.

The powdered form of Ketamine can also be snorted or taken orally. Liquid Ketamine can be injected, or administered directly to the eyes, via an eyedropper. Like PCP and other analogs, these drugs can be ingested transdermally.

Dextromethorphan (DXM)

Dextromethorphan, or DXM, is a synthetically produced substance that is chemically related to codeine, although it is not an opiate. DXM is an ingredient found in numerous over-the-counter cough and cold remedies. When ingested at recommended dosage levels, DXM generally is a safe and highly effective cough suppressant; however, when ingested in larger amounts, DXM produces negative physiological effects. Over-the-counter products that contain DXM often contain other ingredients such as acetaminophen, chlorpheniramine, and guaifenesin.

In some respects, DXM's effects can be similar to a CNS Depressant, CNS Stimulant, and Hallucinogens. It has been classified as a CNS Depressant in some medical texts and scientific/research reports.

Dextromethorphan is commonly known as "DXM," "Triple C (CCC)," "Robo," "Robo-tripping,""Skittles," "Robo-dosing," "Robo-fire," "Rojo," "Candy," "Velvet,"and "DM."

Methods of Ingestion

Most DXM abusers ingest the drug orally, although some snort the pure powdered form of the drug. Some abusers ingest 250 to 1,500 milligrams in a single dosage, far more than the recommended therapeutic doses of 10 to 20 milligrams every four hours or 30 milligrams every 6 to 8 hours

B. Possible Effects of Dissociative Anesthetics

Dissociative Anesthetics produce impairment and other observable effects on the human mind and body that are a combination of effects produced by CNS Depressants, CNS Stimulants and Hallucinogens.

PCP is classified as a Dissociative Anesthetic because it cuts off the brain's perceptions of the senses. PCP users often feel that their heads are physically separated from their bodies. They sometimes report feeling they are dead, and that their heads are floating away.

Among these drugs least desirable side effects are:

- Delirium
- Agitation, anxiety
- Rigid muscle tone
- Elevated blood pressure
- Convulsions
- Difficulty in speech
- Hallucinations
- Violent reactions

Some evidence of long term memory disorders and psychological disturbances resembling schizophrenia has also been linked to PCP.

The following are extreme, but not unique, examples:

- One young man methodically pulled out his own teeth, with a pair of pliers.
- A second suffered hallucinations of unbelievably grotesque monsters, and gouged out his own eyes to avoid seeing the monsters.
- Another drank rat poison, hoping to kill the rats that he imagined were infesting his body.
- A 26 year old nude woman in Washington, DC repeatedly plunged a butcher knife into her own eye, chest, groin and abdomen. She then threatened a police officer with the knife and was shot to death. (Washington Post, March 7, 1988)

Dextromethorphan (DXM)

Abusers of Dextromethorphan will also ingest various amounts of DXM depending on their body weight and the effect or plateau that they are attempting to achieve. The levels of DXM plateaus include:

- First Plateau: Mild inebriation.
- Second Plateau: An effect similar to alcohol intoxication and, occasionally, mild hallucinations. The abuser's speech can become slurred, and short-term memory may be temporarily impaired.
- Third Plateau: An altered state of consciousness. The abuser's senses, particularly vision, can become impaired.
- Fourth Plateau: Mind and body dissociation or an "out-of-body" experience. The abuser can lose some or all contact with his or her senses. The effects at this plateau are comparable to PCP and its analogs.

Other effects resulting from acute dosages of DXM (between 250 and 1,500 milligrams) include blurred vision, body itching, rash, sweating, fever, hypertension, shallow respiration, diarrhea, toxic psychosis, and an increased heart rate, blood pressure and body temperature.

C. Onset and Duration of Effects

PCP

When smoked or injected, PCP's effects generally are felt within 1-5 minutes. When snorted, the onset occurs in about 2-3 minutes. The effects reach their peak in about 15-30 minutes. If taken

orally, PCP's effects are generally felt in 30-60 minutes. The effects generally last 4-6 hours, but they can last somewhat longer.

Ketamine

The onset of effects of Ketamine is within seconds if smoked, 1-5 minutes if injected, 5-10 minutes if snorted and 15-20 minutes if orally administered. Effects generally last 30-45 minutes if injected, 45-60 minutes if snorted, and 1-2 hours following oral ingestion. It is often re-administered due to its relatively short duration of action.

Dextromethorphan (DXM)

Dextromethorphan is rapidly absorbed from the gastrointestinal tract and peak plasma concentrations are reached in approximately 2.5 hours. It is widely distributed, and is rapidly and extensively metabolized by the liver. Dextromethorphan is demethylated to dextrophan, an active metabolite, and to 3-methoxymorphinan and 3-hydroxymorphinan. It exerts its antitussive effects within 15-30 minutes of oral administration. The duration of action is approximately 3-6 hours with conventional dosage forms.

D. Signs and Symptoms of Dissociative Anesthetic Overdose

In addition to the bizarre, violent, and self-destructive behavior discussed previously, persons severely intoxicated by PCP or DXM may exhibit definite and extreme symptoms signifying a medically dangerous condition. Some examples are:

- A deep coma, lasting for up to 12 hours.
- Seizures and convulsions.
- Respiratory depression.
- Excited Delerium. This condition is characterized by a combination of disorientation, agitation, violent or bizarre behavior, insensitivity to pain, elevated body temperature, and/or increased strength. It is often followed by cardiopulmonary arrest.
- Possible cardiac problems. Lower doses of PCP may trigger a heart attack if the user had some pre-existing condition, predisposing them to possible cardiac problems.
- Eyes generally open with a blank stare.

There is also some evidence that prolonged use of PCP and DXM can lead to psychosis, which can be permanent.

E. Expected Results of the Evaluation

When a DRE concludes that a subject is impaired by a Dissociative Anesthetic, such as Phencyclidine or DXM, his or her report should state that "...the subject is impaired by a Dissociative Anesthetic."

When a person under the influence of Dissociative Anesthetics is evaluated by a DRE, the following results can generally be expected:

Horizontal Gaze Nystagmus – yes, with a very early angle of onset.

Vertical Gaze Nystagmus - yes

Lack of Convergence - yes

Pupil size - normal

Reaction to light - normal

Pulse rate - up

Blood pressure - up

Temperature - up. It is not uncommon for persons under the influence of PCP to remove most or all of their clothing in an effort to cool down.

Muscle tone - rigid

Injection sites usually won't be found, although some PCP users do inject the drug.

General Indicators:

- Blank stare
- Confused
- Chemical odor (of Ether, used in preparation of PCP)
- Cyclic behavior (With PCP)
- Difficulty with speech
- Disorientated
- Early HGN onset
- Hallucinations
- Incomplete verbal responses
- Increased pain threshold (PCP)
- Loss of memory
- "Moon Walking" (PCP)
- Non-communicative
- Perspiring (PCP)
- Possibly violent (PCP)
- Sensory distortions
- Slow, slurred speech

Not all laboratories that perform blood and urine analyses are capable of detecting all of the known analogs of PCP; in fact, some of the analogs can be detected by few if any laboratories. Thus, a DRE should not be surprised if a negative toxicological report comes back for a subject

the DRE believed was impaired by Phencyclidine. It is possible that the subject had used an analog that the particular lab couldn't detect.

Topics for Study

1. What was the original purpose for which PCP was first patented and marketed?

2. Why do many PCP smokers prefer to adulterate mentholated cigarettes with PCP?

3. What is Ketamine?

4. What does the term "dissociative anesthetic" mean?

5. "Phencyclidine" is a contraction of what three words?

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. N. KOZUSKA | DRE NO.: 14859 | ROLLING LOG NO.: 46

RECORDER/ WITNESS: CST. C. PINHEIRO

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property

FILE #: S-Session-16-1

ARRESTEE'S NAME (LAST, FIRST, M)	DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
ALBRIGHT, JEREMY J.	86-10-4	23	M	W	CST. M. VERTOLLI

DATE EXAMINED/TIME/LOCATION: 10/DEC/09 - 1420 HRS - 22 DIV

BREATH RESULTS: Results N.A. ☐ Refused Instrument # ---

CHEMICAL TEST: ☒ Urine ☐ Oral fluid ☐ Blood ☐ Refused

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. VERTOLLI

What have you eaten today? CHEESEBURGER & FRIES When? 11am

What have you been drinking? How Much? WATER N/A

Time of last drink? N/A

Time now? 1:30PM | When did you last sleep? How long? NIGHT BEFORE LAST 1-2HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: COOPERATIVE

COORDINATION: SLOW & DELIBERATE

SPEECH: SLURRED

BREATH: NOTHING NOTED

FACE: FLUSHED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, If so ☐ Hard ☐ Soft

Eyes: ☒ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 110 / 1430	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 120 / 1446	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 110 / 1501	Angle of Onset	IMMEDIATE	IMMEDIATE

Vertical Nystagmus? ☒ Yes ☐ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: 27/30 | 28/30

LEG TREMORS

☑	☑ Sways while balancing
Ø	☑ Uses arms to balance
Ø	Ø Hopping
Ø	Ø Puts foot down

ROMBERG BALANCE: 2" / 2"

WALK AND TURN TEST

Cannot keep balance: ✓

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	✓✓
Steps off Line	Ø	Ø
Raises Arms	Ø	Ø
Actual Steps Taken	9	9

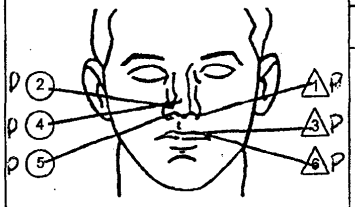
INTERNAL CLOCK: 29 Estimated as 30 sec.

Describe Turn: SHUFFLED FEET

Cannot do Test (explain): N/A

Type of Footwear: LOAFERS (BRN)

○ Right △ Left — Draw lines to spots touched



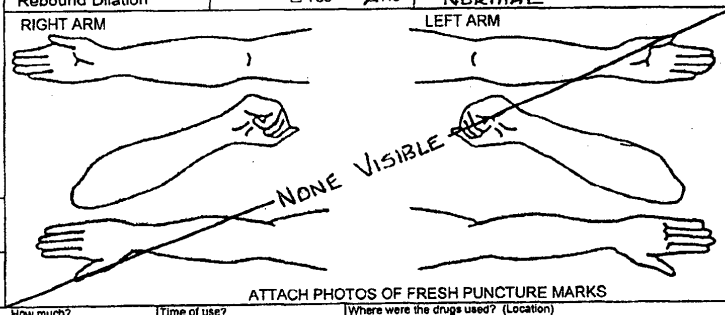
PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	7.0	8.5	5.0
Right Eye	7.0	8.5	5.0

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: NORMAL



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 152 / 100 TEMP: 37.6 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? CORICIDIN | How much? 24 PILLS | Time of use? LAST NIGHT | Where were the drugs used? (Location) FRIEND'S HOUSE

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
10/DEC/09 1300 HRS	1350	1420	1515

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR: RULE OUT MEDICAL ☐ | ALCOHOL ☐ | DEPRESSANT ☐ | STIMULANT ☐ | HALLUCINOGEN ☐ | DISSOCIATIVE ANESTHETIC ☐ | NARCOTIC ANALGESIC ☐ | INHALANT ☐ | CANNABIS ☐ | OPERATIONAL ☐ | TRAINING ☐

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Peel Regional Headquarters

(2) **Witnesses:** Constable C. Pinheiro

(3) **Source:** The writer was contacted by Dispatch and requested to contact Constable Bill Vertolli regarding a drug evaluation. Cst Vertolli advised he had stopped Jeremy Albright for speeding on Lexington Avenue, that Vertolli had bloodshot eyes and slurred speech. He appeared impaired. however, there was no odour of alcoholic beverage on his breath. He had 6 clues on the HGN test and performed poorly on the SFSTs. He admitted taking some "Dex" the night earlier.

(4) **First Observations of Subject:** Albright was first observed in the interview room at Peel Police HQ. His face was flushed and his speech slurred. His movements were slow and deliberate.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test –Albright swayed 2" font to back & 2" side to side. **Walk & Turn Test** – Albright could not keep balance once during the instruction stage. During the walking stage, he shuffled both feet to turn around and he missed heel to toe on his 4th & 9th steps. **One Leg Stand Test** – While balancing on his left leg, Albright swayed and exhibited leg tremors. While balancing on his right leg, Albright swayed, used arms for balance, and exhibited leg tremors. **Finger to Nose Test** – Smith was unable to touch the tip of his nose on any of his attempts and used the pad of his finger despite the instructions and demonstration.

(6) **Clinical Signs:** Albright exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, & an immediate onset as well as vertical nystagmus. He had a lack of convergence. His pulse rate, blood pressure, and body temperature were all above the normal ranges.

(7) **Statements:** Albright stated he took about 24 Coricidan (dextromethorphan) pills. He also stated he had to be transported to the hospital several months ago when he overdosed on 32 Coricidan pills.

(8) **Medical Problems/Treatment:** Albright indicated he had no medical issues.

(9) **Opinion:** It is the opinion of Nathan Kozuska, a certified Drug Recognition Expert, that:

_____.

(10) **Miscellaneous:** Albright provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. F. POPOFF | DRE NO.: 10184 | ROLLING LOG NO.: 81

RECORDER/ WITNESS: CST. R. LECLAIR | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 16-2

ARRESTEE'S NAME (LAST, FIRST, M): ROSS, ROBERT H. | DOB (YY-MM-DD): 79-06-09 | AGE: 30 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. C. MATTHEWS

DATE EXAMINED/TIME/LOCATION: 12/08/08 - 2145 - CELLBLOCK | BREATH RESULTS: Results N.A. ☐ Refused Instrument # | CHEMICAL TEST: ☒ Urine ☐ Oral fluid ☐ Blood ☐ Refused

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. MATTHEWS

What have you eaten today? CHICKEN — When? 60m

What have you been drinking? How Much? Nothing — Time of last drink? N/A

Time now? 8 O'CLOCK | When did you last sleep? YESTERDAY | How long? 6hrs

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: PASSIVE, COOPERATIVE

COORDINATION: POOR, STAGGERING

SPEECH: SLURRED, SLOW & LOW

BREATH: CHEMICAL ODOUR

FACE: FLUSHED & SWEATY

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, If so ☐ Hard ☐ Soft

Eyes: ☒ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2150	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 108 / 2204	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 100 / 2217	Angle of Onset	IMMEDIATE	IMMEDIATE

Vertical Nystagmus? ☒ Yes ☐ No

Convergence: Right Eye → Left Eye

ONE LEG STAND: TEST STOPPED (1 3 7 / R) (1 4 5 / L) — TEST STOPPED

ROMBERG BALANCE: 3" 3" 3" 3" — CIRCULAR SWAY

WALK AND TURN TEST

Cannot keep balance ✓

Starts too soon ✓

	1st Nine	2nd Nine
Stops Walking	✓	✓
Misses Heel -Toe	All	All
Steps off Line	✓	✓
Raises Arms	✓✓✓	✓✓
Actual Steps Taken	9	9

☒ Sways while balancing ☒ Uses arms to balance ☐ Hopping ☒ Puts foot down

INTERNAL CLOCK: 45 Estimated as 30 sec. | Describe Turn: SWIVELED IN ONE ABRUPT MOTION | Cannot do Test (explain): N/A | Type of Footwear: SNEAKERS

○ Right △ Left — Draw lines to spots touched

RIGID MOVEMENTS

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.0	3.5
Right Eye	4.0	6.0	3.5

Rebound Dilation ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: CLEAR - CHEMICAL ODOUR

REACTION TO LIGHT: NORMAL

BLOOD PRESSURE: 146 / 100 | TEMP: 37.6 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments: VERY RIGID ARMS

RIGHT ARM / LEFT ARM — NO VISIBLE MARKS

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? NOTHING | How much? N/A | Time of use? NO ANSWER | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST: 12/08/08 - 2100 hrs | TIME DRE NOTIFIED: 2120 | EVAL START TIME: 2145 | TIME COMPLETED: 2220

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR: RULE OUT MEDICAL | ALCOHOL | DEPRESSANT | STIMULANT | HALLUCINOGEN | DISSOCIATIVE ANESTHETIC | NARCOTIC ANALGESIC | INHALANT | CANNABIS | ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Regina Traffic Division Office, Regina, Saskatchewan

(2) **Witnesses:** Constable Rene Leclair

(3) **Source:** The writer was contacted by radio to contact Constable Chris Matthews about doing a drug evaluation on Robert Ross who was observed driving on North Main Street at about 10km/h, drifting within his lane, and nearly hitting other vehicles. When stopped, the suspect appeared dazed and could not state where he was or where he came from. He had a blank stare and appeared very confused.

(4) **First Observations of Subject:** The writer first observed the Ross in the interview room at the Traffic Office. He appeared dazed and disoriented, had a fixed stare, and responded very slowly (5-10 second delay) to every question. He was perspiring heavily and had rambling speech.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test –Ross had a 3" sway in a circular motion and estimated the passing of 30 seconds in 45 seconds. **Walk & Turn Test** – During the instruction stage, Ross could not keep his balance once, then he started too soon. During the walking stage, he stepped off line on his 2nd step, stopped on his 4th step, and missed heel to toe on steps 2 through 8. To turn, he swiveled in one abrupt motion, stepped off line on his 1st step on the way back, stopped on his 2nd step, and missed heel to toe on steps 3 through 9. He raised his arms through the entire test. **One Leg Stand Test** – While balancing on his left leg, Ross put his foot down at count 1, 3, & 7, swayed, and used arms for balance before the test was stopped for safety reasons. While balancing on his right leg, he put foot down on count 1, 4, & 5, swayed and used arms for balance before the test was stopped for safety reasons. **Finger to Nose Test** – Smith was unable to touch the tip of his nose on any of his attempts and his arm movements were very rigid.

(6) **Clinical Signs:** Ross exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, & an immediate onset as well as vertical nystagmus. He had a lack of convergence, reaction to light was normal. His pulse rate, blood pressure, and body temperature were all above the normal ranges.

(7) **Statements:** Ross denied taking any drugs.

(8) **Medical Problems/Treatment:** Ross indicated he had no medical issues.

(9) **Opinion:** It is the opinion of Fred Popoff, a certified Drug Recognition Expert, that:

_____.

(10) **Miscellaneous:** Ross provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. J. SCHWENNEKER | DRE NO.: 4921 | ROLLING LOG NO.: 131

RECORDER/ WITNESS: CST. H. MONTGOMERY

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property

FILE #: S-Session 16-3

ARRESTEE'S NAME (LAST, FIRST, M): GEORGE, DEBRA. A.

DOB (YY-MM-DD): 84-08-24 | AGE: 25 | SEX: F | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): CST. J. SHUSTER #1733

DATE EXAMINED/TIME/LOCATION: 05/02/08 - 2315

BREATH RESULTS: ☐ Refused — Results: 0 mg% — Instrument #: 74080

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. SHUSTER

What have you eaten today? PIZZA — When? 6PM

What have you been drinking? How Much? NOTHING N/A — Time of last drink? N/A

Time now? 11 PM — When did you last sleep? How long? LAST NIGHT 6-7 HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: PASSIVE, NON-RESPONSIVE

COORDINATION: POOR, SLOW, STAGGERING

SPEECH: SLOW, CONFUSED, THICK

BREATH: NOTHING NOTED

FACE: SWEATY, FLUSHED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 120 / 2325	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 116 / 2336	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 118 / 2345	Angle of Onset	IMMEDIATE	IMMEDIATE

Vertical Nystagmus? ☒ Yes ☐ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: Test Stopped (1) 3 R — Test Stopped L (L) R

ROMBERG BALANCE: 3" 3" 3" 3" — CIRCULAR SWAY

WALK AND TURN TEST

Cannot keep balance: √√

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	√√√√	ALL
Steps off Line	Ø	Ø
Raises Arms	CONSTANT	
Actual Steps Taken	10	12

SUBJECT FELL

☒ Sways while balancing ☒ Uses arms to balance ☒ Hopping ☒ Puts foot down

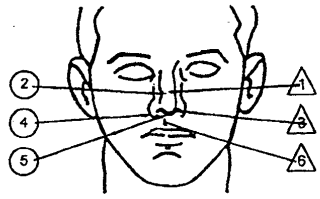
INTERNAL CLOCK: 42 Estimated as 30 sec.

Describe Turn: STOPPED, THEN SPUN AROUND

Cannot do Test (explain): N/A

Type of Footwear: HIKING BOOTS

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.5	3.5
Right Eye	4.0	6.5	3.5

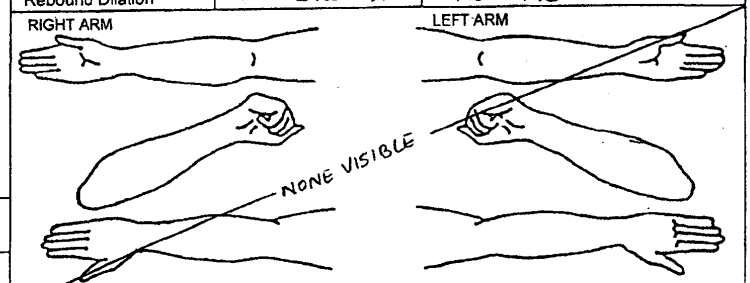
Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: NORMAL

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 150 / 104 — TEMP: 37.8 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments:

What medicine or drug have you been using? NO RESPONSE — How much? N/A — Time of use? NO RESPONSE — Where were the drugs used? (Location) NO RESPONSE

DATE/TIME OF ARREST: 05/02/08 - 2250 HOURS

TIME DRE NOTIFIED: 2300

EVAL START TIME: 2315

TIME COMPLETED: 2358

MEMBERS SIGNATURE

SERIAL/REG. #

REVIEWED BY:

OPINION OF EVALUATOR: RULE OUT MEDICAL; ALCOHOL DEPRESSANT; TIMULANT HALLUCINOGEN; DISSOCIATIVE ANESTHETIC NARCOTIC ANALGESIC; INHALANT CANNABIS; OPERATIONAL TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** 474 Elgin Street, Ottawa

(2) **Witnesses:** Constable Daniel Levesque

(3) **Source:** The writer was contacted and requested to contact Constable Daniel Levesque for a drug evaluation. Constable Levesque stated he had stopped the suspect – Debra George after observing her nearly hit several parked cars. Her speech was slow and slurred. She was very confused and not sure of her surroundings. Her coordination was poor and she nearly fell attempting the SFSTs. She provided two breath samples of 0 mg% prior to calling for a DRE.

(4) **First Observations of Subject:** The writer first observed Heather George in the booking area at Ottawa Police HQ. She had a fixed stare and was responding slowly to Constable Levesque's questions. She was unstable on her feet and several times used the wall to steady herself. Her movements were slow and deliberate.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – George had a 3" circular sway and estimated 30 seconds in 42 seconds. **Walk & Turn Test** – George lost her balance twice during the instruction stage and missed heel to toe on steps 4, 6, 8, 9 and on the 10th step taken despite instructions on the way down the line. She missed heel to toe on steps 2 to 12 on the way back despite being instructed to take 9 steps. He raised his arms constantly. **One Leg Stand Test** –While balancing on her left leg she put her foot down at her count of 1 & 3 and the test was stopped for safety reasons. She was could not maintain balance during the instruction stage when testing the right leg & the test was stopped for safety reasons. **Finger to Nose Test** – George missed the tip of her nose on all 6 attempts.

(6) **Clinical Signs:** George exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation, & an immediate onset as well as vertical nystagmus. She had a lack of convergence, reaction to light was normal. Her pulse rate, blood pressure, and body temperature were all above the normal ranges. Muscle tone was rigid.

(7) **Statements:** George did not respond when asked about drug use.

(8) **Medical Problems/Treatment:** George indicated she had no medical issues.

(9) **Opinion:** It is the opinion of Jeff Schwenneker, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** George provided a urine sample for analysis.

SESSION XVII

NARCOTIC ANALGESICS

SESSION XVII NARCOTIC ANALGESICS

Upon successfully completing this session the student will be able to:

- Explain a brief history of the Narcotic Analgesic category of drugs.
- Identify common drug names and terms associated with the category.
- Identify common methods of administration for this category.
- Describe the symptoms, observable signs and other effects associated with this category.
- Describe the typical time parameters, i.e. onset and duration of effects, associated with this category.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category.
- Describe the procedures for examining and determining the ages of injection sites.
- Correctly answer the "topics for study" questions at the end of the session.

A. Overview of Narcotic Analgesics

There are two subcategories of Narcotic Analgesics. The first subcategory consists of the Opiates or Opiods. The second subcategory is the Synthetics. All Narcotic Analgesics are listed in Schedule I of CDSA.

The Opiates are drugs that either contain or are derived from opium. There are two basic types of opiates, alkaloids and derivatives. An "alkaloid" is a substance that is found in another substance, and can be isolated from it. For example, Morphine, Codeine and Chlorpromazine are all found in opium and are natural alkaloids. Opium Derivatives are produced by chemically treating the natural alkaloid. Heroin is probably the most famous Opium Derivative, but there are a number of other important drugs that are produced in this manner. The source for both the Natural Alkaloids and the Opium Derivatives is a particular species of poppy plant, called the "opium poppy", or papaver somniferum (Latin for "the poppy that brings sleep") Opium is the sap from the seed pods of that plant.

The second subcategory of Narcotic Analgesics has nothing to do with the opium poppy. This subcategory consists of the Synthetics, which are produced artificially from a variety of non-opiate substances. One of the best known of these is Methadone, a drug used as a substitute for Heroin in drug treatment programs. The synthetics do not derive from opium at all, but have similar or identical effects.

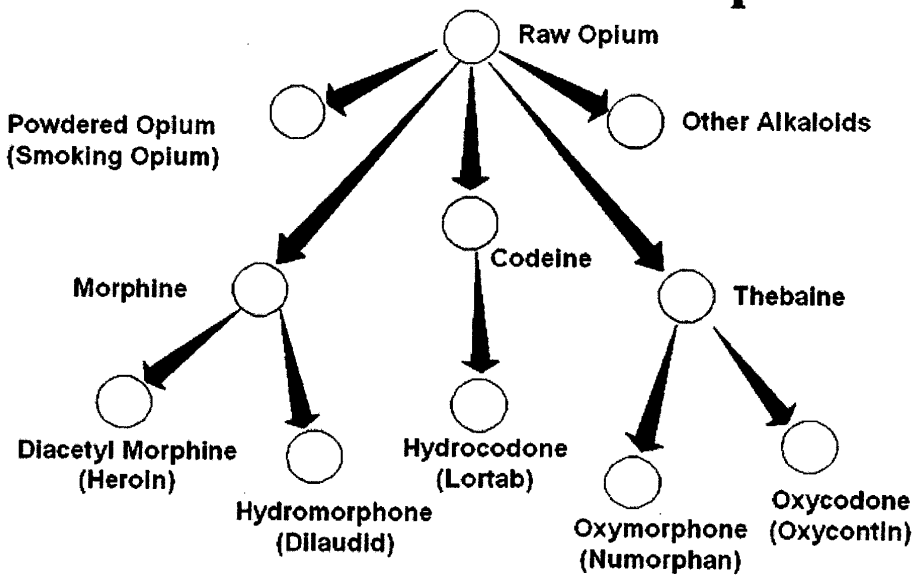
All Narcotic Analgesics share three distinguishing characteristics:

- they will relieve pain (this is what "analgesic" means);
- they will produce withdrawal signs and symptoms, when the drug is stopped after chronic administration;
- their use will suppress the signs and symptoms of chronic opiate withdrawal. (This means that the various Narcotic Analgesics can be substituted for each other to relieve withdrawal symptoms.)

1. The chart on the next page lists the names of some natural alkaloids and Opium Derivatives and shows their derivation from opium.

   Powdered opium, also known as "smoking opium", is not really a derivative, but rather is a simple refinement of raw opium. (In much the same sense, "refined sugar" is still sugar.) Powdered opium is used medically to treat diarrhea. As a medicine, it is taken orally. As a drug of abuse, it is smoked. It remains popular as a drug of abuse among some Asian American communities.

Commonly-abused Opiates and Their Derivation From Opium



Morphine is the principal natural alkaloid of opium. It was first isolated from opium in 1805. Morphine is used medically to suppress severe pain, for example, with terminal cancer patients. It is highly addictive.

Codeine is another natural alkaloid of opium, separate from morphine. Codeine was first isolated in 1832. It is used medically to suppress coughing or minor pain. Although codeine is an analgesic, its pain killing ability is much weaker than morphine's. Codeine definitely is addictive. NOTE: The technical name for Codeine is Methylmorphine. Some Codeine preparations are available over-the-counter in Canada (e.g., Tylenol No. 1).

Heroin is an Opium Derivative that is produced by chemically treating Morphine. Heroin is the most commonly abused illicit Narcotic Analgesic. Heroin was first produced in 1874, in the hope that it would prove to be a non-addictive substitute for Morphine. Heroin was approved for general use by the American Medical Association in

1906. However, its importation and manufacture have been illegal in the USA since 1925. NOTE: The technical name for heroin is Diacetyl Morphine.

Dilaudid is another Opium Derivative that also is produced from Morphine. Dilaudid sometimes is called "drug store heroin", because it is commercially available. It is used medically for short term relief of moderate to severe pain. Dilaudid has the same addictive liabilities as does heroin or morphine. NOTE: The technical name for Dilaudid is Hydromorphone Hydrochloride.

Hydrocodone is derived from Codeine but is more closely related to Morphine in its pharmacological profile. Hydrocodone products are prescribed in Canada for cough suppression.. Hycodan is one trade name of Hydrocodone.

Dilaudid is a powerful semi-synthetic analgesic with the same addictive properties as morphine. It is used medically for relief of chronic pain. It is sold in ampules (injection) and in suppositories. NOTE: The technical name for Dilaudid is Oxymorphone.

Oxycodone is a semi-synthetic narcotic and prescribed for chronic or long-lasting pain. Oxycodone is the active ingredient of OxyContin and is also the main ingredient for Percodan and Percocet. OxyContin contains between 10 and 160 milligrams of Oxycodone in a timed release tablet. OxyContin has quickly become one of the major drugs of abuse. It is referred to as "Oxy", "OC", "Hillbilly Heroin" and "killer" on the street. Abusers of the drug either crush the tablet for ingestion, snorting it or dilute it in water and inject it. Crushing or diluting the tablet disarms the timed-release action and causes a quick, powerful high. It is somewhat less addictive than morphine, but more addictive than codeine.

2. Some common synthetic opiates include the following.

Demerol is one of the most widely used synthetic opiates for relief of pain and for sedation. It was first produced in 1939. The technical name for Demerol is Meperidine also known as pethidine.

Methadone was developed in Germany during World War II. Methadone's effects are similar to morphine's, although Methadone's effects develop more slowly and last longer. Methadone was developed because of war-time shortages in Germany of morphine. The primary advantage of Methadone is that it cannot be injected, and it has a much longer duration of effects than heroin. Also, Methadone's withdrawal symptoms are slower and milder than are morphine's. It is for these reasons that Methadone is used extensively in "maintenance programs" as a substitute for heroin for addicts undergoing treatment. Methadol is a brand name for Methadone.

The Fentanyls include several hundred "designer drug" analogs of morphine. "Duragesic" is a brand name for Fentanyl. It is frequently found in overdose situations. Fentanyls were first developed in 1965. The principal abused Fentanyl is "three-methyl Fentanyl". This analog is very powerful, and can be fatal in very small amounts.

MPPP is an illegally manufactured analog of Demerol. MPPP is powerfully addictive, and thus is very dangerous in its own right. What makes it even more dangerous is the fact that the "home chemists" who produce it often make a mistake that causes the MPPP to become contaminated with a substance called MPTP, a chemical that produces a paralysis similar to Parkinson's Disease.

Pentazocine is a synthetic analgesic frequently used for chronic or acute pain of moderate to severe degree. It is marketed under the trade name Talwin

3. Methods of administration vary from one Narcotic Analgesic to another.

Methods of ingestion include: oral, smoking, injection, snorted, suppositories and transdermally. An example is heroin which can be injected, snorted or smoked.

B. Possible Effects of Narcotic Analgesics

The effects that a Narcotic Analgesic user will experience and exhibit depend on the tolerance that the user has developed for the drug. As a person develops tolerance for a drug, that person will experience diminishing effects if they continue to take the same dose of the drug. Conversely, if the person wishes to continue to experience the same effects, he or she will have to take steadily larger doses as tolerance develops.

People develop tolerance to Narcotic Analgesics fairly rapidly. A Narcotic Analgesic user who has developed tolerance and who has taken his or her "normal" dose of the drug may exhibit little or no evidence of intellectual or physical impairment. For example, a heroin addict who has injected his or her usual dose may be able to operate a car properly and satisfactorily perform the Standardized Field Sobriety Tests.

The clinical and physical effects of Narcotic Analgesics usually are evident with new users, or with tolerant users who have taken more than their "normal" doses.

One of the most easily observable effects is a condition known as "on the nod." This is a semiconscious state of deep relaxation, brought about by the sedative action of the drug. When a user is "on the nod", their eyelids will become very droopy (ptosis), and the head will slump forward until the chin rests on the chest. But the user usually can be awakened easily and be sufficiently alert to respond to questions.

Other effects may include:

- slowed reflexes
- slow and raspy speech
- slow, deliberate movement
- inability to concentrate
- slow breathing
- skin cool to touch
- possible vomiting
- itching of the face, arms, or body

C. Onset and Duration of Effects of Narcotic Analgesics

Heroin users generally experience certain psychological effects immediately after injection. These include a feeling of pleasure or euphoria; relief from withdrawal symptoms; and, relief from pain. Physical effects, if they are evident at all, typically will become evident after 5-30 minutes. But remember, physical effects may not be evident if the user is tolerant and has taken a normal dose.

The physical effects usually will be observable for up to 4-6 hours with new users.

As the physical effects begin to disappear, withdrawal signs and symptoms start to emerge. These withdrawal signs can become very severe, if the user does not take another dose. However, it is important to keep in mind that when withdrawal signs are evident, the individual is no longer under the active influence of the drug.

As the effects of the Heroin diminish, withdrawal symptoms begin. The addicted user experiences chills, aches of the muscles and joints, nausea and insomnia.

Outward signs of withdrawal typically start to be observable within 8-12 hours. The subject sweats and has goose bumps on the skin. Reflexes become hyperactive. The subject yawns, may vomit, their nose runs and the eyes tear. At this point, the withdrawal signs and symptoms closely resemble those of the common cold or the flu. The withdrawal signs and symptoms intensify from 14-24 hours, and may be accompanied by goose bumps (piloerection), slight tremors, loss of appetite and dilation of the pupils.

Approximately 24-36 hours since the last "fix", the subject experiences insomnia, vomiting, diarrhea, weakness, depression and hot/cold flashes. Withdrawal signs and symptoms generally reach their peak after 2-3 days. At this point, the subject usually experiences muscular and abdominal cramps, elevated temperature and severe tremors and twitching. This twitching, especially of the legs, is referred to as the expression "kicking the habit". The subject is very nauseated at this time, may gag and vomit repeatedly, and may lose 10-15 pounds within 24 hours.

D. Signs And Symptoms of Narcotic Analgesic Overdose

Narcotic Analgesics depress respiration. The subject's breathing becomes slow and shallow, and death can occur from severe respiratory depression. The danger of death from an overdose of Narcotic Analgesic is heightened by the fact that the addicted user may not know the strength of the drug that he or she is taking. The subject's skin becomes clammy, and the subject may experience convulsions, and slip into a coma. The subject's lips may turn blue, and the body may become pale or blue. The subject may have extremely constricted pupils (unless there is brain damage in which pupils may be dilated).

E. Expected Results of the Evaluation

When a person under the influence of a Narcotic Analgesic is evaluated by a DRE, the following results can generally be expected:

Horizontal Gaze Nystagmus - no

Vertical Gaze Nystagmus – no

Lack of Convergence - no

Pupil size - constricted

Reaction to light - little to none visible

Pulse rate will be down

Blood pressure will be lowered

Temperature will be down

Muscle tone - flaccid

Injection sites usually will be found, with heroin users. Injection sites may not be evident with users of other Narcotic Analgesics.

In general, the effects of Narcotic Analgesics include:

- constricted pupils
- depressed reflexes
- drowsiness
- droopy eyelids (ptosis)
- dry mouth
- euphoria
- facial itching
- nausea
- "on the nod"
- puncture marks
- slowed reflexes
- slow, low, raspy speech
- slowed breathing

F. Injection Site Examination

Examination of injection sites can reveal many clues about a subject's drug habit. The sites can reveal if the subject injects their drugs and if the use was current or in the recent past.

Drugs enter the body through three major tissues of the body - intramuscular, just under the skin (subcutaneous) or through a vein.

The primary instrument used to inject drugs is a hypodermic syringe. The syringe consists of a hollow needle, tube and a plunger. The inside diameter of the needle or gauge vary in size. The larger the gauge, the smaller the needle.

The subject's equipment is commonly referred to as a "hype kit" or "works". The kit consists of a cooker, handle, matches or lighter, a tourniquet and "cottons."

As a DRE, you will be asked in court to describe the difference between legal and illegal injection marks. A legal injection utilizes the muscle, usually is only one mark, and sterile needles are used. An illegal injection utilizes veins, will usually be multiple marks in various stages of healing and since the same needle is usually used over and over again, the mark will have a barbed or jagged appearance.

A user will frequently use the same spot to inject the drugs to reduce the likelihood of detection. This technique is sometimes referred to as "trap dooring."

There is not exact science to classify the age of puncture sites. However, there are some general puncture site classifications:

Classifications:

Fresh - A fresh puncture site is defined as 0 - 12 hours and will be a red dot and have a oozing appearance or blood crater with no scab formation.

Early - An early puncture site is approximately 12 - 96 hours (half day to 4 days) and will have a light scab, light bruise, reddened border and a crater appearance.

Late - A late puncture site is 5 - 14 days and will have a dark scab, dark bruise and the crater will flatten.

Healing - A healing puncture site is over 14 days old and the scab will be flaking and falling off with shriveled, light colored skin.

G. Expected Location of Injection Marks

Injection sites can be located anywhere on the subject's body. The arms are the most frequently used place. The subject may use the ankles, neck, feet or any place where a vein is accessible.

It is necessary to conduct a thorough slow methodical examination of the subject's arms. Using a magnifying light called a schematic light or "ski light," examine the left inner arm as it is extended with the palm facing you. Then ask the subject to contract the arm by grasping their shoulder (this forces the veins to protrude). Beginning at the wrist, examine the arm to the elbow. Examine the outer arm as it is extended palm facing down. Start the exam at the shoulder and move to the wrist. Ask the subject to extend his or her fingers to examine the fingers. Pay particular attention to the areas between the fingers, under watches and rings. Repeat the examination for the right arm.

Ankles are the next most common injection site, especially the back. Extreme caution should be used when examining the shoes and socks for evidence because syringes and needles are commonly hidden there.

H. Conclusion

The examination may reveal evidence of recent use, however, just the presence of injection sites doesn't mean the person is under the influence or impaired.

DRE's may elect to photograph new or recent injection marks for evidential purposes.

Conducting a thorough examination is a skill and requires practice to become proficient.

Topics for Study

1. What are the two subcategories of Narcotic Analgesics?

2. What three distinguishing characteristics do all Narcotic Analgesics share?

3. Consider this situation:

   A heroin addicted user injects what is, for him, a "normal" dose of the drug. One hour later a DRE examines the addicted user and finds that he is not impaired.

   What is the most likely explanation for this?

4. What is another, more common, name for the drug call Diacetyl Morphine?

5. What is Methadone?

6. An analgesic is a drug that _____?

7. What is MPPP?

8. What is Oxycodone?

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. T. JONES | DRE NO. 12989 | ROLLING LOG NO. 88

RECORDER/ WITNESS: CST. D. METCALFE

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE # 5-Session 17-1

ARRESTEE'S NAME (LAST, FIRST, M): REFF, JOSEPH

DOB (YY-MM-DD): 66-05-16 | AGE: 42 | SEX: M | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): CST. D. ROSIER #79

DATE EXAMINED/TIME/LOCATION: 03/17/08 - 2200 SJPF

BREATH RESULTS: ☐ Refused Results N/A Instrument #

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by: CST. D. ROSIER

What have you eaten today? "NOTHING" When? "DON'T KNOW"

What have you been drinking? How Much? "I DONT KNOW"

Time of last drink? N/A

Time now? ABOUT 8pm | When did you last sleep? THIS MORNING | How long? 4 HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? "I DON'T TAKE DRUGS" ☐ Yes ☒ No

ATTITUDE: SARCASTIC

COORDINATION: POOR, STUMBLING, STAGGERING

SPEECH: LOW, RASPY

BREATH: NOTHING NOTED

FACE: PALE

CORRECTIVE LENS: ☐ None (REMOVED) ☒ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Very Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 60 / 2210	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 58 / 2221	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 58 / 2230	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye ← Left Eye ←

ONE LEG STAND: 24/30 | 27/30

ROMBERG BALANCE: 0" 2" | 0" 0"

WALK AND TURN TEST: STOPPED COUNTING ALOUD 3rd STEP

	1st Nine	2nd Nine
Cannot keep balance	✓✓	
Starts too soon	Ø	
Stops Walking	Ø	✓
Misses Heel -Toe	✓✓	✓
Steps off Line	✓	Ø
Raises Arms	✓	✓✓✓
Actual Steps Taken	9	9

☒ Sways while balancing ☒ Uses arms to balance ☒ Hopping ☒ Puts foot down

INTERNAL CLOCK: 55 Estimated as 30 sec. | Describe Turn: AS INSTRUCTED BUT SLOW | Cannot do Test (explain): N/A | Type of Footwear: DRESS SHOES

○ Right △ Left Draw lines to spots touched

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	1.5	2.0	1.5
Right Eye	1.5	2.0	1.5

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

Rebound Dilation: ☐ Yes ☒ No

REACTION TO LIGHT: LITTLE TO NONE VISIBLE

RIGHT ARM / LEFT ARM: NO MARKS VISIBLE

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 70 TEMP: 36.6°

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "NOTHING" How much? | Time of use? "I DIDN'T" | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST: 03/17/08 - 2130 | TIME DRE NOTIFIED: 2140 | EVAL START TIME: 2200 | TIME COMPLETED: 2305

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT MEDICAL	ALCOHOL DEPRESSANT	STIMULANT HALLUCINOGEN	DISSOCIATIVE ANESTHETIC NARCOTIC ANALGESIC	INHALANT CANNABIS	☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Saint John Police Force HQ, Saint John, NB

(2) **Witnesses:** Constable Dan Metcalfe

(3) **Source:** The writer was in the Saint John Police HQ booking area when Constable Dan Metcalfe arrived with subject Joseph Reff who was arrested for driving a stolen vehicle an hour earlier. Upon stopping Reff, Metcalfe noted that Reff's speech was slow, slurred, and raspy. His coordination was poor and he was licking his lips repeatedly. His pupils were constricted and he performed poorly on the SFSTs.

(4) **First Observations of Subject:** Reff was first observed in the DRE Room at Saint John Police HQ. He appeared to be asleep. His eyes were closed, his head kept nodding forward and his breathing was slow. Reff responded to questions as if he was wide awake. His voice was raspy and his pupils appeared constricted. He was licking his lips and his movements were slow and deliberate.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Reff had a 2" front to back sway and estimated the passing of 30 seconds in 55 seconds. **Walk & Turn Test** –Reff was unable to keep his balance twice during the instruction stage. During the walking stage, he missed heel to toe on his 3rd & 4th steps, stepped off line on his 5th step, made his turn slowly, then missed heel to toe on his 2nd step and stopped after his 4th step on the way back. He used his arms for balance and stopped counting out loud three steps into the test. **One Leg Stand Test** – While balancing on her left leg, Reff put his foot down at 15 & 24, swayed while balancing, and used arms for balance. While balancing on his right leg, he put his foot down at 26, swayed while balancing, and used his arms for balance. **Finger to Nose Test** – Reff missed the tip of his nose on all six attempts, only touching his nose twice (on the bridge near his left eye and once at his right nostril).

(6) **Clinical Signs:** Reff had droopy eyelids and exhibited a lack of convergence. His pupils were constricted in room light, near total darkness, and in direct light and there little to no reaction to light. Pulse rate and blood pressure were below the normal ranges and his muscle tone was flaccid.

(7) **Statements:** When asked, Reff stated, "Nothing. I don't do drugs".

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Trevor Jones, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Reff provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. F. BRODA | DRE NO. 10691 | ROLLING LOG NO. 116

RECORDER/ WITNESS: SGT. A. GOLEBIOSKI | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE # S- Session 17-2

ARRESTEE'S NAME (LAST, FIRST, M): JEFFREY, WAYNE | DOB (YY-MM-DD): 45-06-12 | AGE: 64 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. D. CAVANAUGH #6814

DATE EXAMINED/TIME/LOCATION: 05/JAN/10 - 0100 C.T.U. | BREATH RESULTS: ☐ Refused Results 0 mg% Instrument # 44141 | CHEMICAL TEST ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST CAVANAUGH

What have you eaten today? CHICKEN — When? 6pm

What have you been drinking? How Much? NOTHING N/A — Time of last drink? N/A

Time now? ABOUT MIDNIGHT | When did you last sleep? LAST NIGHT | How long? 4HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? DR FREEMAN ☒ Yes ☐ No

Are you taking any medication or drugs? ☒ Yes ☐ No — "PAIN PILLS FOR MY BACK"

ATTITUDE: COOPERATIVE

COORDINATION: POOR, WOBBLY, STUMBLING

SPEECH: SLOW, MUMBLING

BREATH: SLOW, SHALLOW, NOTHING NOTED — ODOUR

FACE: NOTHING

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☒ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 60 / 0110	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 60 / 0127	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 60 / 0137	Angle of Onset	NONE	NONE

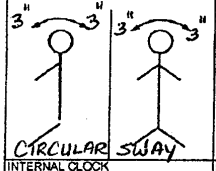
Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

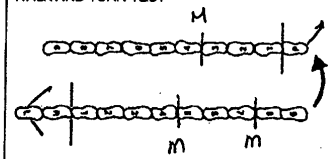
ONE LEG STAND 22/30 24/30

COUNTED SLOWLY

ROMBERG BALANCE



WALK AND TURN TEST



Cannot keep balance √√

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	√√	√
Steps off Line	Ø	Ø
Raises Arms	√√√	√√
Actual Steps Taken	9	9

√√ √√ Sways while balancing

√ √ Uses arms to balance

Ø Ø Hopping

√ √ Puts foot down

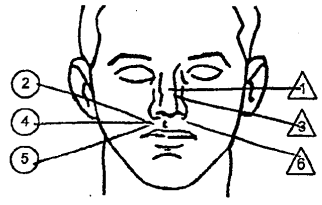
INTERNAL CLOCK: 53 Estimated as 30 sec.

Describe Turn: STAGGERED TO RIGHT

Cannot do Test (explain): N/A

Type of Footwear: LACE UP BOOTS

○ Right △ Left — Draw lines to spots touched



SLOW MOVEMENTS

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	2.0	2.5	2.0
Right Eye	2.0	2.5	2.0

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

Rebound Dilation: ☐ Yes ☒ No

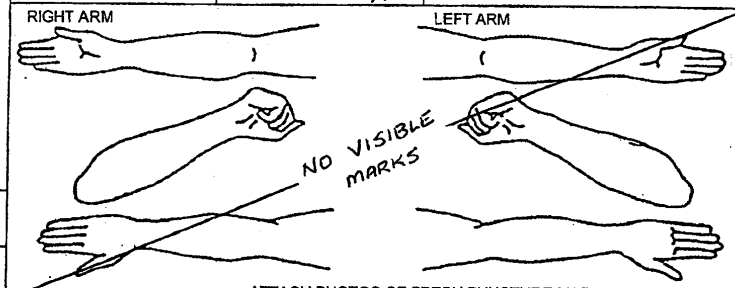
REACTION TO LIGHT: NONE

BLOOD PRESSURE: 106 / 64 TEMP: 36.5

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments: ARMS √ NECK

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? "A COUPLE OF PILLS FOR MY BACK" | How much? | Time of use? WITH DINNER | Where were the drugs used? (Location) SHARI'S

DATE/TIME OF ARREST: 05/JAN/10 - 0040 | TIME DRE NOTIFIED: 0050 | EVAL START TIME: 0100 | TIME COMPLETED: 1055

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL

☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Central Booking, Winnipeg City Police, Winnipeg, Manitoba

(2) **Witnesses:** Sgt Andy Golebioski

(3) **Source:** The writer was summoned to the Breath/DRE Room to conduct an evaluation on Wayne Jeffrey for Sgt Andy Golebioski who had stopped Jeffrey after Jeffrey failed to stop at a red light on Main Avenue and almost struck a pedestrian in the crosswalk. Golebioski noted that Jeffrey had slow and deliberate movements and his speech was slow, slurred, and raspy. He was unable to perform the SFSTs as directed, read a breath demand, and returned to booking where his breath results were both 0 mg%.

(4) **First Observations of Subject:** Jeffrey was first observed in the Breath Room of Central Booking. He was repeatedly scratching his face and neck. His head kept nodding forward and he appeared to be "on the nod". His voice was raspy, his pupils appeared to be constricted and his eyelids were droopy.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Jeffrey had a 3" circular sway and estimated the passing of 30 seconds in 53 seconds. **Walk & Turn Test** –Jeffrey was unable to keep his balance twice during the instruction stage. During the walking stage, he raised his arms and missed heel to toe on his 5th & 8th steps. He lost his balance during his turn and staggered to the right. On the last 9 steps, he raised his arms for balance and missed heel to toe on step 4. **One Leg Stand Test** – While balancing on his left leg, he swayed while balancing, used arms for balance, and put his foot down on his counts of 15 & 25. While balancing on his right leg, he swayed while balancing, used arms for balance and put his foot down at 13 & 20. **Finger to Nose Test** – Jeffrey missed the tip of his nose on all six attempts, only touching his nose twice (on the bridge of his nose).

(6) **Clinical Signs:** Jeffrey had droopy eyelids (ptosis). His pupils were constricted in room light and in near total darkness. There little to no reaction to light. Blood pressure was below the normal range and his muscle tone was flaccid.

(7) **Statements:** Jeffrey said he took pain pills for his back earlier at dinner.

(8) **Medical Problems/Treatment:** Sore back.

(9) **Opinion:** It is the opinion of Fred Broda, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Jeffrey provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Cst. K. Wakelin | DRE NO.: 12249 | ROLLING LOG NO.: 77

RECORDER/ WITNESS: Cst. R. Harvey

CRASH: ☐ None ☐ Fatal ☒ Injury ☐ Property

FILE #: S-Session 17-3

ARRESTEE'S NAME (LAST, FIRST, M)	DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
Burstein, David L.	80-04-29	27	M	W	Cst. P. Giroux #39

DATE EXAMINED/TIME/LOCATION: 11/01/08 - 4:15pm Charlottetown RCMP DET.

BREATH RESULTS: ☐ Refused INTOX Results 0 mg% Instrument # 21260

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: Cst. P. Giroux

What have you eaten today? Nothing — When? N/A

What have you been drinking? How Much? Nothing — N/A — Time of last drink? N/A

Time now? — When did you last sleep? How long? Don't Know Last Night "A Few Hrs"

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: Cooperative

COORDINATION: Poor, Sloppy, Stumbling

SPEECH: Slow & Deliberate, Raspy

BREATH: Nothing Noted

FACE: Normal

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 60 / 1630	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 56 / 1642	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 60 / 1655	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☒ No

Convergence — Right Eye / Left Eye

ONE LEG STAND: 2½30 — 29/30

ROMBERG BALANCE: 3" 3" 3" 3" — Circular Sway

WALK AND TURN TEST: Walked very slowly

Cannot keep balance: ✓

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	✓	✓
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	✓	✓
Actual Steps Taken	9	9

✓ Sways while balancing ✓ Uses arms to balance Ø Hopping ✓ Puts foot down

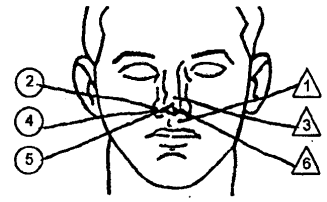
INTERNAL CLOCK: 58 Estimated as 30 sec.

Describe Turn: Lost Balance Staggered to the Left

Cannot do Test (explain): N/A

Type of Footwear: Loafers

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	1.5	1.5	1.5
Right Eye	1.5	1.5	1.5

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: Nothing Noted

ORAL CAVITY: Nothing Noted

REACTION TO LIGHT: None Visible

RIGHT ARM: Puncture Wounds xxx 3 Red Dots — Scar Tissue

LEFT ARM: 4 Puncture Wounds With Scabs (xxxx

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 100 / 60 TEMP: 36.1 °

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments: Arms & Neck Very Relaxed

What medicine or drug have you been using?	How much?	Time of use?	Where were the drugs used? (Location)
None	Refused	Refused	Refused

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
11/01/08 - 4:00p.m.	4:05pm	4:15p.m.	5:25p.m.

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT MEDICAL	ALCOHOL DEPRESSANT	STIMULANT HALLUCINOGEN	DISSOCIATIVE ANESTHETIC NARCOTIC ANALGESIC	INHALANT CANNABIS	☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Charlottetown RCMP Detachment, Charlottetown, PEI

(2) **Witnesses:** Constable Richard Harvey

(3) **Source:** The writer was notified by radio to attend the Charlottetown Detachment to see Constable Richard Harvey about completing a drug evaluation on David Bursten who was observed drifting in and out of his traffic lane and driving 20km/h under the posted 50km/h speed limit on Maypoint Road. Harvey noted that Bursten had poor coordination and had slow and deliberate movements. His speech was slow and slurred. He performed poorly on the SFSTs and was taken back to the detachment after a breath demand was read. Breath results were both 0 mg%.

(4) **First Observations of Subject:** Writer first observed Bursten in the interview room at the Charlottetown RCMP Detachment cells area. He was sitting at a table scratching his face and appeared to be "on the nod" periodically. His voice was low, slow, and raspy. His pupils were constricted and his eyelids were droopy. He stated he was cold.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Bursten had a 3" circular sway and estimated the passing of 30 seconds in 58 seconds. **Walk & Turn Test** –Bursten lost his balance once during the instruction stage. During the walking stage, during the first 9 steps, he stopped after the 4th step. After continuing, he made his turn, losing his balance and staggering to his left. During the second 9 steps, he stopped after the 4th step, eventually started again then stopped again after he took his 7th step. He walked very slowly throughout the entire test. **One Leg Stand Test** – While balancing on his left leg, he swayed while balancing, used his arms for balance, and put his foot down on his counts of 18 & 21. While balancing on his right leg he swayed while balancing, used his arms for balance, and put his foot down at 17. **Finger to Nose Test**–Bursten missed the tip of his nose on attempts 1, 2, 3, & 4.

(6) **Clinical Signs:** Bursten had droopy eyelids. His pupils were constricted in room light, near total darkness, and in direct light and there was no reaction to light. His pulse rate, blood pressure, and body temperature were below the normal ranges and his muscle tone was flaccid. There were a number of old and new injection marks on Bursten's arms.

(7) **Statements:** He indicated he didn't take any drugs and refused to answer any other questions related to drug ingestion.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Ken Wakelin, a certified Drug Recognition Expert, that:

_____

(10) **Miscellaneous:** Bursten provided a urine sample for analysis.

SESSION XVIII

PRACTICE: TEST INTERPRETATION

SESSION XVIII PRACTICE: TEST INTERPRETATION

Upon successfully completing this session the student will be able to:

Analyze the results of a complete drug influence evaluation and identify the category or categories of drugs affecting the individual examined.

Articulate the basis for the drug category identification.

The purpose of this session is to give you practice in interpreting the results of the drug influence evaluation. During this session, you will be reviewing exemplars with the entire class and later in small groups. During your analysis of the exemplars, utilize all of the information available, including the preliminary examination, eye examinations, psychophysical tests, vital signs, dark room and other evidence. Remember to base your opinion on the totality of the information provided.

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. F. POPOFF | DRE NO.: 10184 | ROLLING LOG NO.: 67

RECORDER/ WITNESS: CST. R. LECLAIR | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 18-1

ARRESTEE'S NAME (LAST, FIRST, MI): MARTINEZ, Robert | DOB (YY-MM-DD): 79-06-09 | AGE: 30 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. RENE LECLAIR

DATE EXAMINED/TIME/LOCATION: 12/08/08 - 2145 - CELLBLOCK | BREATH RESULTS: ☐ Refused Results: N/A Instrument # | CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by: CST. MATTHEWS | What have you eaten today? CHICKEN | When? 6am | What have you been drinking? How Much? NOTHING | Time of last drink? N/A

Time now? 8 O'CLOCK | When did you last sleep? YESTERDAY | How long? 6hrs | Are you sick or injured? ☐ Yes ☒ No | Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No | Do you have any physical disabilities? ☐ Yes ☒ No | Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No | ATTITUDE: PASSIVE, COOPERATIVE | COORDINATION: POOR, STAGGERING

SPEECH: SLURRED, SLOW & LOW | BREATH: CHEMICAL ODOUR | FACE: FLUSHED & SWEATY

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft | Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery | Blindness: ☒ None ☐ L. Eye ☐ R. Eye | Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain) | Nystagmus Present: ☒ Yes ☐ No | Able to follow stimulus: ☒ Yes ☐ No | Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 12150	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 108 12204	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 100 12217	Angle of Onset	IMMEDIATE	IMMEDIATE

Vertical Nystagmus? ☒ Yes ☐ No — Convergence: Right Eye / Left Eye

ONE LEG STAND: TEST STOPPED — TEST STOPPED

ROMBERG BALANCE: CIRCULAR SWAY

WALK AND TURN TEST

Cannot keep balance ✓ | Starts too soon ✓

	1st Nine	2nd Nine
Stops Walking	✓	✓
Misses Heel -Toe	All	All
Steps off Line	✓	✓
Raises Arms	✓✓✓	✓✓
Actual Steps Taken	9	9

☒ Sways while balancing ☒ Uses arms to balance ☒ Hopping ☒ Puts foot down

INTERNAL CLOCK: 45 Estimated as 30 sec. | Describe Turn: SWIVELED IN ONE ABRUPT MOTION | Cannot do Test (explain): N/A | Type of Footwear: SNEAKERS

○ Right △ Left — Draw lines to spots touched

RIGID MOVEMENTS

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.0	3.5
Right Eye	4.0	6.0	3.5

NASAL AREA: NOTHING NOTED | ORAL CAVITY: CLEAR - CHEMICAL ODOUR

Rebound Dilation ☐ Yes ☒ No | REACTION TO LIGHT: NORMAL

BLOOD PRESSURE: 146 / 100 | TEMP: 37.6 °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments: VERY RIGID ARMS

RIGHT ARM / LEFT ARM — NO VISIBLE MARKS

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using?	How much?	Time of use?	Where were the drugs used? (Location)
NOTHING	N/A	NO ANSWER	NO ANSWER

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
12/08/08 - 2100 hrs	2120	2145	2220

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT MEDICAL	ALCOHOL DEPRESSANT	STIMULANT HALLUCINOGEN	DISSOCIATIVE ANESTHETIC NARCOTIC ANALGESIC	INHALANT CANNABIS	OPERATIONAL TRAINING	

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Cellblock, Regina Police Service, Regina, Saskatchewan

(2) **Witnesses:** Constable Rene Leclair

(3) **Source:** The writer spoke with Constable Rene Leclair who advised that the subject – Robert Martinez was observed travelling westbound on Victoria Av approaching Prince of Wales Dr. at approximately 20KM/HR drifting within his lane and almost striking other vehicles. When he was stopped the driver appeared dazed and could not state where he was or where he came from. He had a blank stare and appeared confused. The subject was arrested for driving while impaired by drugs.

(4) **First Observations of Subject:** The writer first observed Martinez in the cellblock area. He appeared dazed and disoriented, had a fixed stare and responded very slowly (approximately 5-10 second delay) to all questions. Martinez was perspiring heavily, had a flushed appearance and had slow, slurred and low speech. There was a strong chemical odour on his breath.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Martinez had a 3" circular sway and estimated 45 seconds as being 30 seconds. **Walk & Turn Test** – He lost balance once and started too soon during the instruction stage. On the way up the line and on the way back he stepped off line once, missed heel to toe 8 times, stopped once, and raised his arms He make his turn with one abrupt swivel. **One Leg Stand Test** – While balancing on his left leg he swayed, used his arms, and put his foot down on his counts of 1, 2, 3, and 7 before the test was stopped for safety reasons. While balancing on his right leg he swayed, used arms, and put foot down at his counts of 1, 4, & 5 before the test was stopped for safety reasons. **Finger to Nose Test** –He missed the tip of his nose with the tip of his finger on every attempt & his movements were rigid.

(6) **Clinical Signs:** Martinez exhibited a Lack of Smooth Pursuit as well as Distinct and Sustained Nystagmus at Maximum Deviation. He exhibited a lack of convergence and vertical nystagmus. His pulse rate was elevated at 100bpm, 108bpm and 100bpm. The his blood pressure was above the normal range at 146mmHg/100mmHg. His body temperature was above the normal range at 37.6°C. The subject's muscle tone was rigid with very rigid arms.

(7) **Statements:** Martinez denied using any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Fred Popoff, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Martinez provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: Cst. C. Seeley | DRE NO.: 15927 | ROLLING LOG NO.: 91

RECORDER/ WITNESS: Cst. E. Goodfellow

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 18-2

ARRESTEE'S NAME (LAST, FIRST, M): GROVES, PAUL

DOB (YY-MM-DD)	AGE	SEX	RACE
75-09-14	34	M	W

ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. E. Goodfellow #671

DATE EXAMINED/TIME/LOCATION: 10 Feb 09 - 1925

BREATH RESULTS: ☐ Refused Results N/A Instrument # N/A

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: Cst. Goodfellow

What have you eaten today? Pancakes — When? 7am

What have you been drinking? How Much? Nothing N/A — Time of last drink? N/A

Time now? midnight — When did you last sleep? How long? I don't remember

Are you sick or injured? ☒ Yes ☐ No — "I feel sick"

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☐ No — "I'm clean"

ATTITUDE: Cooperative, slow

COORDINATION: Poor, unstable

SPEECH: slow, low, raspy

BREATH: Nothing noted

FACE: Appears drowsy

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☐ Normal ☒ Droopy very

PULSE & TIME	HGN	Left Eye	Right Eye
1. 56 / 1435	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 60 / 1950	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 56 / 2005	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: Test stopped

ROMBERG BALANCE

WALK AND TURN TEST

Cannot keep balance ✓✓

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	✓✓	✓✓
Misses Heel -Toe	✓	✓✓
Steps off Line	✓	
Raises Arms	✓✓	✓✓✓
Actual Steps Taken	9	9

☒ Sways while balancing ☑ Uses arms to balance ☒ Hopping ☒ Puts foot down

INTERNAL CLOCK: 58 Estimated as 30 sec.

Describe Turn: Lost balance staggered to right

Cannot do Test (explain): N/A

Type of Footwear: Lace up boots

○ Right △ Left — Draw lines to spots touched: slow movements

Kept leaning forward

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	1.5	1.5	1.5
Right Eye	1.5	1.5	1.5

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: Nothing Noted

ORAL CAVITY: Nothing Noted

REACTION TO LIGHT: None visible

RIGHT ARM: scar

LEFT ARM: scar

oozing puncture wounds

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 60 TEMP: 36.4

MUSCLE TONE: ☐ Near Normal ☒ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "I'm not using" — How much? — Time of use? no answer — Where were the drugs used? (Location) no answer

DATE/TIME OF ARREST: 10 Feb 09 1900hrs

TIME DRE NOTIFIED: 1915hrs

EVAL START TIME: 1925hrs

TIME COMPLETED: 2030hrs

MEMBERS SIGNATURE — SERIAL/REG. # — REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☒ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Cellblock, Miramichi Police Force, Miramichi, NB

(2) **Witnesses:** Constable Ed Goodfellow

(3) **Source:** The writer spoke with the arresting officer who advised that he observed the subject – Paul Groves slumped over the wheel on Doyle Street at Railway Avenue. The motor vehicle was still in drive and his foot was on the brake. While speaking to the subject he noticed that his speech was slow, low and raspy. His coordination was poor and he was very unstable on his feet. He performed poorly on the S.F.S.T. battery at the side of the road and he was arrested for driving while his ability to operate a motor vehicle is impaired by drug.

(4) **First Observations of Subject:** The writer first observed the David in the cellblock of the Miramichi Police Force. He appeared drowsy and was having difficulty keeping his eyes open. His head was nodding forward and he had very droopy eyelids. His voice was slow, law and raspy and his pupils appeared to be constricted.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Groves had an approximately 2" sway front to back and he estimated the passage of 30 seconds in 58 seconds. **Walk & Turn Test** – He lost his balance twice during the instructions, stopped walking, missed heel to toe, stepped off the line and used his arms for balance. During the turn the subject lost his balance to the right. **One Leg Stand Test** – While balancing on his left leg he swayed, used his arms, and put his foot down on his counts of 1, 2, 3, and 4 before the test was stopped for safety reasons. While balancing on his right leg he swayed, used arms, and put foot down at his counts of 1, 2, and 3 before the test was stopped for safety reasons. **Finger to Nose Test** –He missed the tip of his nose with the tip of his finger on every attempt. His movements were slow, his head leaning forward toward his chest throughout.

(6) **Clinical Signs:** Groves' pulse rate was below normal at 56bpm and 56bpm. His blood pressure was below normal at 110/60mmHg. His body temperature was below normal at 36.4° Celsius. Groves' pupils were constricted in all three lighting conditions, in room light they measured at 1.5mm in near total darkness at 1.5mm, and in direct light at 1.5mm. His reaction to light in direct light was noted as being none visible.

(7) **Statements:** Groves denied having taken any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Cheryl Seeley, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Groves provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. S. MORRISON | DRE NO. 14048 | ROLLING LOG NO. 63

RECORDER/ WITNESS: CST. L. THOMAS

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property

FILE #: S-Session 18-3

ARRESTEE'S NAME (LAST, FIRST, M): HATOS, PHIL

DOB (YY-MM-DD): 58-03-02 | AGE: 51 | SEX: M | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): CST. L. THOMAS

DATE EXAMINED/ TIME/LOCATION: 11/25/09 - 2310 NORTH STATION

BREATH RESULTS: ☐ Refused — Results 40 mg% — Instrument # 12835

CHEMICAL TEST: ☐ Refused — ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. L. GIORDANO

What have you eaten today? STEAK DINNER — When? 7PM

What have you been drinking? How Much? GLASS OF WINE 1 — Time of last drink? 8PM

Time now? 11 PM | When did you last sleep? LAST NIGHT | How long? 8HRS

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: COOPERATIVE, NERVOUS

COORDINATION: POOR, JERKY, STUMBLING

SPEECH: NORMAL, TALKATIVE

BREATH: ALCOHOLIC BEVERAGE

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2340	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 104 / 2349	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 108 / 2358	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence — Right Eye / Left Eye

ONE LEG STAND: 23/30 | 21/30

ROMBERG BALANCE: 0" 0" 3" 3" — EYELID TREMORS

WALK AND TURN TEST

Cannot keep balance: ____

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	✓	✓
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	✓✓	✓
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance ☒ Hopping ☑ Puts foot down

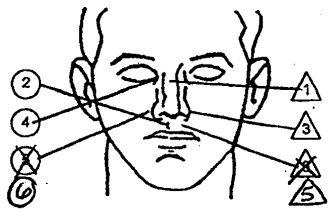
INTERNAL CLOCK: 20 Estimated as 30 sec.

Describe Turn: AS INSTRUCTED

Cannot do Test (explain): N/A

Type of Footwear: LOAFERS

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.0	8.5	5.5
Right Eye	6.0	8.5	5.5

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: REDNESS & ULCERATIONS

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: SLOW

BLOOD PRESSURE: 146 / 100 TEMP: 37.3 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

RIGHT ARM / LEFT ARM — NO VISIBLE MARKS

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? NONE | How much? N/A | Time of use? "I DIDN'T" | Where were the drugs used? (Location) N/A

DATE/TIME OF ARREST: 11/25/09 2230 | TIME DRE NOTIFIED: 2300 | EVAL START TIME: 2310 | TIME COMPLETED: 2400

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL ☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** North Station – South Simcoe Police Service

(2) **Witnesses:** Constable Les Thomas

(3) **Source:** The arresting officer, Cst Les Thomas advised that he was on general patrol on South Acres Drive near Yonge Street when he observed a motor vehicle travelling at a high rate of speed westbound. When stopped, the suspect – Phil Hatos appeared nervous and was very talkative. He did poorly on the SFSTs and as a result, was placed under arrest for impaired driving and transported to the north station for a DRE evaluation.

(4) **First Observations of Subject:** Hatos was first observed in the breath room. He was very talkative. He repeatedly shifted his weight from foot to foot and was making abrupt hand movements. When not speaking he appeared to be grinding his teeth. There was an odour of alcoholic beverage from his breath.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Hatos had a 3" sway side to side and estimated 20 seconds to be 30 seconds. **Walk & Turn Test** – Hatos was unable to keep balance during the instruction stage. During the walking stage, on his way up the line, he raised his arms and stopped after the 7th step. He eventually continued, made his turn, then stopped again after his 4th step on the way back. He also raised his arms on the way back down the line. **One Leg Stand Test** – While balancing on his left leg he swayed while balancing and used his arms for balance. While balancing on his right leg he swayed while balancing, used his arms to balance, and put his foot down on his count of 20. **Finger to Nose Test** –He missed the tip of his nose with the tip of his finger on every attempt and used the wrong hand on his 5th & 6th attempts.

(6) **Clinical Signs:** Hatos' pulse rate and blood pressure were above their respective normal ranges. He exhibited a lack of smooth pursuit and a lack of convergence. He had eyelid tremors and his pupils were dilated in room light and in direct light. There was a slow reaction to light. He had redness & ulcerations inside his nasal area. His blood alcohol concentration was measured to be 40 milligrams of alcohol in 100 milliliters of blood.

(7) **Statements:** Hatos denied having taken any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Steve Morrison, a certified Drug Recognition Expert, that:

_____

(10) **Miscellaneous:** Hatos provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: CELESTE BUTT | DRE NO. 12077 | ROLLING LOG NO. 42

RECORDER/ WITNESS: SGT. RON MORRIS | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE # 5-Session 18-4

ARRESTEE'S NAME (LAST, FIRST, M): JACKSON, GLEN | DOB (YY-MM-DD): 610511 | AGE: 47 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): SGT. RON MORRIS

DATE EXAMINED/TIME/LOCATION: 2008-03-18 2030hrs. C.J.U. | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☐ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No — Given by: SGT RON MORRIS

What have you eaten today? EGGS + TOAST | When ? 9 AM

What have you been drinking? How Much? COFFEE (2 CUPS) | Time of last drink?

Time now? 11 pm | When did you last sleep? How long? LAST NIGHT 7 hrs.

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No

ATTITUDE: PASSIVE, COOPERATIVE

COORDINATION: POOR, UNSTEADY, SLOW

SPEECH: SLOW, LOW

BREATH: NOTHING NOTED

FACE: PALE

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☑ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☑ No

Able to follow stimulus: ☑ Yes ☐ No

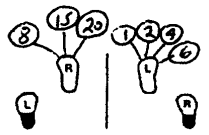
Eyelids: ☐ Normal ☑ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 54 / 2038	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 54 / 2051	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 56 / 2103	Angle of Onset	N/A	N/A

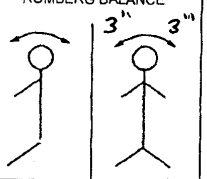
Vertical Nystagmus? ☐ Yes ☐ No

Convergence: Right Eye → Left Eye ←

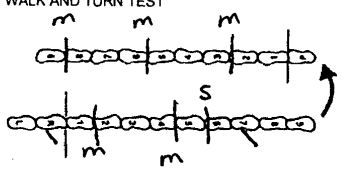
ONE LEG STAND: 23/30 TEST STOPPED



ROMBERG BALANCE



WALK AND TURN TEST



Cannot keep balance ✓

Starts too soon ✓

	1st Nine	2nd Nine
Stops Walking	✓	Ø
Misses Heel -Toe	✓✓ (2)	✓✓ (3)
Steps off Line	✓	Ø
Raises Arms	CONSTANT	CONSTANT
Actual Steps Taken	9	9

☑ Sways while balancing ☐ Uses arms to balance ☐ Hopping ☑ Puts foot down

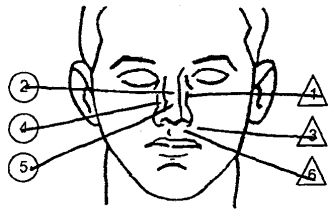
INTERNAL CLOCK: 50 Estimated as 30 sec.

Describe Turn: LIFTED BOTH FEET AND WALKED AROUND

Cannot do Test (explain): N/A

Type of Footwear: WALKING SHOES

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	2.0	2.5	2.0
Right Eye	2.0	2.5	2.0

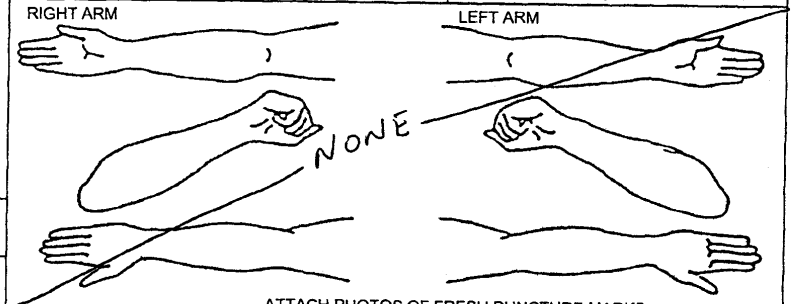
NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

Rebound Dilation: ☐ Yes ☑ No

REACTION TO LIGHT: LITTLE TO NONE VISIBLE

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 68 | TEMP: 36.2 °

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "I DON'T USE" | How much? NO ANSWER | Time of use? NO ANSWER | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
2008-03-18 2010hrs.	2020 hrs.	2030 hrs.	2125 hrs.

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Central Traffic Unit – Toronto Police Service

(2) **Witnesses:** Sergeant Ron Morris

(3) **Source:** The arresting officer, Sgt Ron Morris advised that he was on general patrol on the Gardner Expressway near Yonge Street when he observed a motor vehicle travelling westbound at approximately 30km/h. The motor vehicle was observed weaving in and out of traffic. When they approached Spadina Road the vehicle was observed weaving within its lane and at times drifting into the other lanes. When Sgt Morris attempted to stop the vehicle, the driver – Mark Jackson continued on for 2km before stopping. Jackson's speech was thick and slow. He did poorly on the SFSTs and was placed under arrest for driving while impaired by drug.

(4) **First Observations of Subject:** Jackson was first observed in the breath room. He was cooperative and passive. When he spoke, it was slow, low, and he had a raspy voice. His face was pale and he had a blank stare. He was slow to respond to questions and was very unstable on his feet.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Jackson had a 3" sway side to side and estimated 50 seconds to be 30 seconds. **Walk & Turn Test** – He lost his balance one during the instruction stage. During the walking stage, on his way up the line, he raised his arms, missed heel to toe on his 2nd step and 5th step, stopped after his 5th step, stepped off line on his 7th step, and made an abrupt spin to turn which caused him to stagger. On the way back down the line, he raised his arms and missed heel to toe on steps 3, 6, & 9. **One Leg Stand Test** – While balancing on his left leg he swayed while balancing, used his arms for balance and put his foot down on his count of 8, 15, & 20. While balancing on his right leg he swayed while balancing and put his foot down on his count of 1, 2, 4, & 6. **Finger to Nose Test** –He missed the tip of his nose with the tip of his finger on every attempt.

(6) **Clinical Signs:** Jackson's pulse rate, blood pressure, and body temperature were all below the normal ranges and his eyelids were droopy, His pupils were constricted in room light & near total darkness with little to no reaction to light. His muscle tone was flaccid.

(7) **Statements:** Jackson denied having taken any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Celeste Butt, a certified Drug Recognition Expert, that:

_____

(10) **Miscellaneous:** Jackson provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. V. PILETTE | DRE NO. 15969 | ROLLING LOG NO. 31

RECORDER/WITNESS: CST. J. BERNARD | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE # S-Session 18-5

ARRESTEE'S NAME (LAST, FIRST, M)	DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
STEVENS, LAURA	71-06-08	38	M	W	CST J. BERNARD #3751

DATE EXAMINED/TIME/LOCATION: 01/17/09 - 2200 PDQ 15

BREATH RESULTS: ☐ Refused Results N/A Instrument # N/A

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by: CST. ARSENAULT

What have you eaten today? "BURGER" When? "NOON"

What have you been drinking? How Much? "JUST WATER" N/A

Time of last drink? N/A

Time now?	When did you last sleep? How long?	Are you sick or injured?	Are you diabetic or epileptic?
8 PM	LAST NIGHT 8 HRS	☐ Yes ☒ No	☐ Yes ☒ No

Do you take insulin?	Do you have any physical disabilities?	Are you under the care of a doctor/dentist?
☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No

Are you taking any medication or drugs? ☒ Yes ☐ No — VALIUM - 2 EACH DAY

ATTITUDE: CO-OPERATIVE

COORDINATION: POOR, STAGGERING

SPEECH: THICK, SLOW, SLOW TO RESPOND

BREATH: NOTHING NOTED

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

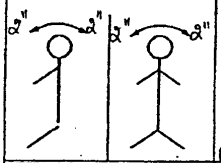
PULSE & TIME	HGN	Left Eye	Right Eye
1. 56 / 2210	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 58 / 2225	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 58 / 2235	Angle of Onset	30°	30°

Vertical Nystagmus? ☑ Yes ☐ No

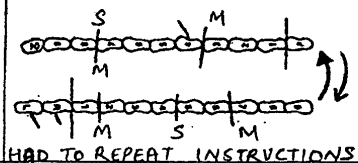
Convergence: Right Eye ✓ Left Eye ✓

ONE LEG STAND: 27/30 (5, 25) | 28/30 (12, 26)

ROMBERG BALANCE



WALK AND TURN TEST



HAD TO REPEAT INSTRUCTIONS

	1st Nine	2nd Nine
Cannot keep balance	✓✓	
Starts too soon	Ø	
Stops Walking	✓	✓
Misses Heel -Toe	✓✓	✓
Steps off Line	Ø	✓
Raises Arms	✓✓	✓✓
Actual Steps Taken	9	10

✓✓ Sways while balancing
☑ Uses arms to balance
Ø Hopping
✓✓ Puts foot down

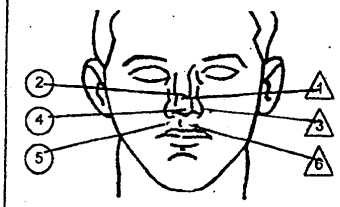
INTERNAL CLOCK: 46 Estimated as 30 sec.

Describe Turn: TURNED BACKWARDS

Cannot do Test (explain): N/A

Type of Footwear: WORK BOOTS

○ Right △ Left
Draw lines to spots touched



SLOW MOVEMENTS

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.0	4.0
Right Eye	4.0	6.0	4.0

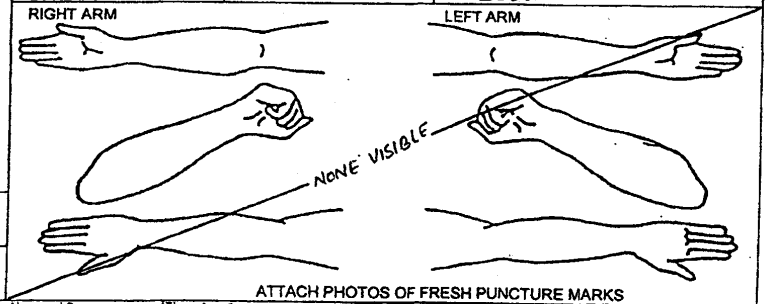
Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: SLOW

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 110 / 74 TEMP: 36.4

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "JUST MY PILLS" How much? "2 A DAY" Time of use? 10 AM Where were the drugs used? (Location) AT HOME

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
01/17/09 - 2120	2140	2200	2315

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT	☐ ALCOHOL	☐ STIMULANT	☐ DISSOCIATIVE ANESTHETIC	☐ INHALANT	☐ OPERATIONAL	
☐ MEDICAL	☐ DEPRESSANT	☐ HALLUCINOGEN	☐ NARCOTIC ANALGESIC	☐ CANNABIS	☐ TRAINING	

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** PDQ 15 – Service de Police de la ville de Montreal

(2) **Witnesses:** Constable Joseph Bernard

(3) **Source:** The arresting officer – Constable Joseph Bernard observed the suspect – Laura Stevens stopped within the intersection of Rue Wellington. When he approached the vehicle, Stevens was sitting in the driver's seat. Her speech was thick and slow. She performed poorly on the SFSTs, was arrested for impaired driving, and transported back to the office for a DRE evaluation to be conducted.

(4) **First Observations of Subject:** Stevens was first observed sitting in the interview rom. She was cooperative and had slow, thick, slurred speech. She was slow to respond to questions. Her balance was poor and she staggered while walking. Her eyes were watery.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test –Stevens had a 2" sway side to side and front to back. She estimated 46 seconds as being 30 seconds. **Walk & Turn Test** – The instructions had to be repeated twice. During the instruction stage, Stevens was unable to keep her balance with her feet breaking apart twice. During the walking stage, she raised his arms, missed heel to toe on her 2nd step, stopped briefly after step 4, & missed heel to toe on his 7th step on her way up the line. She made her turn in a backwards direction, missed heel to toe and stepped off line on step 4, stopped after step 7, then stopped, eventually continuing to take 10 steps instead of 9 as instructed. **One Leg Stand Test** – While balancing on her left leg she swayed while balancing, used her arms to balance, and put her foot down on her count of 5 & 25. While balancing on her right leg she swayed while balancing, used her arms to balance, and put her foot down on her count of 12, & 26. **Finger to Nose Test** –She missed the tip of his nose with the tip of his finger on all but her 4th attempt.

(6) **Clinical Signs:** Stevens exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation with an angle of onset of 30 degrees. She had vertical nystagmus and a lack of convergence. Her pulse rate and blood pressure were down, reaction to light was slow and muscle tone flaccid.

(7) **Statements:** Stevens stated she took 2 Valium at 10am at his home.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Vincent Pilette, a certified Drug Recognition Expert, that:

(10) **Miscellaneous:** Stevens provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. C. CLEMENT | DRE NO.: 14975 | ROLLING LOG NO.: 50

RECORDER/ WITNESS: CST. S. GRIFFITHS | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: 5-Session 18-6

ARRESTEE'S NAME (LAST, FIRST, M): SHOLLY, RENA | DOB (YY-MM-DD): 51-02-18 | AGE: 58 | SEX: F | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. S. GRIFFITHS

DATE EXAMINED/TIME/LOCATION: 06/OCT/2009 - 1245 CAMBRIDGE | BREATH RESULTS: Results N/A ☐ Refused Instrument # N/A | CHEMICAL TEST ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. G. BLUNDELL

What have you eaten today? NOTHING — When ? N/A

What have you been drinking? How Much? "I DIDN'T DRINK ANYTHING" — Time of last drink? N/A

Time now? "DON'T KNOW" | When did you last sleep? How long? "ABOUT 2 DAYS AGO"

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No — "Uhm.... NOT YET"

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No — "I DON'T GO TO THE DOCTOR"

Are you taking any medication or drugs? "I TOOK SOME TYLENOL THIS MORNING" ☒ Yes ☐ No

ATTITUDE: COOPERATIVE, SLOW TO RESPOND

COORDINATION: SLOW, SHAKY

SPEECH: LOW, SLOW, SLURRED AT TIMES

BREATH: NOTHING NOTED

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, If so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☐ Equal ☒ Unequal (explain) LEFT LARGER (2mm)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 120 / 1248	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 120 / 1305	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 120 / 1345	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence — Right Eye / Left Eye

ONE LEG STAND: 25/30 — 26/30

ROMBERG BALANCE -NO SWAY-

WALK AND TURN TEST

	1st Nine	2nd Nine
Cannot keep balance	Ø	
Starts too soon	Ø	
Stops Walking	✓	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	✓	Ø
Actual Steps Taken	9	9

☑ Sways while balancing ☒ Uses arms to balance ☒ Hopping ☑ Puts foot down

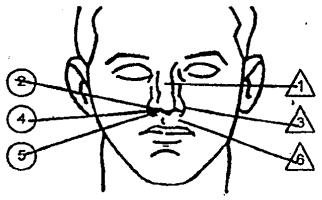
INTERNAL CLOCK: 15 Estimated as 30 sec.

Describe Turn: AS INSTRUCTED

Cannot do Test (explain): N/A

Type of Footwear: WORK SHOES (FLAT)

○ Right △ Left — Draw lines to spots touched



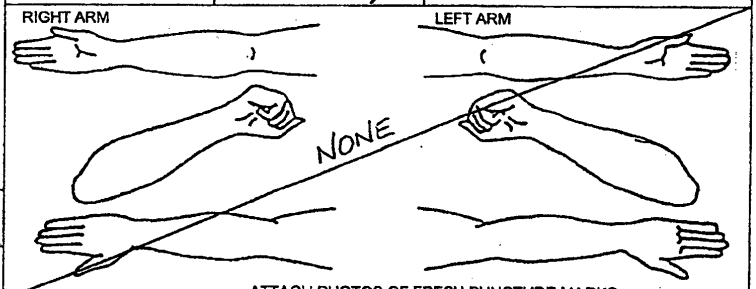
PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	5.5	7.5	5.0
Right Eye	3.5	5.5	3.0

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: NORMAL



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 160 / 80 — TEMP: 37.2 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "JUST TWO TYLENOL" — How much? — Time of use? "THIS MORNING" — Where were the drugs used? (Location) "HOME"

DATE/TIME OF ARREST: 06/OCT/09 - 1230 | TIME DRE NOTIFIED: 1240 | EVAL START TIME: 1245 | TIME COMPLETED: 1345

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL
☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Waterloo Regional Police Service – Cambridge Station

(2) **Witnesses:** Constable Scott Griffiths

(3) **Source:** The arresting officer – Constable Scott Griffiths observed the subject – Rena Sholly parked in the parking lot of the Cambridge Center just of Dunbar Road. When Griffiths approached the vehicle, Sholly was acting strange and was slow to respond to questions. Her speech was slow and slurred at times and she was unstable on her feet. Cst Griffiths had Sholly perform SFSTs and she performed poorly. She was placed under arrest for being in care or control of a motor vehicle while impaired by drugs.

(4) **First Observations of Subject:** Sholly was observed sitting in the interview room. She was cooperative and appeared stable. She was slow to respond to questions and slurred her speech at times. Her coordination was slow and shaky at times. Her eyes were watery.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Sholly estimated 15 seconds to be 30 seconds. **Walk & Turn Test** – During the walking stage, she raised her arms and stopped briefly after step 1 on her way up the line. **One Leg Stand Test** – While balancing on her left leg she swayed while balancing and put her foot down on her count of 16. While balancing on her right leg she swayed while balancing and put her foot down on her count of 3. **Finger to Nose Test** –She missed the tip of his nose with the tip of his finger on every attempt.

(6) **Clinical Signs:** Sholly's pulse rate was above the normal range of 60-90 beats per minute at 120 beats per minute. Her blood pressure was above the normal range of 120-140 millimeters of mercury (mmHg) systolic over 70-90 millimeters of mercury diastolic at 160/80mmHg. Sholly's left eye was dilated in room light and in direct light but her right eye was not. Her left pupil was 2.0mm larger than her right pupil in all lighting conditions.

(7) **Statements:** Sholly stated she took 2 Tylenol "this morning".

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Chris Clement, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Nothing to note.

SESSION XIX

INHALANTS

SESSION XIX INHALANTS

Upon successfully completing this session the student will be able to:

Explain a brief history of the Inhalant category of drugs.

Identify common drug names and terms associated with this category.

Identify common methods of administration for this category.

Describe the symptoms, observable signs and other effects associated with this category.

Describe the typical time parameters, i.e. onset and duration of effects, associated with this category.

List the clues that are likely to emerge when the drug evaluation and classification process is conducted for a person under the influence of this drug category.

Correctly address the "topics for study" questions at the end of this session.

A. Overview of Inhalants

Inhalants include a wide variety of breathable chemicals that produce mind altering results. These substances are readily available in many households and can be purchased easily. Inhalants are sometimes called deliriants, in that they may produce delirium. Delirium is usually a brief state characterized by incoherent excitement, confused speech, restlessness and possible hallucinations. Depending on the nature of the particular Inhalant, the effects produced may be similar to those of stimulants, depressants, or hallucinogens.

There are three major subcategories of Inhalants: volatile solvents, aerosols and anesthetic gases.

The volatile solvents include a large number of readily available substances, none of which is intended by the manufacturer to be used as a drug. One of the most widely abused volatile solvents is plastic cement, or "model airplane glue". Plastic model cement includes the following volatile chemicals: toluene, acetone, naphtha, aliphatic acetates, hexane, cyclohexane, and benzene. Other frequently abused volatile solvents include: paint, gasoline, paint thinners, dry cleaning fluids, typewriter correction fluid, engine degreasers, spray paint, and fingernail polish removers.

The aerosols are chemicals discharged from a pressurized container by the propellant force of a compressed gas. Commonly abused aerosols include hair sprays, deodorants, insecticides, glass chillers and vegetable frying pan lubricants. Abused aerosols contain various hydrocarbon gases that produce drug effects.

The majority of abusers of volatile solvents and aerosols are pre-teens and teenagers.

The third subcategory, the anesthetic gases, includes substances that are less frequently abused than are volatile solvents or aerosols. The anesthetic gases are drugs that abolish pain, and they are used medically for that purpose during surgery. Anesthetic gases that are sometimes abused include ether, amyl nitrite, butyl nitrite, and isobutyl nitrite. Adults may be more frequent users of the anesthetic gases.

There is an important distinction between the anesthetic gases and the other two subcategories of Inhalants. The volatile solvents and the aerosols usually cause elevated blood pressure. But the anesthetic gases usually cause blood pressure to become lower than normal. Apparently, this is due to the fact that the anesthetic gases can dilate the blood vessels around the heart thus causing a lowered blood pressure. Pulse rate, however, usually is increased by all three subcategories of Inhalants.

Some Inhalant users prefer to put their Inhalants in a plastic bag, others soak rags or socks and then sniff the fumes. Many abusers use everyday items such as aluminum cans, balloons or

other containers in an attempt to conceal their use and concentrate the fumes. Some common street names that Inhalant users use are, "Huffing", "Hacking", "Ballooning" and "Glading".

B. Possible Effects of Inhalants

The effects of Inhalants vary from one substance to another. Common effects include:

- altered shapes and colors
- antagonistic behavior
- bizarre thoughts
- distorted perceptions of time and distance
- dizziness and numbness
- drowsiness and weakness
- euphoria and grandiosity
- floating sensation
- inebriation similar to alcohol intoxication
- intense headaches
- light-headedness
- nausea and excessive salivation
- possible hallucinations

In general, persons under the influence of Inhalants will appear confused and disoriented. Their speech usually will be slurred.

C. Onset and Duration of Inhalants' Effects

Inhalants' effects are felt virtually immediately. However, the duration of effects depends on the substance used. For example, glue, paint, gasoline and other commonly abused Inhalants usually produce effects that last from several minutes, up to eight hours depending on the substances abused and the duration of abuse. Nitrous oxide's effects typically last 5 minutes or less. The effects of amyl nitrite and butyl nitrite last from a few seconds to up to 20 minutes.

D. Signs and Symptoms of Inhalant Overdose

Some Inhalants will depress the central nervous system to the point where respiration ceases. Others can cause heart failure. Some Inhalant overdoses induce severe nausea and vomiting, and the unconscious user may asphyxiate in his or her own vomit. Others using bags to get high may pass out then suffocate with a bag over their face. Thus, there is a significant risk of death due to Inhalant abuse.

There is evidence that long term Inhalant abuse can cause:

- permanent damage to the central nervous system
- liver damage
- kidney damage
- bone and bone marrow damage
- greatly reduced mental and physical abilities

E. Expected Results of the Evaluation

When a person under the influence of Inhalants is examined by a drug recognition expert, the following results generally will be found.

Horizontal Gaze Nystagmus - yes.

Vertical Gaze Nystagmus - yes, high dose for that particular individual.

Lack of Convergence - yes.

Pupil size - normal, but may be dilated with certain specific Inhalants (anesthetic gases).

Reaction to light - slow.

Romberg - subjects will exhibit impairment and will tend to sway when performing this test.

Walk and Turn - subjects will exhibit impairment and will often take slow deliberate steps and will commonly stagger.

One Leg Stand - subjects will exhibit impairment and will tend to sway when performing this test.

Finger To Nose - subjects will exhibit impairment and will tend to sway when performing this test.

Pulse rate - up.

Blood pressure - up or down. Volatile Solvents and Aerosols usually will cause elevated blood pressure, while Anesthetic Gases usually will lower the blood pressure.

Temperature - up, down or normal depending on the substance.

Muscle tone - flaccid or normal (Anesthetic Gases may cause muscles to be flaccid)

General Indicators:

- bloodshot, watery eyes
- confused
- disoriented appearance
- flaccid or normal muscle tone
- flushed face, possibly sweating
- intense headaches
- lack of muscle control
- non-communicative
- odor of the inhaled substance
- possible nausea
- residue of substance around face, nose, hands or clothing

- slow, thick, slurred speech

Topics for Study

1. What are the three major subcategories of Inhalants?

2. What are some of the principal active ingredients in many volatile substances?

3. In what important respect do the effects of Anesthetic Gases differ from the effects of Volatile Solvents and Aerosols?

4. Does any of the subcategories of Inhalants cause pulse rate to decrease?

5. The effects of Amyl Nitrite and Butyl Nitrite last from a few seconds to up to _____ minutes.

DRUG INFLUENCE EVALUATION

EVALUATOR: Ray Turner | DRE NO. 15008 | ROLLING LOG NO. 56

RECORDER/ WITNESS: John McLeod | CRASH: ☐ None ☐ Fatal ☐ Injury ☐ Property | FILE # 5-Session 19-1

ARRESTEE'S NAME (LAST, FIRST, M): GRAVES, James L. | DOB (YY-MM-DD): 88 08 06 | AGE: 21 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): John McLeod

DATE EXAMINED/TIME/LOCATION: 2010-06-01 2200hrs. MRP HQ, Moffet | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☐ Urine ☐ Oral fluid ☑ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: John McLeod | What have you eaten today? hamburger | When? 6pm | What have you been drinking? How Much? Coke 1 can | Time of last drink? —

Time now? About 10p.m | When did you last sleep? How long? Last night 6 hours | Are you sick or injured? ☐ Yes ☑ No | Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No | Do you have any physical disabilities? ☐ Yes ☑ No | Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No | ATTITUDE: Cooperative | COORDINATION: Poor, unsteady, Barely stand upright

SPEECH: Slurred, mumbling | BREATH: Paint, chemical odour | FACE: Paint residue on lips and chin (gold)

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft | Eyes: ☐ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☑ Watery | Blindness: ☑ None ☐ L. Eye ☐ R. Eye | Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain) | Nystagmus Present: ☑ Yes ☐ No | Able to follow stimulus: ☑ Yes ☐ No | Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 104 / 2210	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 102 / 2224	Max. Deviation	☑ Yes ☐ No	☑ Yes ☐ No
3. 104 / 2240	Angle of Onset	30°	30°

Vertical Nystagmus? ☑ Yes ☐ No — Convergence: Right Eye ↻ Left Eye ↺

ONE LEG STAND: Stopped at 2. Unable to stand for instructions

ROMBERG BALANCE: Test stopped

WALK AND TURN TEST: Test stopped. Could not stand

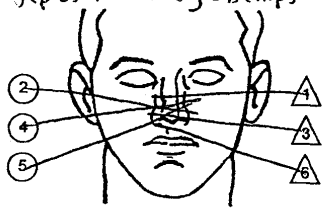
Cannot keep balance VVV (3) | Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	Ø	Ø
Actual Steps Taken	Ø	Ø

☑ Sways while balancing ☑ Uses arms to balance ☐ Hopping ☐ (2) ☑ Puts foot down

INTERNAL CLOCK: N/A Estimated as 30 sec. | Describe Turn: N/A | Cannot do Test (explain): Unable to stand heel to toe | Type of Footwear: New sneakers

○ Right △ Left — Draw lines to spots touched: touched palm of hand to tip of nose every attempt

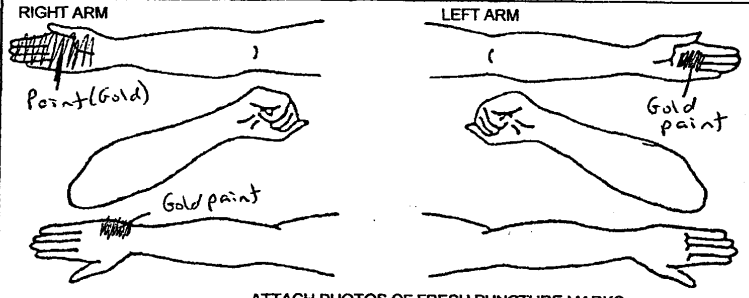


PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.5	3.5
Right Eye	4.0	6.5	3.5

NASAL AREA: Gold Paint in nose | ORAL CAVITY: Smell of paint from breath

Rebound Dilation ☐ Yes ☑ No | REACTION TO LIGHT: Normal

RIGHT ARM / LEFT ARM



BLOOD PRESSURE: 140 / 100 | TEMP: 36.9°

MUSCLE TONE: ☑ Near Normal ☐ Flaccid ☐ Rigid

Comments:

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? "I huffed some gold" | How much? "not much" | Time of use? 8pm | Where were the drugs used? (Location) In the park

DATE/TIME OF ARREST: 2010-06-01 2100hrs | TIME DRE NOTIFIED: 2130hrs | EVAL START TIME: 2200hrs | TIME COMPLETED: 2245hrs.

MEMBERS SIGNATURE: R. Turn | SERIAL/REG. #: 66731 | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL ☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Cole Harbour RCMP Detachment, Cole Harbour, Nova Scotia

(2) **Witnesses:** Constable John McLeod

(3) **Source:** The writer was contacted by radio and advised to contact Cst John McLeod for a drug evaluation. McLeod advised he arrested James Graves for impaired driving after observing him fail to stop at a red light at Main & Wareham Street. Graves was cooperative but appeared dazed. He performed poorly on the SFSTs. A can of spray paint was located on the front seat of Graves' vehicle along with paint soaked rags.

(4) **First Observations of Subject:** Writer first observed Graves in the interview room of the Cole Harbour RCMP Detachment. He appeared passive and dazed. He had very poor coordination and balance. Gold paint smears were visible on his face and hands.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Graves was unable to remain in position during the instruction stage and the test was stopped prior to getting him into the starting position. **Walk & Turn Test** – Graves could not keep balance during the instruction stage, breaking his feet apart 3 times before the test was stopped for safety reasons. **One Leg Stand Test** – While balancing on his left leg, he swayed while balancing, used his arms for balance, and put his foot down on his counts of 1 & 2 before the test was stopped approximately 6 seconds in due to safety reasons. Graves was unable to remain in the heels-and-toes-together position for more than 2 seconds during the instruction stage and the test was stopped for safety reasons. **Finger to Nose Test** – Graves did not touch the tip of his finger to his nose during any of the 6 attempts. On each attempt, he touched the palm of his hand to his nose with his finger not making contact with any part of his face.

(6) **Clinical Signs:** Graves exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation with an angle of onset of 30 degrees as well as vertical nystagmus. He had a lack of convergence and his pulse rate and blood pressure were above the normal range.

(7) **Statements:** Graves stated "I huffed some gold".

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Ray Turner, a certified Drug Recognition Expert, that:

_____.

(10) **Miscellaneous:** Graves provided a blood sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Daryl Dalby | DRE NO. 13707 | ROLLING LOG NO. 86

RECORDER/WITNESS: Mark Jennings | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE # 5-Session 19-2

ARRESTEE'S NAME (LAST, FIRST, M): MARTIN, William | DOB (YY-MM-DD): 90-02-01 | AGE: 20 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Mark Jennings

DATE EXAMINED/TIME/LOCATION: 2010-05-20 2000hrs Hwy Traffic Office Portsmouth | BREATH RESULTS: ☐ Refused Results 0 mg% Instrument # 91771 | CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: Mark Jennings | What have you eaten today? When? Pizza AfterWork/6pm | What have you been drinking? How Much? Couple of beer | Time of last drink? 5pm

Time now? About 8pm | When did you last sleep? How long? Last night 7hours | Are you sick or injured? ☑ Yes "I feel dizzy" ☐ No | Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No | Do you have any physical disabilities? ☐ Yes ☑ No | Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No | ATTITUDE Cooperative, Slow to respond | COORDINATION Poor Staggering at times

SPEECH Slurred slow | BREATH Gasoline type odour | FACE Flushed

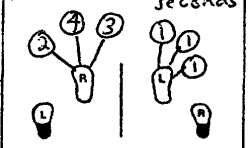
CORRECTIVE LENS: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft | Eyes: ☐ Normal ☑ Reddened Conjunctiva ☑ Bloodshot ☑ Watery | Blindness: ☑ None ☐ L. Eye ☐ R. Eye | Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain) | Nystagmus Present: ☑ Yes ☐ No | Able to follow stimulus: ☑ Yes ☐ No | Eyelids: ☑ Normal ☐ Droopy

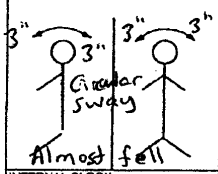
PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2015	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 100 / 2024	Max. Deviation	☑ Yes ☐ No	☑ Yes ☐ No
3. 96 / 2036	Angle of Onset	35°	35°

Vertical Nystagmus? ☐ Yes ☑ No | Convergence: Right Eye ☑ | Left Eye ←

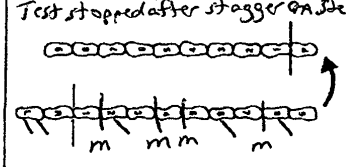
ONE LEG STAND: Stopped at 5seconds | Stopped at 4 seconds



ROMBERG BALANCE



WALK AND TURN TEST: Test stopped after stagger on Step 8 | Cannot keep balance ✓✓ (2) | Starts too soon Ø

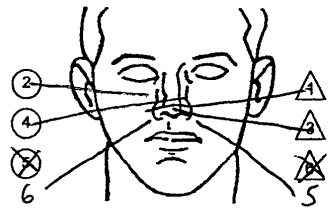


	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	✓✓✓ (4)	Ø
Steps off Line	✓✓ (2)	Ø
Raises Arms	Constant	Ø
Actual Steps Taken	8	0

☑ ☑ Sways while balancing | ☑ ☑ Uses arms to balance | Ø ☑ Hopping | ☑ (3) ☑ Puts foot down (3)

INTERNAL CLOCK: 19 Estimated as 30 sec. | Describe Turn: N/A | Cannot do Test (explain): Staggered with both feet at 6 & 8 where stopped | Type of Footwear: hushpuppies

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	5.0	6.5	4.5
Right Eye	5.0	6.5	4.5

Rebound Dilation: ☐ Yes ☑ No

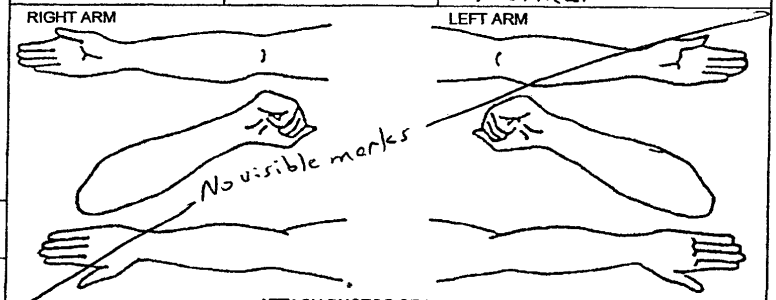
NASAL AREA: Runny nose Gasoline odour | ORAL CAVITY: Gasoline odour | REACTION TO LIGHT: Normal

BLOOD PRESSURE: 146 / 104 | TEMP: 37.1 °

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? "I don't do drugs | How much? | Time of use? No answer | Where were the drugs used? (Location) No answer

DATE/TIME OF ARREST: 2010-05-20 1850 hrs | TIME DRE NOTIFIED: 1930 hrs | EVAL START TIME: 2000 hrs | TIME COMPLETED: 2052 hrs

MEMBERS SIGNATURE: D. Dalby | SERIAL/REG. #: 637742 | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Port Mann Traffic Services, 9060 Stormont Ave, Burnaby, BC

(2) **Witnesses:** Constable Mark Jennings

(3) **Source:** The writer was asked to return to the Traffic Office to speak to a member – Cst Mark Jennings about conducting a drug evaluation. Upon arrival, Jennings stated he conducted a traffic stop on William Martin after observing him pull out in front of oncoming traffic on Surrey Road, nearly causing a collision. Martin was cooperative but slow to respond to questions. He performed poorly on the SFSTs, was read a breath demand, and provided 2 subsequent breath results of 0 mg%.

(4) **First Observations of Subject:** Writer first observed Martin in the holding room at the traffic office. His speech was slow and slurred. He had poor coordination, staggering at times. His eyes were watery and bloodshot.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Martin had a 3" circular sway and almost fell over during the test. He estimated the passing of 30 seconds in 19 seconds. **Walk & Turn Test** –Martin could not keep balance during the instruction stage, breaking his feet apart 2 times. During the walking stage, he missed heel to toe and stepped off line on step 2 (staggering), missed heel to toe on step 4 & 5, stepped off line on step 6, missed heel to toe on step 8 then staggered to the right, almost falling over before the test was stopped for safety reasons. He had also raised his arms throughout the test. **One Leg Stand Test** – While balancing on his left leg, he swayed while balancing, used his arms for balance, and put his foot down on his counts of 2, 3, & 4 before the test was stopped after approximately 8 seconds due to safety reasons. While balancing on his right foot he put foot down at 1 three times and the test was stopped after 4 seconds for safety reasons. **Finger to Nose Test** – Martin missed the tip of his nose 5 times and mixed up his right and left hands for attempts 5 & 6.

(6) **Clinical Signs:** Martin exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation with an angle of onset of 35 degrees. He had a lack of convergence, his pulse rate and blood pressure were above the normal range and his muscle tone was flaccid.

(7) **Statements:** Martin denied taking any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Daryl Dalby, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Graves provided a blood sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Jonathan Cormier | DRE NO. 15949 | ROLLING LOG NO. 48

RECORDER/ WITNESS: Troy Forester

CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property

FILE # S-Session 19-3

ARRESTEE'S NAME (LAST, FIRST, M): BROWN, Stanley

DOB (YY-MM-DD): 85-02-25 | AGE: 25 | SEX: M | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Troy Forester

DATE EXAMINED/TIME/LOCATION: 2011-01-10 1710hrs. Edmonton P.S. H.Q.

BREATH RESULTS: ☐ Refused Results N/A Instrument #

CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: Troy Forester

What have you eaten today? 3 hotdogs When? Lunchtime

What have you been drinking? How Much? Nothing

Time of last drink? —

Time now? Don't Know | When did you last sleep? How long? Last night 8 hours

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☐ No

Are you taking any medication or drugs? ☐ Yes ☑ No

ATTITUDE: Disinterested, dazed

COORDINATION: Poor, clumsy

SPEECH: Slurred, slow

BREATH: Chemical

FACE: Flushed

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☑ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☑ Yes ☐ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 120 / 1719	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 116 / 1731	Max. Deviation	☑ Yes ☐ No	☑ Yes ☐ No
3. 116 / 1745	Angle of Onset	35°	35°

Vertical Nystagmus? ☐ Yes ☑ No

Convergence: Right Eye ● Left Eye ●

ONE LEG STAND: Unable to stand for instructions Test stopped (R) | Unable to stand for instructions Test stopped (L)

ROMBERG BALANCE: Left foot stepped out at 20 seconds (3 3 3 3)

WALK AND TURN TEST

Cannot keep balance (2)

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	(8)	(8)
Steps off Line	(3)	(3)
Raises Arms	Constant	Constant
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ Puts foot down

INTERNAL CLOCK: 27 Estimated as 30 sec.

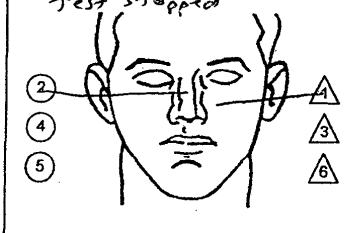
Describe Turn: Lifted both feet and walked around to turn

Cannot do Test (explain): N/A

Type of Footwear: Blue Crocs

○ Right △ Left — Draw lines to spots touched

Fell over on attempt 3 Test stopped



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.0	3.0
Right Eye	4.0	6.0	3.0

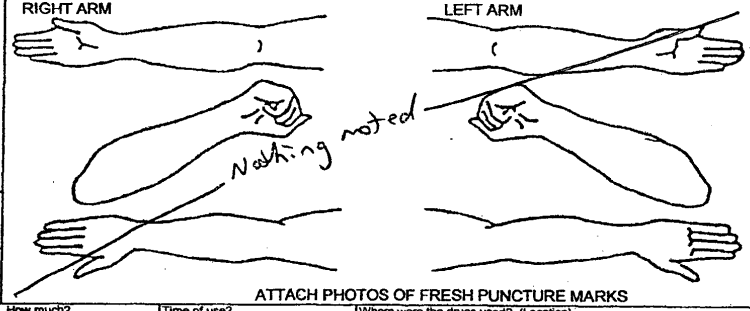
Rebound Dilation ☐ Yes ☑ No

NASAL AREA: Nothing noted

ORAL CAVITY: Chemical smell from mouth

REACTION TO LIGHT: Normal

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 156 / 102 TEMP: 36.7°

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? Nothing | How much? No answer | Time of use? No answer | Where were the drugs used? (Location) No answer

DATE/TIME OF ARREST: 2011-01-10 1615hrs

TIME DRE NOTIFIED: 1625 hrs.

EVAL START TIME: 1710 hrs.

TIME COMPLETED: 1750 hrs.

MEMBERS SIGNATURE: J. Cormier

SERIAL/REG. #: 33961

REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL

☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Edmonton Police Service HQ, 103 Ave, Edmonton

(2) **Witnesses:** Constable Troy Forester

(3) **Source:** The writer was directed to attend Edmonton Police Service HQ to conduct a drug evaluation for Cst Troy Forester. Forester indicated he responded to a report of an impaired driver on Jasper Avenue and located the vehicle stopped at the roadside with Stanley Brown behind the wheel. Brown appeared sluggish and dazed and provided incoherent responses to simple questions related to his name and where he was coming from. There was a strong chemical odour coming from his breath as he spoke and there was no indication of alcohol use. Brown was read a DRE demand and returned to EPS HQ for an evaluation to be conducted.

(4) **First Observations of Subject:** Writer first observed Brown in interview room #2-06. He appeared confused and his coordination was poor. His movements were clumsy and slow. His eyes appeared exceptionally watery and in there was a strong chemical odour from his breath as he spoke.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Brown had a 3" sway front to back & side to side. He moved his left foot out to maintain balance at 20 seconds and the test was stopped for safety reasons. **Walk & Turn Test** – Brown lost his balance twice during the instruction stage. He missed heel to toe steps 2 through 9 & stepped off line on 3, 6, & 7 during the first nine, and during the second nine missed heel to toe on steps 2 through 9 and stepped offline on steps 2, 3, & 8. He constantly raised his arms during the test. **One Leg Stand Test** – For testing of balance on both the left & right legs, Brown was unable to maintain the heels-and-toes-together position during the instruction stage and the test was stopped at that point for safety reasons. **Finger to Nose Test** – Brown missed the tip of his nose with attempts 1 & 2 before falling over, causing the test to be stopped for safety reasons.

(6) **Clinical Signs:** Brown exhibited a lack of smooth pursuit, distinct & sustained nystagmus at maximum deviation with an angle of onset of 35 degrees. He had a lack of convergence, his pulse rate and blood pressure were above the normal range and his muscle tone was flaccid.

(7) **Statements:** Brown denied taking any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Jonathan Cormier, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Brown provided a urine sample for analysis.

SESSION XX

PRACTICE: CLINICAL INDICATOR EXAMINATIONS

SESSION XX **PRACTICE: VITAL SIGNS EXAMINATIONS**

Upon successfully completing this session the student will be able to:

Conduct examinations of pulse, blood pressure and temperature.

Describe the vital signs examination procedures.

Document the results of the vital signs examinations.

In this session, you will have opportunities to practice taking measurements of pulse, blood pressure and temperature. You will work in a team with two or three students, taking turns measuring these vital signs on each other. When it is not your turn to serve either as the test administrator or the test subject, you should closely observe your teammate who is administering the examinations and offer any coaching that seems appropriate. You will record your measurements using the data collection sheet on the next page.

In preparation for this session, make sure you can do the following:

- Locate the radial, brachial and carotid artery pulse points.
- Position the blood pressure cuff properly on a subject's arm.

CLINICAL INDICATORS EXAMINATIONS DATA SHEET

EXAMINER'S NAME _____

DATE _____/_____/_____

PULSE MEASUREMENTS

SUBJECT'S NAME _____

TIME_____

PULSE POINT USED _____

BEATS PER MINUTES _____

SUBJECT'S NAME _____

TIME _____

PULSE POINT USED _____

BEATS PER MINUTES _____

SUBJECT'S NAME _____

TIME _____

PULSE POINT USED _____

BEATS PER MINUTES _____

BLOOD PRESSURE MEASUREMENTS

SUBJECT'S NAME _____

TIME _____

SYSTOLIC _____

DIASTOLIC _____

SUBJECT'S NAME _____

TIME _____

SYSTOLIC _____

DIASTOLIC _____

SUBJECT'S NAME _____

TIME _____

SYSTOLIC _____

DIASTOLIC _____

SESSION XXI

CANNABIS

SESSION XXI CANNABIS

Upon successfully completing this session the student will be able to:

Explain a brief history of Cannabis.

Identify common names and terms associated with Cannabis.

Identify common methods of administration for Cannabis.

Describe the symptoms, observable signs and other effects associated with Cannabis.

Describe the typical time parameters, i.e. onset and duration of effects associated with Cannabis.

List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category.

Correctly answer the "topics for study" questions at the end of this session.

A. Overview of Cannabis

"Cannabis" is the category of drugs that derive primarily from various species of Cannabis plants. Two species that supply much of the abused Cannabis are Cannabis Sativa and Cannabis Indica. Some jurisdictions as well as botanists don't recognize Cannabis Indica as a separate species. The active ingredient in these drugs is:

Delta-9 Tetrahydrocannabinol
(abbreviated Delta-9 THC, or simply "THC")

THC is found principally in the leaves and flowers of the plant, rather than the stems or branches. Different varieties of Cannabis plants have different concentrations of THC. A variety that has a relatively high concentration of THC is the Sinsemilla (the unfertilized female) plant, a type of Cannabis Sativa having very tiny seeds. ("Sinsemilla" is a Spanish expression for "without seeds".)

Cannabis has some limited medical applications. It lowers intraocular pressure, and can be helpful for glaucoma patients. It suppresses nausea, and sometimes is recommended for cancer patients to relieve the nausea that accompanies chemotherapy.

There are four principal forms of the drug Cannabis.

Marijuana consists of the dried leaves of the plant.

Hashish is a form of cannabis made from the dried and pressed resin of a marijuana plant.

Hash oil is sometimes referred to as "marijuana oil" it is a highly concentrated syrup-like oil extracted from marijuana. It is normally produced by soaking marijuana in a container of solvent, such as acetone or alcohol for several hours and after the solvent has evaporated, a thick syrup-like oil is produced with a THC content generally ranging from 10 to 12 percent.

Marinol (also known as Dronabinol) is a synthetic form of THC that is not derived from Cannabis plants. Marinol is a prescription drug administered to cancer patients to suppress the nausea that may accompany chemotherapy. Nabilone is a synthetic form of THC and is used as an anti-vomiting agent.

Potency, Purity and Dose

THC is the major psychoactive constituent of Cannabis. Potency is dependant on THC concentration and is usually expressed as percent THC per dry weight of material. Average THC concentration in marijuana is 11-15 percent, hashish 5-15 percent, and hash oil 10-12 percent. The form of marijuana known as Sinsemilla is derived from the unpollinated

female cannabis plant and is preferred for its high THC content (ranging from 15 percent and higher). Recreational doses are highly variable. A single intake of smoke from a pipe or joint is called a hit (approximately 1/20th of a gram). The lower the potency or THC content the more hits are needed to achieve the desired effects; 1-3 hits of high potency Sinsemilla is typically enough to produce the desired effects. In terms of its psychoactive effect, a drop or two of hash oil on a cigarette is equal to a single "joint" of marijuana. Medically, the initial starting dose of Marinol is 2.5 mg, twice daily.

Marijuana usually is smoked. Marijuana, hashish and hash oil also can be taken orally, e.g., baked in cookies or brownies and eaten. Marinol is taken orally.

B. Possible Effects of Cannabis

Cannabis interferes with a person's ability or willingness to divide attention. When driving, they may attend to certain parts of the driving task but ignore other parts. For example, they may continue to steer the car but ignore stop signs, traffic lights, etc.

Pharmacological effects of marijuana vary with dose, route of administration, experience of user, vulnerability to psychoactive effects, and setting of use. At recreational doses, effects may include relaxation, euphoria, relaxed inhibitions, sense of well-being, disorientation, altered time and distance perception, lack of concentration, impaired learning and memory, alterations in thought formation and expression, drowsiness, sedation, mood changes such as panic reactions and paranoia, and a more vivid sense of taste, sight, smell, and hearing. Stronger doses intensify reactions and may cause fluctuating emotions, flights or fragmentary thoughts with disturbed associations, a dulling of attention despite an illusion of heightened insight, image distortion, and psychosis.

Other characteristic indicators **may** include an odor of marijuana in the subject's vehicle or on the subject's breath, marijuana debris in the mouth, green coating on the subject's tongue, and reddening of the conjunctiva.

Because Cannabis impairs attention, divided attention tests are excellent tools for recognizing people who are under the influence of this category of drug.

C. Onset and Duration of Cannabis Effects

Persons begin to feel and exhibit marijuana's effects within 8-9 seconds after inhaling the smoke. The effects usually reach their peak within 10-30 minutes, and the effects generally continue for 2-3 hours. The user typically feels "normal" within 3-6 hours after smoking marijuana. There are studies that indicate that the user may be impaired long after the euphoric feelings have ceased.

It is important to understand that some blood and urine tests may continue to disclose evidence of the use of marijuana long after the effects of marijuana have dissipated. That is because certain chemical tests do not seek to find THC itself, but instead look for

metabolites of THC, or chemical by-products. It can take as long as 4 hours for THC metabolites (i.e., carboxy THC) to appear in the urine at concentrations sufficient to trigger an immunoassay (50 ng/mL) following smoking. Some blood tests may disclose marijuana use for at least 3 days after smoking. Some urine tests may indicate the presence of THC metabolites for 28-45 days.

There are two important metabolites of THC. One of these metabolites is Hydroxy THC; this causes the user to feel euphoric so that they are aware of the effects. Hydroxy THC usually is eliminated from the blood plasma within six hours. The other important metabolite is Carboxy THC. There is no evidence at this time that this metabolite is psychoactive. Carboxy THC may be found in the blood plasma for several days following marijuana use.

D. Signs and Symptoms of Cannabis Overdose

Excessive use of marijuana can create paranoia and possible psychosis. These same effects may develop from long term use of the drug, which has also been observed to produce sharp personality changes, especially in adolescent users. Other long term effects include:

- lung damage
- chronic bronchitis
- lowering of testosterone (male sex hormone)
- possible birth defects, still births and infant deaths
- acute anxiety attacks
- chronic reduction of attention span

E. Expected Results of the Evaluation

When a person under the influence of Cannabis is evaluated by a DRE, the following results can generally be expected:

Horizontal Gaze Nystagmus - no

Vertical Gaze Nystagmus - no

Lack of Convergence - yes

Pupil size - dilated, but possibly normal. Rebound dilation may be observed.

Reaction to light - normal

Pulse rate - up

Blood Pressure - up

Temperature - normal

Muscle tone - normal

Injection sites usually will not be found.

General Indicators:

- body tremors
- disorientated
- debris in mouth (possible)
- eyelid tremors
- impaired perception of time and distance
- increased appetite
- marked reddening of the conjunctiva
- odour of marijuana
- possible paranoia
- relaxed inhibitions

Topics for Study

1. What is the active ingredient in Cannabis?

2. Why is the Walk and Turn test and the One Leg Stand test excellent tools for recognizing persons under the influence of marijuana?

3. What is Marinol?

4. What is Sinsemilla?

5. Name two important metabolites of THC, and describe how they affect the duration and perception of the effects of Cannabis.

DRUG INFLUENCE EVALUATION

EVALUATOR: MARK SKINNER | DRE NO. 16769 | ROLLING LOG NO. 71

RECORDER/ WITNESS: Constable Brian Bonnell

CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE # 5-Session 21-1

ARRESTEE'S NAME (LAST, FIRST, M): MacLEAN, Joshua

DOB (YY-MM-DD): 900701 | AGE: 19 | SEX: M | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): Constable Brian Bonnell

DATE EXAMINED/TIME/LOCATION: 2010-12-15 1410hrs. RCMP TRAFFIC SERVICES C.B.

BREATH RESULTS: ☐ Refused Results N/A Instrument #

CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No — Given by: B. Bonnell

What have you eaten today? "Nothin' man" When ? No answer

What have you been drinking? How Much? "Nothin'" Time of last drink? —

Time now? 3 o'clock | When did you last sleep? How long? Last night 1am to 9am

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No — "No way, man"

ATTITUDE: COOPERATIVE, SLOW, APATHETIC

COORDINATION: DISORIENTED, UNSTEADY

SPEECH: SLOW RELAXED

BREATH: STALE ODOUR

FACE: NOTHING NOTED

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☑ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☑ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☐ Normal ☑ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 112 / 1419	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 112 / 1431	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 110 / 1442	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☑ No

Convergence — Right Eye / Left Eye

ONE LEG STAND: 25/30 | 29/30

ROMBERG BALANCE: 2" 2" 2" 2" — EYELID TREMORS — CIRCULAR SWAY

WALK AND TURN TEST — LOWER BODY TREMORS

Cannot keep balance: VV

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel-Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	Constant	Constant
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ Puts foot down

INTERNAL CLOCK: 43 Estimated as 30 sec.

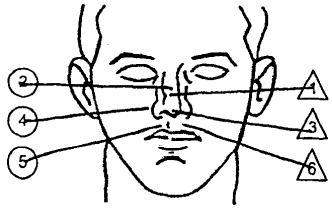
Describe Turn: As Instructed

Cannot do Test (explain): N/A

Type of Footwear: SNEAKERS

○ Right △ Left — Draw lines to spots touched

EYELID TREMORS



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	5.5	7.0	5.0
Right Eye	5.5	7.0	5.0

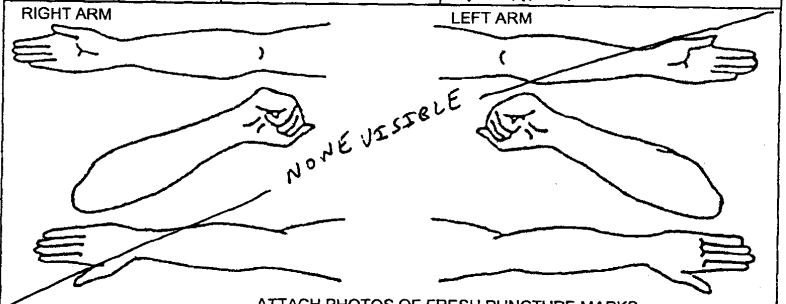
Rebound Dilation ☑ Yes ☐ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: BROWN COATING ON TONGUE RAISED TASTE BUDS

REACTION TO LIGHT: NORMAL

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 142 / 100 TEMP: 37.0 °

MUSCLE TONE: ☑ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "NOTHING" | How much? NO ANSWER | Time of use? NO ANSWER | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
2010-12-15 1330hrs.	1340hrs.	1410 hrs.	1458 hrs.

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL
☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** RCMP Cape Breton Traffic Services Office, North Sydney, Nova Scotia

(2) **Witnesses:** Constable Brian Bonnell

(3) **Source:** The writer was asked to return to the Cape Breton Traffic Services office to conduct a drug evaluation for Cst Brian Bonnell. Upon arrival, Bonnell indicated that he conducted a traffic stop on the subject – Joshua MacLean behind a school on Lingan Road after a complaint was received of youths in a vehicle smoking drugs. There was a strong smell of burnt cannabis from MacLean's breath, he had reddened conjunctiva, appeared confused, and was giggling. MacLean performed poorly on the SFSTs and was read a DRE demand and transported to the office.

(4) **First Observations of Subject:** MacLean was in the DRE Room sitting in a chair. His eyelids were droopy, he had reddened conjunctiva, was laughing and loud. He appeared friendly and cooperative.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – MacLean had a 2" circular sway, had eyelid tremors, and estimated 43 seconds to be 30 seconds. **Walk & Turn Test** – MacLean lost his balance twice during the instruction stage. During the walking stage, he had lower body tremors throughout. He raised his arms for balance throughout the test as well. **One Leg Stand Test** – While balancing on his left leg, he swayed while balancing, used his arms to balance, and put his foot down on his count of 15.. While balancing on his right leg, he swayed while balancing, used his arms for balance, and put his foot down on his counts of 6 and 27. **Finger to Nose Test** – MacLean missed the tip of his nose on every attempt except #3 and exhibited eyelid tremors.

(6) **Clinical Signs:** MacLean's pulse rate and blood pressure were both above the normal range. Body temperature was normal. His pupils were dilated in room light and in direct light. He had rebound dilation and a normal reaction to light. He had raised taste buds and a brown coating on his tongue. He also had droopy eyelids.

(7) **Statements:** MacLean denied having taken any drugs. He specifically denied smoking cannabis.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Mark Skinner, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Marin provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: S/Sgt. D. Savoy | DRE NO. 8762 | ROLLING LOG NO. 110

RECORDER/ WITNESS: Cst. D. Dickinson

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE # S-Session 21-2

ARRESTEE'S NAME (LAST, FIRST, M): Marin, Richard. C.

DOB (YY-MM-DD): 66-07-13 | AGE: 43 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. D. Peat # 21788

DATE EXAMINED/TIME/LOCATION: 11Sept09 - 2325 Port Mann Detach.

BREATH RESULTS: Results 0.069% ☐ Refused INTOX. Instrument # 21240

CHEMICAL TEST: ☒ Urine ☐ Oral fluid ☐ Blood ☐ Refused

CHARTER WARNING GIVEN: ☒ Yes ☐ No Given by: Cst. D. Peat

What have you eaten today? Hotdog When? 3hrs ago

What have you been drinking? How Much? Beer "Two" Time of last drink? 2hrs ago

Time now? About 9pm | When did you last sleep? How long? Last night. About 5hrs

Are you sick or injured? "No, and I'm not drunk" ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? "I don't take anything" ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? "Nothing man" ☐ Yes ☒ No

ATTITUDE: Impatient, anxious

COORDINATION: Poor, disoriented

SPEECH: slow, slurred

BREATH: Alcoholic beverage

FACE: Nothing noted

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☒ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 110 / 2330	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 112 / 2342	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 110 / 2353	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: 28/30 Leg tremors 27/30

ROMBERG BALANCE: 3" 3" 3" 3" Circular sway Eyelid Tremors

WALK AND TURN TEST: walked slowly; Leg tremors

Cannot keep balance ✓

Starts too soon ∅

	1st Nine	2nd Nine
Stops Walking	✓✓	∅
Misses Heel-Toe	✓✓	∅
Steps off Line	✓	∅
Raises Arms	✓✓	✓✓✓
Actual Steps Taken	9	9

✓✓✓ Sways while balancing

✓✓ Uses arms to balance

∅ Hopping

∅ Puts foot down

INTERNAL CLOCK: 42 Estimated as 30 sec.

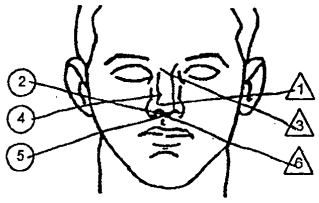
Describe Turn: lost balance, stepped to the right

Cannot do Test (explain): n/a

Type of Footwear: work boots

○ Right △ Left

Draw lines to spots touched



Eyelid Tremors

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	8.0	6.0
Right Eye	6.5	8.0	6.0

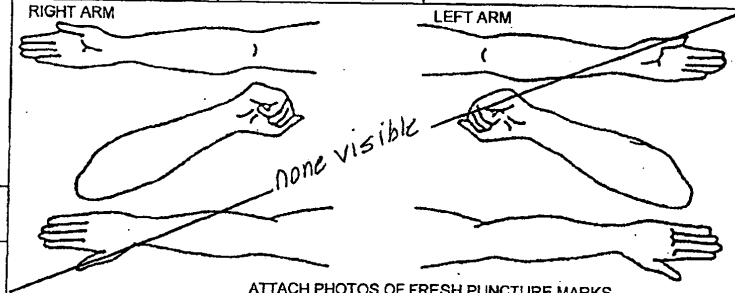
Rebound Dilation ☐ Yes ☒ No

NASAL AREA: Nothing noted

ORAL CAVITY: Brownish coating on tongue

REACTION TO LIGHT: slow

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 148 / 100 TEMP: 36.9 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "Just a couple of beers" | How much? | Time of use? n/a | Where were the drugs used? (Location) n/a

DATE/TIME OF ARREST: 11Sept09, 2305hrs

TIME DRE NOTIFIED: 2315 hrs

EVAL START TIME: 2325 hrs

TIME COMPLETED: 0030 - 12Sep09

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT MEDICAL | ALCOHOL | DEPRESSANT | STIMULANT | HALLUCINOGEN | DISSOCIATIVE ANESTHETIC | NARCOTIC ANALGESIC | INHALANT | CANNABIS | ☒ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Interview Room, Port Mann Detachment, B.C.

(2) **Witnesses:** Constable Dave Dickinson

(3) **Source:** The writer was contacted by radio and advised to contact Constable Don Peat who had arrested a party for impaired driving who returned to the detachment for a breath test, the result of which (60mg%) did not appear in keeping with his gross signs of impairment. Peat felt that the party – Richard Marin, might be also have another drug in his system.

(4) **First Observations of Subject:** When first observed in the interview room, Marin appeared anxious, impatient, and disoriented, with slow, slurred speech and bloodshot eyes.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Marin had a 3" circular sway, estimated 30 seconds in 42 seconds, and exhibited eyelid tremors. **Walk & Turn Test** – Marin could not keep balance twice during the instruction stage, missed heel to toe on his 3rd step then stopped. He missed heel to toe on his 7th step, & stopped after his 8th step. He lost balance & stepped to the right on his turn, & missed heel to toe on his 3rd step on the way back. He walked slowly, raised arms and had leg tremors throughout the test. **One Leg Stand Test** – While balancing on his left leg, Marin put his foot down on his count of 25. He swayed while balancing, used arms for balance, & exhibited leg tremors. While balancing on his right leg, Marin swayed while balancing, used arms to balance, and exhibited leg tremors. **Finger to Nose Test** – Marin missed the tip of his nose on every attempt and exhibited eyelid tremors.

(6) **Clinical Signs:** Marin's breath test 2 results prior to the evaluation indicated a BAC of 60mg%. He exhibited a lack of convergence, slow internal clock, his pupils were dilated in room light & direct light. Reaction to light was slow. His pulse was up & his blood pressure was up. Marin's muscle tone was near normal.

(7) **Statements:** Marin stated he had "Just a couple of beers".

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Dave Savoy, a certified Drug Recognition Expert, that:

_____

(10) **Miscellaneous:** Marin provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST K. BURTON | DRE NO. 10948 | ROLLING LOG NO. 79

RECORDER/ WITNESS: CST. H. SMITH

CRASH: ☐ None ☐ Fatal ☐ Injury ☒ Property | FILE # S-Session 21-3

ARRESTEE'S NAME (LAST, FIRST, M): CHONG, TOMAS

DOB (YY-MM-DD): 78-05-24 | AGE: 31 | SEX: M | RACE: W

ARRESTING OFFICER (NAME, SERIAL/REG #): CST. A. BEELER

DATE EXAMINED/TIME/LOCATION: 12/07/09 - 10:50PM BEDFORD STN.

BREATH RESULTS: Results N/A ☐ Refused Instrument # N/A

CHEMICAL TEST: ☒ Urine ☐ Oral fluid ☐ Blood ☐ Refused

CHARTER WARNING GIVEN: ☒ Yes ☐ No | Given by: CST. BEELER

What have you eaten today? "COUPLE OF BURGERS" When? 7PM

What have you been drinking? How Much? "NOTHING, I DON'T DRINK" | Time of last drink? N/A

Time now? ABOUT MIDNIGHT" | When did you last sleep? "LAST NIGHT" | How long? 9HRS

Are you sick or injured? "I FEEL FINE" ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: RELAXED, CAREFREE

COORDINATION: POOR, STUMBLING

SPEECH: SLOW & DELIBERATE

BREATH: ODOUR OF MARIHUANA

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☒ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 108 / 11:07PM	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 110 / 11:20PM	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 108 / 11:30PM	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: 23/30 | 25/30

(16) (18) R L L R

COUNTED SLOWLY

☒ ☑ Sways while balancing

☒ ☑ Uses arms to balance

☒ ☒ Hopping

☑ ☑ Puts foot down

ROMBERG BALANCE: (CIRCULAR SWAY)

WALK AND TURN TEST

Cannot keep balance ✓

Starts too soon ✓

	1st Nine	2nd Nine
Stops Walking	∅	∅
Misses Heel -Toe	All	All
Steps off Line	∅	∅
Raises Arms	✓✓	✓✓
Actual Steps Taken	9	9

INTERNAL CLOCK: 41 Estimated as 30 sec.

Describe Turn: SPUN AROUND

Cannot do Test (explain): N/A

Type of Footwear: TAN LOAFERS

○ Right △ Left

Draw lines to spots touched

(EYELID TREMORS)

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.0	7.5	5.0-7.0
Right Eye	6.0	7.5	5.0-7.0

Rebound Dilation: ☒ Yes ☐ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: GREEN COATING ON TONGUE

REACTION TO LIGHT: NORMAL

RIGHT ARM / LEFT ARM

NONE VISIBLE

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 140 / 96 TEMP: 37.1 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? "NOTHING MAN" | How much? N/A | Time of use? "I DIDN'T" | Where were the drugs used? (Location) "I AIN'T SAYING"

DATE/TIME OF ARREST: 12/07/09 - 10:25PM | TIME DRE NOTIFIED: 10:40PM | EVAL START TIME: 10:50PM | TIME COMPLETED: 11:50PM

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

RULE OUT: ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS

☒ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** HRP DRE Room, 1975 Gottingen St, Halifax, Nova Scotia

(2) **Witnesses:** Constable Holly Smith

(3) **Source:** The writer was summoned to the HP DRE Room by Constable Holly Smith who requested a drug evaluation be conducted on Tomas Chong. Smith had conducted a traffic stop on Chong after noticing him driving 30 km/h under the 60 km/h speed limit on Main Avenue and weaving in and out of his lane. He appeared confused, there was a strong smell of burnt marijuana from his breath and he had reddened conjunctiva. He was arrested for impaired driving at returned to booking.

(4) **First Observations of Subject:** When first observed just outside the DRE room, Chong appeared relaxed and carefree, he stumbled once walking into the DRE Room and his speech was slow and deliberate. He had reddened conjunctiva.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Chong had a 2" circular sway and estimated the passing on 30 seconds in 41 seconds. **Walk & Turn Test** –Chong could not keep balance during the instruction stage and started too soon once. He missed heel to toe on every step during the first 9 steps, spun around to make his turn contrary to the instructions & demonstration, and missed heel to toe on every step during the last 9 steps. Chong used his arms for balance throughout the entire test. **One Leg Stand Test** – While balancing on his left leg, Chong swayed while balancing and put his foot down at his count of 16. While balancing on his right leg, Chong swayed while balancing used arms for balance, and put his foot down at his count of 18. **Finger to Nose Test** – Chong missed the tip of his nose on every attempt and exhibited eyelid tremors throughout the test.

(6) **Clinical Signs:** Chong had reddened conjunctiva, exhibited a lack of convergence, his pupils were dilated in room light, and in direct light and he exhibited rebound dilation. His pulse rate was up, his blood pressure was up, and his temperature was normal.

(7) **Statements:** Chong indicated he hadn't taken any drugs but when asked where he took the drugs he stated "I ain't sayin'".

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Ken Burton, a certified Drug Recognition Expert, that:

_____ .

(10) **Miscellaneous:** Chong provided a urine sample for analysis.

SESSION XXII

OVERVIEW OF SIGNS AND SYMPTOMS

SESSION XXII OVERVIEW OF SIGNS AND SYMPTOMS

Upon successfully completing this session the student will be able to:

Describe the possible effects that may be observed in each major indicator of drug impairment.

Identify the effects that will most likely be observed with subjects under the influence of each drug category.

Summarizing What We've Learned About The Effects of Each Category: An Exercise For The Student

We have now completed a detailed review of all seven drug categories. In this session, we will summarize what we've learned about the major indicators of drug impairment that DREs rely upon to form their opinions. We will also summarize how each drug category usually "discloses itself" on those major indicators.

The major indicators of impairment consist of nine items:

- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Pupil Size
- Reaction to Light
- Pulse Rate
- Blood Pressure
- Body Temperature
- Muscle Tone

As a DRE, you will evaluate each of these indicators for every subject you examine. What are the possible things that you may observe for each indicator? For example, what are the possible things that you may observe when you check a subject for Horizontal Gaze Nystagmus? What are the possible things that you may observe when you check the subject's blood pressure?

With HGN, there are only two possibilities: either it will be **Present** (i.e. the eyes will jerk) or **Not Present** (i.e. the eyes will move smoothly). Some drugs cause nystagmus, others do not; there is no drug that "cures" nystagmus. With blood pressure, there are three different things we might observe: it may be up, down, or it may be normal. Some drug categories elevate the blood pressure, others lower it; if a person is under the influence of two different drug categories, one that raises blood pressure and one that lowers it, it is possible that the two drugs will partly off-set each other, and the blood pressure may be normal.

What about the other seven major indicators? What are the possible things we may find with each of them? **Before you answer**, try to complete the list of possibilities we've started on the following chart:

Horizontal Gaze Nystagmus?	**YES or NO**
Vertical Gaze Nystagmus?	
Lack of Convergence?	
Pupil Size?	
Reaction to Light?	
Pulse Rate?	
Blood Pressure?	**UP, DOWN, or NORMAL**
Body Temperature?	
Muscle Tone?	

How did you do? Your completed list, on the previous page, should look something like this:

Indicator	Possible Effects
Horizontal Gaze Nystagmus?	**YES or NO**
Vertical Gaze Nystagmus?	**YES or NO**
Lack of Convergence?	**YES or NO**
Pupil Size?	**DILATED or NORMAL or CONSTRICTED**
Reaction to Light?	**NORMAL, SLOW, or LITTLE TO NONE VISIBLE**
Pulse Rate?	**UP or DOWN or NORMAL**
Blood Pressure?	**UP or DOWN or NORMAL**
Body Temperature?	**UP, DOWN, or NORMAL**

Next, your instructors will expect you to be able to state how each category of drugs usually affects each of the eight major indicators. This is information that was first covered in your Pre-School, and covered in even greater detail earlier in this school. In the table below, we've listed what we can usually expect to see in subjects who are under the influence of CNS Depressants. Try to fill in the rest of the table before Session XXII is given in class.

WHAT WILL WE USUALLY SEE IN OUR SUBJECTS?

	Depressants	Inhalant	D/A	Cannabis	Stimulants	Hallucinogens	NA
HGN	Yes						
VGN	Yes *(high dose)						
Lack Conv	Yes						
Pupil Size	Normal (1)						
React Light	Slow						
Pulse Rate	Down (2)						
Blood Press	Down						
Body Temp	Normal						
Muscle Tone	Flaccid						

* high dose for that individual

(1)Soma, Quaaludes and some anti-depressants usually dilate pupils
(2)Quaaludes, ETOH and some anti-depressants may elevate
(3)Certain psychedelic amphetamines may cause slowing
(4)Normal, but may be dilated
(5)Down with anesthetic gases, up with volatile solvents and aerosols
(6)Pupil size possibly normal

The following attachment, Comparison of DRE Symptomatology With Cross Section of Drug Symptomatology Sources, is a small portion of the available scientific literature addressing drug influence. The Synopsis is consistent with the DRE training.

COMPARISON OF DRE SYMPTOMATOLOGY WITH CROSS SECTION OF DRUG SYMPTOMATOLOGY SOURCES

CNS DEPRESSANTS:

DRE Symptomatology:

Nystagmus	decreased pulse
decreased blood pressure	uncoordinated
disoriented	sluggish
thick slurred speech	drunk-like appearance

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Barbiturates, pages 546-547:

(The Pharmacological Basis of Therapeutics, Twelfth Edition, Gilman, A., Goodman, I., Brunton, L., Chabner, B.A., and Knollmann, B. McGraw Hill. 2010.)

Nystagmus	Strabismus
difficulty in visual accommodation	
vertigo	Gait ataxia
positive Romberg sign	Hypotonia
Dysmetria	Diplopia
sluggishness	difficulty in thinking
slowness, slurring of speech	poor comprehension
poor memory	faulty judgement
emotional lability	

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 8 Ed. 1997.

(A Primer of Drug Action, Julien, Robert M. W.H., Advokat, C.D. and Camaty, J.E. Freeman and Company, New York, 11th Ed. 2007.)

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989. p.19.

(Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (6th Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 2006.)

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), page 36: barbiturates effects like alcohol (staggering, poor motor control).

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990), page 11: sedative hypnotics same as alcohol and other depressants

(Encyclopedia of Drug Abuse, (2nd edition) O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York 1992)

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey (1989), page 72: Benzodiazepines same as barbiturate effects; pages 247; 292): Barbiturates:

Nystagmus	depressed pulse
depressed blood pressure	diminished concentration
incoordination	decreased reaction time

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988), p. 135.

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 159

(Diagnostic and Statistical Manual of Mental Disorders (DSM –IV-TR) (4th Ed, Revised), Washington DC. American Psychiatric Association 2000)

Maladaptive behavioral changes, e.g., disinhibition of sexual or aggressive impulses, mood lability, impaired judgment, impaired social or occupational functioning.

slurred speech	incoordination
unsteady gait	impairment in attention or memory

CNS STIMULANTS:

DRE Symptomatology:

dilated pupils	increased pulse rate
increased temperature	increased blood pressure
body tremors	restlessness
excited	euphoric
talkative	exaggerated reflexes
anxiety	grinding teeth
redness to nasal area	runny nose
loss of appetite	insomnia
increased alertness	

The Pharmacological Basis of Therapeutics, Seventh Edition,

Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Cocaine 551-554

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J.,Barceloux, Donald G. Elsevier Science Pub. Co. 1988, Amphetamines, Page 634:

Mild influence:
Mydriasis
restlessness
irritability
tremor
Diaphoresis
nausea
pallor

hyperreflexia
talkativeness
insomnia
flushing
combativeness
vomiting
dry mucous membranes

Moderate:
hyperactivity
hypertension
Tachycardia
chest discomfort
abdominal pain
mild temperature
elevation
repetitive behavior
panic reactions

confusion
Tachypnea
premature ventricular contraction
vomiting
Profuser Diaphoresis

impulsivity
hallucinations

Serious:
delirium
Hyperreflexia
Hypotension

marked Hypertension/Tachycardia
convulsions
coma

Cocaine, page 650-659

Early Stimulation:
euphoria
excitement
irritable behavior
sudden headache
vomiting
twitching of small muscles
tremor
Cocaine Psychosis
elevation of pulse

Garrulity
apprehension
Mydriasis
nausea
dizziness
tics
jerks
hallucinations
increased respiration

Advanced:
convulsions
decreased consciousness

Hyperreflexia
increased pulse and blood pressure

Later Stages:
Hypotension
Dyspnea et al

Hypothermia

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1992, pages 120-123: Amphetamines and cocaine (CNSS):

dilation of pupils	increased blood pressure
slight tremor	restlessness
agitation	possibly hallucinations

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989, page 99: CNSS cause:

dilation of pupils	rapid heart rate
elevation of blood pressure	tremor in hands
increased body temperature	restlessness

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), pages 25, 121: Amphetamine:

dilation of pupils	increase heart rate
blood pressure	flushing
teeth grinding	dry mouth
tremors	lack of coordination

pages 64, 100, 121:

dilation of pupils	increased heartbeat
increased temperature	similar to Amphetamine

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990), pages 8 and 10 Cocaine and Amphetamine:

dilated pupils	increased pulse
increased blood pressure	vasoconstriction
agitation tremors	increased temperature

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989), page 29 Amphetamines:

pupil dilation (Mydriasis)	increased pulse rate
elevated blood pressure	hyperactive
talkative	irritable
restless	Anorexia
tremors	urinary retention
teeth grinding (Bruxism)	fidgety, jerky, random motions
illogical, loose thoughts	

Page 295: Cocaine:

dilated pupils
increased blood pressure
Hyperpyrexia
Tachycardia
vasoconstriction

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988) page 142: Amphetamine:

increased pulse
possibly increased temperature
general increase in psychomotor activity
increased blood pressure
increased wakefulness

page 145: Cocaine

Mydriasis (dilated pupils);
euphoria
may cause psychosis
agitation

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 142.

COCAINE:
Maladaptive behavioral changes, e.g., euphoria, fighting, grandiosity, hyper-vigilance, psychomotor agitation, impaired judgment, impaired social or occupational functioning.

pupillary dilation
elevated blood pressure
nausea or vomiting
Tachycardia
perspiration or chills
visual or tactile hallucinations

AMPHETAMINE:
Maladaptive behavioral changes, e.g., fighting, grandiosity, hyper-vigilance, psychomotor agitation, impaired judgment, impaired social or occupational functioning

pupillary dilation
elevated blood pressure
nausea or vomiting
Tachycardia
perspiration or chills

HALLUCINOGENS:

DRE Symptomatology:
dilated pupils
increased blood pressure
dazed appearance
Synesthesia
paranoia
nausea
increased pulse rate
increased temperature
body tremors
hallucinations
uncoordinated
disoriented

difficulty in speech
poor perception of time/distance
perspiring

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, LSD and Related Drugs, page 564

pupillary dilation
Tachycardia
tremor
Piloerection
increased body temperature
Hyper vigilance
loss of boundaries
increased blood pressure
Hyperreflexia
nausea
muscular weakness
hallucinations
Synesthesia

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988, LSD, pages 667-669:

pupillary dilation
increased body temperature
weakness
Hyperreflexia
hallucinations
poor judgment
increased heart rate
Piloerection
tremor
Ataxia
depersonalization
mood swings

Primer of Drug Action, Julien, Robert M.; W. H. Freeman & Company, NY, 1992

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed.), Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989 page 160:

dilated pupils
increased awareness
sensory input
flushed face
increased blood pressure
faltered body images
fine tremor
increased body temperature

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, Inc New York (1984), pages 100; 115 120, 153): Hallucinogens:

dilated pupils
increased blood pressure
profuse perspiration
hallucinations
increased heart rate
increased temperature
loss of appetite

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990)

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey (1989), page 218: LSD:

Ataxia	high blood pressure
Hyperreflexia	incoordination
Tachycardia	

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Plenum Medical Book Company, New York (1988)

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 145.

Maladaptive behavioral changes, e.g., marked anxiety or depression, ideas of reference, fear of losing one's mind, paranoid ideation, impaired judgment, impaired social or occupational functioning.

Perceptual changes occurring in a state of full wakefulness and alertness, e.g., subjective intensification of perceptions, depersonalization, derealization, illusions, hallucinations, Synesthesia

pupillary dilation	Tachycardia
sweating	palpitations
blurring of vision	tremors
incoordination	

DISSOCIATIVE ANESTHETICS (PHENCYCLIDINE)

DRE Symptomatology:	
Nystagmus	increased pulse
increased blood pressure	increased temperature
perspiring	warm to the touch
blank stare	early onset of nystagmus
"moon walking"	difficulty in speech
incomplete responses	repetitive response
repetitive speech	increased pain threshold
cyclic behavior	confused, agitated
hallucinations	possibly violent and combative

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, PCP, page 565-567

Nystagmus	elevated heart rate
elevated blood pressure	feeling of intoxication
staggering gait	slurred speech
numbness of extremities	sweaty

muscular rigidity
drowsiness
repetitive movements
blank stare
hostile behavior

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988, PCP 768-777:

Nystagmus
depressed light reflexes
diminished pain
tremors
slurred speech
increased pulse rate
Amnesia
body image distortion
depersonalization
hallucinations
Miosis
blurred vision
Ataxia
muscle weakness
drowsiness
increased blood pressure
anxiety/agitation
euphoria
disordered thought processes

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1997, page 262: PCP:

increased blood pressure
disinhibition
muscle rigidity
delirium excitement
hallucinations
speech difficulty
elevated blood pressure
blank stare
mood swings
agitation
disorientation
analgesia
pain tolerance

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed.), Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989 p. 178

sweating
fever convulsions
muscle rigidity
increased blood pressure

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), page 100, 208: PCP:

Nystagmus
increased pulse rate
mood swings
changes in body awareness
violent behavior
increased blood pressure
flushing
hallucinations
speech difficulties
decreased responsiveness

Drug Abuse and Dependence, Grinspoon, Lester, M.D.; Bakalar, James B., Harvard Medical School Mental Health Review No. 1 (1990), page 25: PCP:

body image distortions
Nystagmus
loss of muscle control
memory loss drooling
increased blood pressure
muscle rigidity
incoherent speech
blank stare

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989) page 296: PCP:

Nystagmus
hallucination
loss of motor control
automated speech
Nystagmus at rest
disorientation
extreme agitation
disassociation from environment

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D. Ph.D.D Plenum Medical Book Company, New York (1988), page 156: PCP:

Ataxia
muscular hypertonicity
Ptosis
Horizontal Gaze, Vertical Gaze and Rotary Nystagmus
elevated blood pressure
mood swings
tremors
Hyperreflexia
Tachycardia

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 155.

Maladaptive behavioral changes, e.g., belligerence, assaultiveness, impulsiveness, unpredictability, psychomotor agitation, impaired judgment, impaired social or occupational functioning.

Vertical or Horizontal Gaze Nystagmus
increased blood pressure or heart rate
numbness or diminished responsiveness to pain.
Ataxia
Dysarthria (slurred speech)
muscle rigidity
seizures
Hyperacusis

NARCOTICS:

DRE Symptomatology:
constricted pupils
decreased blood pressure
decreased pulse rate
decreased temperature

Ptosis (droopy eyelids)
drowsiness
low, raspy speech
facial itching
fresh puncture marks
"on the nod"
depressed reflexes
dry mouth
euphoria

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Opiods page 541-545

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988; Heroin, pages 702-703. See also Methadone, Demerol, etc.:

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1997: Morphine:

constructed pupils
drowsiness
mental clouding
depressed respiration
euphoria
decreased blood pressure
Dysphoria
sedation
Analgesia

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed., Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989

Decrease pain (p.6)

Encyclopedia of Drug Abuse, O'Brien, Robert,Cohen, Sydney. M.D. Facts on File, INC New York (1984) page 100, 120, 123, 124: Narcotics:

constricted pupils
Analgesia
euphoria going
reduced heart rate
depressed appetite
"on the nod"

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard MedicalSchool Mental Health Review No. 1 (1990), page 14: Narcotics:

constricted pupils
dreamy state
euphoria
"nodding off"
pain suppression

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey (1989) page 293 - 294:

Miosis (constricted pupils)
Hypothermia
(decreased temperature)
drowsiness lethargy
Bradycardia
(decreased heart beat)
euphoria/dysphoria
confusion

flaccid muscle tone
Analgesia
depressed respiration

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988), page 132

Miosis (constricted pupils)
itching
low blood pressure
flushing sweating

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 152.

Maladaptive behavioral changes, e.g., initial euphoria followed by apathy, dysphoria, psychomotor retardation, impaired judgment, impaired social or occupational functioning.

pupillary constriction
slurred speech
drowsiness
impairment in attention or memory

INHALANTS: (Toluene)

DRE Symptomatology:
Nystagmus
increased blood pressure
odor on mouth
slurred speech
increased pulse rate
residue around nose
nausea disorientation

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Inhalants, page 567

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989. p. 185

decreased inhibitions
drowsiness
sneezing runny nose
floating sensation
light sensitivity

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984)

lowered inhibitions
incoordination confusion
nausea
restlessness
disorientation
impaired judgment

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990)

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989), pages 265, 272, 297: Toluene:

Nystagmus
tremors cerebellar
rambling speech
light headedness
CNS depression that mimics Ataxia
Narcotic Analgesics
blank stare
euphoric mood
mental dulling
Ataxia
irritability
tremors

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988)

brief euphoria
giddy intoxication, similar to alcohol
CNS depression (volatile solvents/toluene)
dizziness
Vertigo

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 149.

Maladaptive behavioral changes, e.g., belligerence, assaultiveness, apathy, impaired judgment, impaired social or occupational functioning.

Nystagmus
incoordination
unsteady gait
depressed reflexes
tremor generalized muscle
stupor or coma
euphoria
dizziness
slurred speech
lethargy
psychomotor retardation
blurred vision or diplopia
weakness

CANNABIS:

DRE Symptomatology:
dilated pupils
odour of Marijuana
body tremors
relaxed inhibitions
paranoia
impaired perception of time and distance
marked reddening of conjunctivae
debris in mouth
eyelid tremors
increased appetite
disorientation

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Cannabis, pages 559-561

euphoria	short term memory impairment
temporal disintegration	balance and stance impairment
information processing impairment	increased hunger
dry mouth	additive to alcohol

Lower doses affect perception, impairing well beyond when subject subjectively feels effects; alters all information processing; relatively simple motor skills unaffected

High doses:

anxiety	hallucinations
increased heart rate	increased systolic blood pressure
marked reddening of Conjunctiva	simple motor skills affected

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Cannabis, pages 559-561

euphoria	short term memory impairment
temporal disintegration	balance and stance impairment
information processing impairment	increased hunger
dry mouth	additive to alcohol

Lower doses affect perception, impairing well beyond when subject subjectively feels effects; alters all information processing; relatively simple motor skills unaffected

High doses:

anxiety	hallucinations
increased heart rate	increased systolic blood pressure
marked reddening of Conjunctiva	simple motor skills affected

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988; Cannabis, page 678-681

reddening of Conjunctiva	alteration in mood
motor coordination impairment	euphoria
relaxation	sleepiness
temporal distortion	decrease in balance, steadiness and
(time slows)	muscle strength
impairment of motor tasks and	
reaction times requires higher	
dosages	
loss of short term memory	elective attention
systematic thinking impaired	stimulated appetite
dry mouth	

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1997, Marijuana

reddening of Conjunctiva
increased blood pressure
dry mouth
altered sensory perception

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), pages 100, 120: Marijuana:

red eye
increased heart beat
dryness of mouth and throat
increased pulse rate
increased appetite
time and space distortions
increased heart rate
lack of coordination

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990).page 19: Marijuana:

increased appetite
bloodshot eyes
agitation
hallucinations
faster heartbeat
confusion
incoordination

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989), page 296: Cannabis:

red conjunctiva
pleasant relaxation
slowed time
apathy
problems with motor coordinaton
increased appetite
intensification of sensations
passivity
Tachycardia (increased heart rate)

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988), page 147: Cannabis:

red Conjunctiva
changes in time sense
memory
coordination
balance and stance
increased hunger
short-term memory loss
dry mouth
Tachycardia (rapid heart beat)
elevated systolic pressure affected

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 140.

Maladaptive behavioral changes, e.g., euphoria anxiety, suspiciousness, or paranoid ideation, sensation of slowed time, impaired judgment, social withdrawal.

red Conjunctiva	increased appetite
Tachycardia (rapid heart)	dry mouth

Lack of Convergence:

Clinical Procedures for Ocular Examination, Kurtz and Carlson; McGraw-Hill Medical, 3rd Edition, September 26, 2003.

A Recognized Clinical Trial of Treatment for Convergence Insufficiency in Children, Scheiman, Cotter, Cooper, et al, Arch Ophtology, Jan 2005.

SESSION XXIII

CURRICULUM VITAE PREPARATION AND MAINTENANCE

SESSION XXIII CURRICULUM VITAE PREPARATION AND MAINTENANCE

Upon successfully completing this session the student will be able to:

Describe and discuss the purpose of the DRE Curriculum Vitae.

Identify the elements of a DRE Curriculum Vitae.

Prepare a basic Curriculum Vitae summarizing relevant training, education, experience and accomplishments to date.

Update and extend the Curriculum Vitae, as relevant achievements continue to expand.

A. Purpose of the Curriculum Vitae

The principal purpose of the Curriculum Vitae (C.V.) is to help establish your qualifications for testifying in court as a drug recognition expert. The C.V. records the education and training you have received, and the experience you have accumulated, that qualify you to render an opinion concerning drug impairment.

As a general rule, witnesses can testify only to personal knowledge, and cannot offer opinions as testimony. An important exception to this rule is granted to expert witnesses.

Basically, an expert witness is someone who the court decides is an expert. But "experts" usually are persons skilled in some art, trade, science or profession, who have a knowledge of matters not within the knowledge of people of average education, learning and experience. The prosecution or defense will call a witness who, they assert, is an "expert" in some matter. The court will carefully assess the credentials of that witness, i.e. the education, training and experience he or she has had in the matter in question. And the court -- and the court alone -- will decide whether the witness is an expert. If the court rules that the witness is an expert, then the witness may assist the court in arriving at a decision by expressing an opinion on a state of facts shown by the evidence, and based upon his or her special knowledge. Generally a witness' qualification is achieved through "Voir Dire" which is a French expression literally meaning "trial within a trial". A"Voir Dire" normally takes place with an exclusion of all other witnesses related to the matter in question.

After you have completed all of the necessary training, the prosecution will begin to call you as an expert witness in drug evaluation and classification cases. The court will wish to consider relevant evidence of your alleged expertise. Your C.V. can help to ensure that the court rules in your favor.

B. Preparation for Court Qualification

Being qualified as an expert may be as simple as stating your occupation. Or, it could require several hours of exhausting questioning by the prosecutor and the defense lawyer. The prosecutor will seek to show that, insofar as drug recognition is concerned, your knowledge is greater than that of the average person. The stronger your credentials, the better the chance that the court will consider you an "expert". And, the stronger your credentials, the more impressed the jury will be with your expertise, and the more weight they will give to your testimony.

The credentials that you have to offer to establish your expertise consist mainly of:

- The formal education and training you have received.
- The directly relevant experience you have acquired.
- The "outside" readings and study you have done.

You need to have accurate, up to date and documented evidence of these credentials, to support the assertion that you are a expert.

C. Curriculum Vitae Content

1. Relevant Formal Education.

   a. High School Education
   List the high school(s) you attended and the dates of your attendance. Highlight classes that provided knowledge in the area of drugs.

   b. College or University Education
   List the schools and dates. Highlight courses relevant to drugs, and relevant to the drug evaluation and classification examination procedures. List major field(s) of study, degree(s) earned, etc.

   c. Specialized College or University - level courses.
   List dates, instructor, subject(s) covered, credits earned, etc. Highlight the relevance of these courses to drugs.

2. Formal Training.

   a. Police Academy (recruit level training).
   List dates of attendance, major topics covered. Highlight drug relevant training.

   b. Specialized Police Training/In-Service Training.
   List dates, topics, instructors. Highlight drug relevant training.

   c. Other specialized training (e.g.,special seminars; lectures).
   List dates, topics, instructors. Highlight drug relevant training.

3. Relevant Experience.

   a. Job Experience. (law enforcement)
   List specific assignments, including dates, rank held, etc. Include special assignments. Highlight duties associated with drug enforcement.

   b. Assignments.
   List agencies, dates, and specialized assignments related to impaired driving, drug enforcement, etc.

   c. Prior law enforcement experience.

   d. Other Job Related Experience.
   List employers, dates, specific duties, etc. Highlight work relevant to drugs.

   e. Drug Enforcement/Evaluation Experience.
   Maintain up to date totals of vehicle stops; Impaired driving investigations;

Impaired driving arrests; drug evaluations; charges and convictions relating to Impaired driving and drug charges.

f. Prior experience in testifying in drug-related cases. Maintain up to date totals of the numbers of appearances in various level courts (e.g., Provincial, Queens Bench/Superior etc.); the number of times qualified as an expert witness in drug cases; t he number of times qualified as an expert witness in other cases.

4. Outside Readings and Study.

a. Maintain listings of the drug related texts read; departmental training bulletins read; journals read; research papers read; films and videos viewed; etc.

5. Training or research conducted.

Document drug related training and research that you conducted or in which you participated.

6. Published works

List all relevant writings that you authored or co-authored, including departmental briefing papers, training manuals/bulletins, magazine articles, books, etc.

D. Curriculum Vitae Examples

The remainder of this session presents an example of a DRE Curriculum Vitae. It is based on the training and experience of an actual drug recognition expert.

MID-COURSE REVIEW

A. Drugs, Drug Categories and the Drug Influence Evaluation

1. Define the word "drug".

2. Name the seven drug categories.

   a. Name the six subcategories of CNS Depressants.
   b. Name three subcategories of CNS Stimulants.
   c. Name two subcategories of the Narcotic Analgesics.

3. Identify the category for each of the listed drugs.

a.	Xanax	f.	Phenyl Cyclohexyl Peperidine
b.	Desoxyn	g.	Ecstasy
c.	Secobarbital	h.	ETOH
d.	Dilaudid	i.	Chlorpromazine
e.	Alprazolam	j.	Psilocybin

4. List the twelve components of the Drug Influence Evaluation in the proper sequence.

   a. Demonstrate the Preliminary Examination.
   b. Demonstrate the Eye Examinations.
   c. Demonstrate the Administration of the Divided Attention Tests.
   d. Demonstrate the Vital Signs Examinations.
   e. Demonstrate the Darkroom Examinations.
   f. Demonstrate the Check for Muscle Tone and the inspection for Injection Sites.

5. Identify the category for each of the listed drugs.

a.	Demerol	f.	Ritalin
b.	Adderall	g.	Isopropanol
c.	Chlordiazepoxide	h.	Bufotenine
d.	Ketamine	i.	Methaqualone
e.	Percodan		

B. Eyes and Vital Signs

1. Name the three clues of Horizontal Gaze Nystagmus.

   a. Demonstrate the check for "Lack of smooth pursuit".
   b. Demonstrate the check for "Distinct and sustained nystagmus at maximum deviation".
   c. Demonstrate the check for "Angle of Onset".

2. Name the categories of drugs that will cause Horizontal Gaze Nystagmus.

   a. Name the categories that will cause Vertical Gaze Nystagmus.
   b. Demonstrate the check for Vertical Gaze Nystagmus.

3. Name the test that is always administered immediately after Vertical Gaze Nystagmus.

   a. Demonstrate the check for Lack of Convergence.
   b. Name the categories of drugs that usually will cause Lack of Convergence.

4. Name the lighting conditions under which we make estimations of pupil size.

   a. Demonstrate the room light pupil size estimation procedure.
   b. Demonstrate the near-total darkness procedure.
   c. Demonstrate the direct light procedure.
   d. Name the other things a DRE looks for while shining the light directly into the subject's eye.
   e. How quickly must the pupil start to constrict if it is considered to exhibit normal reaction to light?
   f. Define Rebound Dilation.

5. State the normal range of pupil sizes for the three lighting conditions.

   a. Define each of the listed terms.

- Miosis
- Mydriasis
- Ptosis

   b. What kinds of drugs will cause dilation of the pupils?
   c. What kinds of drugs will cause constriction?

6. Identify the category for each of the listed drugs.

a.	Oxycodone	f.	Diazepam
b.	Halcion	g.	Dexedrine
c.	Librium	h.	Hycodan
d.	Peyote	i.	Xanax
e.	Preludin		

7. Define "Pulse".

   a. Define "Pulse Rate".
   b. Define "Artery".
   c. Define "Vein".
   d. Identify the location of each listed pulse point.

- Radial
- Brachial

- Carotid

e. Demonstrate a pulse measurement, using the left Radial pulse point.
f. State the normal range of adult human pulse rate.
g. Name the drug categories that usually cause elevated pulse rate.
h. Name the drug categories that usually cause lowered pulse rate.

8. Define "Blood Pressure".

a. How often does a person's blood pressure change?
b. When does the blood pressure reach its highest value?
c. When does the blood pressure reach its lowest value?
d. Name the two medical instruments that are used to measure blood pressure.
e. Name the sounds that we hear through the stethoscope when we make a blood pressure measurement.
f. What does this "Hg" mean?
g. In what units is blood pressure measured?
h. Suppose that, at some particular instant, a person has a blood pressure of 120 mmHg. What does that "120 mmHg" mean?
i. Name the types of drugs that usually cause a lowered blood pressure.
j. Name the types of drugs that elevate blood pressure.
k. State the meaning of each of the listed terms.

- Systolic
- Diastolic
- Bradycardia
- Tachycardia
- Hypertension
- Hypotension

l. State the normal range of Systolic blood pressure.
m. State the normal range of Diastolic blood pressure.
n. Demonstrate the measurement of blood pressure.

C. Physiology

1. Define "Physiology".

2. What is the expression we use to remember the names of the ten major body systems?

a. What is **M** for?
b. What is **U** for?
c. What is the first **R** for?
d. What is **D** for?
e. What is **E** for?
f. What is the second **R** for?
g. What is the **S** for?
h. What is **I** for?
i. What is **N** for?
j. What is **C** for?

3. State the word that means "dynamic balance involving levels of salts, water, sugars and other materials in the body's fluids".

4. Which artery carries blood from the heart to the lungs?

   a. What is unique about the Pulmonary Artery, compared to all other arteries?
   b. What are the Pulmonary Veins?
   c. What is unique about the Pulmonary Veins?

5. Name the various types of nerves.

   a. Sensory Nerves, carry messages to the brain.
   b. Motor Nerves, carry messages from the brain.
   c. Voluntary Nerves are motor nerves that carry messages to the muscles that we consciously control.
   d. Autonomic Nerves are motor nerves that carry messages to the muscles and organs we do not consciously control.
   e. Sympathetic Nerves are autonomic nerves that carry messages commanding the body to react to fear, stress, excitement, etc.
   f. Parasympathetic Nerves are Autonomic Nerves that carry messages to produce relaxed and tranquil activities.

6. Define each of the listed terms.

   a. Neuron
   b. Synapse
   c. Neurotransmitter
   d. Axon
   e. Dendrite

REVIEW OF THE DRE SCHOOL

Test Your Knowledge

The Final Written Examination for this School will take place during Session XXX. This is an opportunity for you to test your knowledge prior to the exam, to verify that you are ready for it. The test that appears on the following pages is similar to the final exam in terms of its content and structure, although it does not (of course) contain the same questions. Take this sample test, and compare your answers with the answer key that appears on the pages following the test.

A SELF-TEST FOR REVIEW AND STUDY

Circle the letters corresponding to the correct answers. Note that some questions have **more than one** correct answer.

1. Suppose you examine a suspect that you know is under the combined influence of Demerol and Chlorpromazine. Which of the following would you not expect to find in that suspect? (Circle all that you wouldn't expect to see.)

   A. Tachycardia is present
   B. Horizontal Gaze Nystagmus is present
   C. Hypotension is present
   D. Mydriasis is present
   E. Lack of Convergence is present

2. The Autonomic Nervous System has sympathetic nerves and nerves.

   A. parasympathetic
   B. metasympathetic
   C. postsympathetic
   D. mesosympathetic
   E. pilosympathetic

3. Suppose you examine a suspect that you know is under the combined influence of Ketamine and Methamphetamine, and you observe that he or she exhibits Horizontal Gaze Nystagmus. This is an example of ....

   A. A Synergistic Effect
   B. An Antagonistic Effect
   C. The Null Effect
   D. An Overlapping Effect
   E. An Additive Effect

4. The technical term meaning "constricted pupils" is ....

   A. Mydriasis
   B. Occulosis
   C. Miosis
   D. Bruxism
   E. Ptosis

5. Chloral Hydrate is an example of ....

   A. a Non-Barbiturate
   B. an Anti-Psychotic Tranquilizer
   C. an Anti-Depressant

D. a Barbiturate
E. an Anti-Anxiety Tranquilizer

6. **Dilaudid** is an example of ....

A. a Synthetic Opiate
B. an Analog of Phencyclidine
C. a Natural Alkaloid of Opium
D. an Opium Derivative
E. a non-Amphetamine-based Stimulant

7. Which of the following ordinarily will cause Horizontal Gaze Nystagmus? (Circle all that usually cause nystagmus.)

A. Methamphetamine
B. Valium
C. The combination of Cocaine and Xanax
D. The combination of Cannabis and LSD
E. The combination of Heroin and Dilaudid

8. **Ritalin** is an example of ....

A. a CNS Stimulant
B. a Narcotic Analgesic
C. an Hallucinogen
D. a CNS Depressant
E. an Analog of Phencyclidine

9. Suppose you examine a suspect that you know is under the combined influence of Heroin and PCP, and you observe that he or she exhibits **miosis**. This is most likely due to ....

A. The "Downside" of Heroin
B. An Overlapping Effect between the two drugs
C. An Antagonistic Effect between the two drugs
D. An Additive Effect between the two drugs
E. The "Downside" of PCP

10. Which of the following usually will be true in a subject who is under the influence of an Hallucinogen? (Circle all that usually will be true.)

A. Pupils will be constricted
B. Body temperature will be elevated
C. Eyes will be unable to converge
D. Blood pressure will be elevated
E. Horizontal Gaze Nystagmus will be present

11. Which of the following is not classified as an Hallucinogen? (Circle all that **are not** Hallucinogens.)

A. ETOH
B. DOM
C. MDMA
D. MPPP
E. THC

12. Which of the following ordinarily will leave body temperature within the normal range? (Circle all that usually don't affect body temperature.)

A. CNS Stimulants
B. Dissociative Anesthetics
C. Cannabis
D. CNS Depressants
E. All of the above usually do affect body temperature

13. Suppose you examine a suspect that you know is under the combined influence of Percodan and Cannabis, and you find that the suspect's pulse rate is 74 bpm. This is most likely due to ....

A. An Additive Effect between the two drugs
B. The "Downside" of Cannabis
C. An Overlapping Effect between the two drugs
D. An Antagonistic Effect between the two drugs
E. The "Downside" of Percodan

14. How many distinct, validated clues have been established for the Romberg Balance test?

A. Eight
B. Six
C. Four
D. Three
E. There are **no validated** clues for that test.

15. A person under the combined influence of Ritalin and LSD usually will have above normal blood pressure. This is an example of ....

A. An Overlapping Effect
B. A Synergistic Effect
C. The Null Effect
D. An Additive Effect
E. An Antagonistic Effect

16. The gap between two nerve cells is called the ....

A. Vesicle
B. Neuron
C. Synapse
D. Dendrite
E. Axon

17. **"Ptosis"** most nearly means ....

A. Dilated pupils
B. Grinding the teeth
C. Constricted pupils
D. Droopy eyelids
E. Goose bumps

18. How many distinct, validated clues have been established for the Walk-and-Turn test?

A. Eight
B. Six
C. Four
D. Three
E. There are **no validated** clues for that test.

19. Which of the following are not subcategories of Inhalants? (Circle all that are not proper names for Inhalant Subcategories.)

A. Fluorocarbons
B. Anesthetic Gases
C. Aerosols
D. Volatile Solvents
E. Propellants

20. **Phencyclidine** is best described as ....

A. parasympathomimetic
B. an anti-depressant
C. a cellular stimulant
D. psychotophobic
E. a dissociative anesthetic

21. Which of the following usually **will not cause** the pupils to dilate? (Circle all that usually do not cause dilation.)

A. MDMA
B. Methaqualone
C. Desoxyn
D. Peyote
E. Ketamine

22. Which subcategory or subcategories of Inhalants usually cause blood pressure to **be below normal**? (Circle all that usually cause below normal blood pressure.)

A. Anesthetic Gases
B. Propellants
C. Volatile Solvents
D. Aerosols
E. Fluorocarbons

23. Which of the following are **Natural Alkaloids** of opium? (Circle all that are Natural Alkaloids.)

A. Lortab
B. Dilaudid
C. Codeine
D. Darvon
E. Hycodan

24. **"Crank"** is a street name for ....

A. Heroin
B. Cocaine
C. PCP
D. Methamphetamine
E. LSD

25. Which of the following are **not validated clues** for the One Leg Stand test? (Circle all that aren't validated clues.)

A. Hopping
B. Raising the arms
C. Putting the foot down
D. Failing to count out loud
E. Swaying

26. Which of the following would be considered **sympathomimetic** drugs? (Circle all that are sympathomimetic.)

A. MDMA
B. Dexedrine
C. Xanax
D. Oxycontin
E. Desoxyn

27. Suppose you examine a suspect, and you observe **all** of the following: Horizontal Gaze Nystagmus is present, with an onset of approximately 30 degrees; BAC is 0.00; eyes are unable to converge; pupil size is 5.5 mm in near-total darkness and 3.5 mm in direct light; pupil reaction to light is within normal; pulse rate is 100 bpm; blood pressure is 148/96; body temperature is 99.8 degrees F. In your opinion, this suspect is under the influence of ....

A. a combination of a CNS Depressant and a CNS Stimulant
B. a CNS Depressant alone
C. a Dissociative Anesthetic alone
D. a combination of a Dissociative Anesthetic and a CNS Stimulant
E. a combination of a CNS Depressant and Cannabis

28. The only artery that carries **de-oxygenated** blood is the _____ artery.

A. Carotid
B. Brachial
C. Pulmonary
D. Radial
E. Coronal

29. Suppose a subject is under the influence of Hycodan and nothing else. Indicate whether each of the following will be true or false:

A. T F Horizontal Gaze Nystagmus will not be present
B. T F Pupils will be constricted
C. T F Bradycardia will be present
D. T F Eyes will be able to converge
E. T F Hypotension will be present

30. **"Bruxism"** most nearly means ....

A. Dilated pupils
B. Grinding the teeth
C. Constricted pupils
D. Droopy eyelids
E. Goose bumps

31. Suppose a suspect is under the influence of a combination of Marijuana and Cocaine, but nothing else. Indicate whether each of the following will be true or false:

A. T F Pulse rate will be elevated
B. T F Pupils will be dilated
C. T F Horizontal Gaze Nystagmus will be present
D. T F Eyes will be able to converge
E. T F Blood pressure will be elevated

32. How many distinct, validated clues have been established for the Finger-to-Nose test?

A. Eight
B. Six
C. Four
D. Three
E. There are **no validated** clues for this test.

33. The drug_____ is an example of an Anti-Anxiety Tranquilizer. (Circle all that are Anti-Anxiety Tranquilizers.)

A. Librium
B. Diazapam
C. Amobarbital
D. Chloral Hydrate
E. Xanax

ANSWER KEY FOR THE SELF-TEST

1. Correct answers are A and D.

   Demerol is a Narcotic Analgesic, Chlorpromazine is a CNS Depressant. The combination should **not produce** elevated heart rate (Tachycardia) nor dilated pupils (Mydriasis). But Horizontal Gaze Nystagmus and Lack of Convergence should be present, due to the Depressant, Chlorpromazine. And, lowered blood pressure (Hypotension) should be present as an Additive Effect of both drugs.

2. Correct answer is A, **parasympathetic**.

3. Correct answer is D, **Overlapping**.

   Ketamine is an Analog of PCP, a drug that usually does cause Horizontal Gaze Nystagmus. Methamphetamine is a CNS Stimulant, a type of drug that doesn't affect nystagmus. This is a case of **action plus no action equals action**, i.e., an Overlapping Effect.

4. Correct answer is C, **Miosis**.

5. Correct answer is A, **Non-Barbiturate**.

6. Correct answer is D, **Opiate Derivative**.

7. Correct answers are B and C.

   Valium is a CNS Depressant, which of course causes nystagmus. The combination of Cocaine and Xanax gives us a Stimulant and a Depressant (Xanax), which causes Nystagmus via an Overlapping Effect. None of the other drugs mentioned cause Nystagmus: Methamphetamine is a Stimulant; LSD is an Hallucinogen; Heroin and Dilaudid are Narcotics; Cannabis, of course, is its own category.

8. Correct answer is A, **CNS Stimulant**.

9. Correct answer is B, **Overlapping**.

   Heroin, a Narcotic, causes constriction of the pupils (Miosis); PCP does not affect pupil size. This is another case of **action plus no action equals action**.

10. Correct answers are B and D.

    Hallucinogens are **sympathomimetic** drugs, and therefore usually elevate the vital signs. But they have no affect on either Nystagmus or Lack of Convergence. And, instead of constricting the pupils, Hallucinogens usually cause pupils to dilate.

11. Correct answers are A, D and E.

ETOH is the chemical name for Ethyl Alcohol, the common beverage form of alcohol that remains the most commonly-abused drug. **MPPP** is a synthetic opiate. **THC** is the primary active ingredient in Cannabis. But "MDMA" (also known as "Ecstasy") and "DOM" (also known as "STP") **are** Hallucinogens.

12. Correct answers are C and D, **Cannabis and Depressants.**

13. Correct answer is D, **Antagonistic.**

A pulse rate of 74 bpm is within the normal range. Percodan, a Narcotic Analgesic, usually lowers the pulse, while Cannabis usually elevates the pulse. The Antagonistic Effect of the two drugs has put this suspect's pulse into a precarious, and probably temporary, state of balance.

14. Correct answer is E, **no validated clues.**

It is important to understand that, when we say there are no validated clues for Romberg, that does **not mean** that the test is invalid. It simply means that we do not have the research data to attest that specific clues on that test are statistically reliable indicators of impairment. Those kinds of research data, at the present time, are available only for Horizontal Gaze Nystagmus, Walk and Turn and One Leg Stand.

15. Correct answer is D, **Additive.**

Ritalin (a Stimulant) and LSD (an Hallucinogen) both usually elevate blood pressure.

16. Correct answer is C, **Synapse.**

17. Correct answer is D, **Droopy Eyelids.**

18. Correct answer is A, **Eight.**

Of the eight **validated** clues for Walk and Turn, two may be observed during the Instructions Stage of the test. They are can't keep balance (which means the suspect breaks away from the heel-to-toe stance) and starts too soon. The other six clues pertain to the Walking Stage of the test. They include:

- misses heel-to-toe
- raises arms
- steps off line
- stops walking
- turns improperly
- takes the wrong number of steps

Although these eight are the only validated clues for Walk and Turn, they aren't the only things that might be observed that could serve as evidence of impairment. All of your observations of the suspect are important.

19. Correct answers are A and E, **Fluorocarbons and Propellants.**

The only proper names for subcategories of Inhalants are Volatile Solvents, Aerosols and Anesthetic Gases.

20. Correct answer is E, **dissociative anesthetic**.

21. Correct answer is E, **Ketamine**.

Ketamine is an analog of PCP, a drug that doesn't affect pupil size. MDMA and Peyote are Hallucinogens, and Desoxyn is a CNS Stimulant; all of those dilate pupils. Methaqualone is a very special CNS Depressant; unlike almost all other Depressants, Methaqualone does affect pupil size (by dilating the pupils).

22. Correct answer is A, **Anesthetic Gases**.

Volatile Solvents and Aerosols usually produce above-normal blood pressure. "Fluorocarbons" and "Propellants" are, of course, not proper names for subcategories of Inhalants.

23. Correct answers are C and D, **Codeine and Darvon**.

Lortab, Dilaudid and Hycodan are all **opium derivatives**. Dilaudid derives from Morphine, and Hycodan and Lortab from Codeine.

24. Correct answer is D, **Methamphetamine**.

25. Correct answer is D, **Failing to Count Out Loud**.

Hopping, Raising the Arms, Putting the Foot Down and Swaying are the four (and only four) **validated** clues of impairment for One Leg Stand.

26. Correct answers are A, B and E: **MDMA, Dexedrine and Desoxyn**.

Dexedrine and Desoxyn are members of the Amphetamine family of CNS Stimulants. MDMA is a "Psychedelic Amphetamine" belonging to the Hallucinogens. CNS Stimulants and Hallucinogens are the two categories that make up the **sympathomimetic** drugs. That means they simulate the responses that the body makes to messages conveyed along the **sympathetic** nerves, i.e., elevated vital signs, dilated pupils, etc. Three other categories, namely the Inhalants, Phencyclidine and Cannabis have **some** sympathomimetic characteristics, but they are not considered to be fully sympathomimetic, and not to the degree of the CNS Stimulants and Hallucinogens. Xanax and Oxycontin aren't even close to being sympathomimetic. Xanax (a Depressant) and Oxycontin (a Narcotic) are better described as wholly or partially **parasympathomimetic**.

27. Correct answer is C, **a Dissociative Anesthetic**.

Dissociative Anesthetics, by themselves, can account for all of the observations listed. Dissociative Anesthetics cause Nystagmus, and Lack of Convergence; they do not affect

pupil size, so the pupils remain within the normal range; they do not affect the reaction of the pupils to light; they usually elevate all three vital signs.

A Depressant, by itself, could not account for the elevated vitals, and usually would slow the pupils' reaction to light.

If we had a combination of a Depressant and a Stimulant, we'd expect to see the pupils dilated beyond the normal range (due to an Overlapping Effect), and we'd expect to see the reaction of the pupils slowed (due to an Additive Effect). Also, although it is possible that the vital signs could all be elevated with a combination of Depressant and Stimulant, we'd probably expect to see some "moderation" of the vitals due to an Antagonistic Effect.

If we had a combination of a Dissociative Anesthetic and a Stimulant, we could expect to see pupil dilation and some slowing of the reaction to light, due to Overlapping Effects.

If we had a combination of a Dissociative Anesthetic and a Stimulant, we could expect to see the temperature within the normal range, since neither of those drugs temperature.

28. Correct answer is C, **Pulmonary**.

29. Correct answers are:

(A) True: **no nystagmus** will be present
(B) True: we will see miosis, or **constricted pupils**
(C) True: we will find a slow pulse, or **Bradycardia**
(D) True: we won't see a Lack of Convergence, so the eyes **will be able to converge**
(E) True: we will find a lowered blood pressure, or **Hypotension**

Hycodan is a Narcotic Analgesic, and these observations will be consistent with impairment by Narcotics.

30. Correct answer is B, **Grinding the Teeth**

31. Correct answers are:

(A) True: An Additive Effect will **elevate the pulse** for this combo
(B) True: **pupils will dilate** due to an Overlapping or Additive Effect
(C) False: neither drug causes Nystagmus, so the Null Effect will also **cause no nystagmus**
(D) False: Marijuana causes Lack of Convergence, so the Overlapping Effect means the **eyes won't converge**
(E) True: An Additive Effect will **elevate the blood pressure**

32. Correct answer is E, **no validated clues**

33. Correct answer are A, B and E: **Librium, Diazapam** and **Xanax**

DRUG EVALUATION AND CLASSIFICATION TRAINING PROGRAM
THE DRUG RECOGNITION EXPERT SCHOOL

SEPTEMBER 2009 EDITION

U.S. DEPARTMENT OF TRANSPORTATION
Transportation Safety Institute
National Highway Traffic Safety Administration

HS172A R9/09

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SESSION XXIV

DRUG COMBINATIONS

SESSION XXIV DRUG COMBINATIONS

Upon successfully completing this session the student will be able to:

Explain the prevalence of polydrug use among drug impaired subjects and identify common combinations of drugs abused by those subjects.

Describe the possible effects that combinations of drugs can produce on the major indicators of drug impairment.

Define the terms "Null", "Overlapping", "Additive" and "Antagonistic" as they relate to polydrug effects.

Identify the specific effects that are most likely to be observed in persons under the influence of particular drug combinations.

A. The Prevalence of Polydrug Use

It is not uncommon for people to ingest more than one drug at a atime. Often, it is an attempt to experience an enhanced or unique 'high' – e.g. cannabis with cocaine. Other times, the mixing of drugs might be quite inadvertent- e.g., having a coup0le of glasses of wine while taking a prescription tranquilizer. In fact, the most familiar drug of all, alcohol, apparently is an especially popular "mixer" with other drugs. Alcohol routinely shows up in combination with virtually everything else, and often DREs encounter subject's who have consumed alcohol along with two or more other drugs.

Cannabis is another popular "mixer", and frequently shows up in combination with Cocaine, PCP and various other drugs. The "speedball", a combination of Cocaine and Heroin, remains popular, despite the well-publicized hazards of this particular mixture.

Polydrug use among drivers is quite common. In the 2008 British Columbia Roadside Survey, 12.4% of drivers who tested positive for drugs had taken more than one substance; a further 16.8% had consumed alcohol as well as drugs.

Data collected from DREs from throughout the U.S. and entered into the national DRE tracking database indicates that approximately 25% of all cases where toxicology was conducted resulted in two or more drug categories detected.

In Canada, among over 3,500 evaluations conducted by Canadian DREs, 37% had been using more than one type of substance.

Polydrug use is common among drivers who die in crashes as well. In a recent analysis of toxicology results from over 13,000 drivers who died on Canadian roads between 2000 and 2006, 32.7% tested positive for drugs. Of these drug-positive cases, 35% had used more than one drug; 43% were positive for a drug and alcohol.

DREs should not be surprised to encounter virtually any possible combination of drugs. DREs may find more polydrug users than single drug users. This means that if the DRE is to do a good job at interpreting the results of evaluations, they must understand the mechanisms of drug interaction.

B. Possible Effects of Drug Combinations

When a person ingests two or more different drugs, each drug may work independently. What the body will exhibit, however, is a combination of those effects.

Four types of combined effects can, and generally will, occur when two or more drug categories are used together.

1. The Null Effect

The simplest way to explain the Null Effect is to say that it is the same thing as "zero plus zero equals zero". Some specific examples may help clarify this.

One of the first things a DRE does when examining a subject is to check for HGN. We know that many drugs do not affect nystagmus. For instance, if we examined a subject that was under the influence of a CNS Stimulant and nothing else, we would not expect to observe nystagmus. Likewise, if we examined someone who was under the influence of Cannabis and nothing else, no nystagmus would be present. What do you expect we would see when we check for nystagmus in the eyes of someone who has used a CNS Stimulant and Cannabis in combination? Since neither drug independently has any affect on nystagmus, the combination also would not affect nystagmus: nothing plus nothing equals nothing.

Another example of the Null Effect would be found when we check the pupil size of a subject who was under the influence of a Dissociative Anesthetic and a CNS Depressant. Dissociative Anesthetics generally do not affect pupil size; neither does a CNS Depressant. The combination of these drugs will not affect the size of the pupils.

The Null Effect, then, means simply this: If neither drug affects some particular indicator of impairment, their combination also will not affect that indicator.

2. The Overlapping Effect

The Overlapping Effect comes into play when one drug does affect some indicator of impairment and the other drug has no effect whatsoever on that indicator. This is a case of "something plus nothing equals something".

Consider once again the example of a combination of a CNS Stimulant and Cannabis. We've already seen that this combination produces a Null Effect as far as nystagmus is concerned. But what about when we examine the subject's eyes for a Lack of Convergence? Cannabis does produce a Lack of Convergence, a CNS Stimulant doesn't. Therefore, the subject who is under the combined influence of Cannabis and a CNS Stimulant will exhibit a Lack of Convergence due to the independent effect of the Cannabis. This is an instance where the effects of the two drugs "overlap".

Another example of an Overlapping Effect would be the pupil size of a person who has taken a Dissociative Anesthetic in combination with a Narcotic Analgesic. A Dissociative Anesthetic doesn't have any effect on pupil size. Narcotic Analgesics cause constricted pupils. Therefore, the combination would also cause the pupils to constrict.

The Overlapping Effect boils down to: **Action plus no action equals action.**

3. The Additive Effect

The Additive Effect occurs when two drug categories both affect some indicator of impairment in the same way. In combination, these effects reinforce each other.

Once again, think of the combination of a CNS Stimulant and Cannabis. What will we find when we check this subject's pulse rate? Cannabis produces Tachycardia, so does a CNS

Stimulant. When the two drugs are taken together, we can expect to observe tachycardia because the drugs reinforce each other for that particular indicator of impairment. That is, the effect is additive.

The simplest way to express the Additive Effect is to say "something plus the same something produces that same something". One thing we can't say for certain is how much the two drugs will reinforce each other. Sometimes the reinforced effect is as simple as "one plus one equals two". But at other times, the combined effect is much greater than the individual contributions of the two drugs, e.g., on the order of "one plus one equals five". We use the term Additive Effect to cover all situations where two drugs impact on some indicator in the same way.

You have already noticed that we have used one particular drug combination, Cannabis and a CNS Stimulant, to furnish examples of all three kinds of effects covered so far. This drives home the important point that drug interactions are often complex, and involve a number of different mechanisms operating at the same time.

4. The Antagonistic Effect

The Antagonistic Effect occurs when two drug categories affect some indicator in exactly the opposite ways. This is a case of "action plus opposing action". For example, suppose we check the blood pressure of someone who is under the combined influence of a Narcotic Analgesic and a CNS Stimulant; what are we likely to find?

The fact is, we're likely to find just about anything at all. The Narcotic Analgesic, independently, tends to produce hypotension, the CNS Stimulant, independently, usually produces hypertension. The two drugs may offset each other, as far as blood pressure is concerned, and the subject's blood pressure may wind up normal. On the other hand, if the CNS Stimulant effects are starting to wear off and the Narcotic Analgesic is still active in the subject's body, we might find the blood pressure down. Conversely, if the CNS Stimulant is active but the Narcotic Analgesic effects have not yet reached their peak, we might find the blood pressure up. When we deal with an Antagonistic Effect, we simply can't predict what the outcome will be.

C. Identifying Expected Indicators of Specific Combinations

On the next page, you will find the Cumulative Drug Symptomatology Matrix. This lists all of the expected effects of each drug category on the major indicators of impairment, and summarizes the general indicators, time parameters and methods of ingestion for each category. This matrix will be useful in identifying how specific combinations of drugs will interact to produce a variety of Null, Overlapping, Additive and Antagonistic Effects.

D. Specific Examples of Drug Combinations: An Exercise for the Student

On the final five pages of this session, you will find examples of specific drug combinations. The expected results for the first two of these combinations (Cannabis and Stimulants, and Dissociative Anesthetic and Narcotic Analgesic) have been worked out for you. Study those examples, then complete the work sheets for the three remaining combinations.

CANNABIS AND CNS STIMULANT IN COMBINATION

IMPAIRMENT INDICATOR	EFECT DUE TO CANNABIS	EFFECT DUE TO CNS STIMULANT	TYPE OF COMBINED EFFECT	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS	NO	NO	NULL	NO
VERTICAL GAZE NHYSTAGMUS	NO	NO	NULL	NO
LACK OF CONV.	YES	NO	OVERLAPPING	YES
PUPIL SIZE	DILATED OR NORMAL	DILATED	OVERLAPPING OR ADDITIVE	DILATED
REACTION TO LIGHT	NORMAL	SLOW	OVERLAPPING	SLOW
PULSE RATE	UP	UP	ADDITIVE	UP
BLOOD PRESSURE	UP	UP	ADDITIVE	UP
BODY TEMP	NORMAL	UP	OVERLAPPING	UP
MUSCLE TONE	NORMAL	RIGID	OVERLAPPING	RIGID

DISSOCIATIVE ANESTHETIC AND NARCOTIC ANALGESIC IN COMBINATION

IMPAIRMENT INDICATOR	EFECT DUE TO PHENCYCLIDINE	EFFECT DUE TO HEROIN	TYPE OF COMBINED EFFECT	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS	YES	NO	OVERLAPPING	PRESENT
VERTICAL GAZE NHYSTAGMUS	YES	NO	OVERLAPPING	PRESENT
LACK OF CONV.	YES	NO	OVERLAPPING	PRESENT
PUPIL SIZE	NORMAL	CONSTRICTED	OVERLAPPING	CONSTRICTED
REACTION TO LIGHT	NORMAL	LITTLE OR NONE VISIBLE	OVERLAPPING	LITTLE OR NONE VISIBLE
PULSE RATE	UP	DOWN	ANTAGONISTIC	DOWN/NORMAL/ UP
BLOOD PRESSURE	UP	DOWN	ANTAGONISTIC	DOWN/NORMAL/ UP
BODY TEMP	UP	DOWN	ANTAGONISTIC	DOWN/NORMAL/ UP
MUSCLE TONE	RIGID	FLACCID	ANTAGONISTIC	NORMAL/RIGID/ UP

WORKSHEET #1
KETAMINE AND LSD

IMPAIRMENT INDICATOR	EFECT DUE TO D/A	EFFECT DUE TO Hallucinogen (Hall)	TYPE OF COMBINED EFFECT*	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS				
VERTICAL GAZE NHYSTAGMUS				
LACK OF CONV.				
PUPIL SIZE				
REACTION TO LIGHT				
PULSE RATE				
BLOOD PRESSURE				
BODY TEMP				
MUSCLE TONE				

* Null; Overlapping; Additive; or, Antagonistic

WORKSHEET #2
CANNABIS AND CNS DEPRESSANT

IMPAIRMENT INDICATOR	EFECT DUE TO CANNABIS	EFFECT DUE TO DEPRESSANT	TYPE OF COMBINED EFFECT*	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS				
VERTICAL GAZE NHYSTAGMUS				
LACK OF CONV.				
PUPIL SIZE				
REACTION TO LIGHT				
PULSE RATE				
BLOOD PRESSURE				
BODY TEMP				
MUSCLE TONE				

* Null; Overlapping; Additive; or, Antagonistic

WORKSHEET #3
CNS STIMULANT AND CNS DEPRESSANT

IMPAIRMENT INDICATOR	EFECT DUE TO CNS STIMULANT	EFFECT DUE TO DEPRESSANT	TYPE OF COMBINED EFFECT*	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS				
VERTICAL GAZE NHYSTAGMUS				
LACK OF CONV.				
PUPIL SIZE				
REACTION TO LIGHT				
PULSE RATE				
BLOOD PRESSURE				
BODY TEMP				
MUSCLE TONE				

* Null; Overlapping; Additive; or, Antagonistic

SESSION XXV

PRACTICE: TEST INTERPRETATION

SESSION XXV PRACTICE: TEST INTERPRETATION

Upon successfully completing this session the student will be able to:

Analyze the results of completed drug influence evaluations and identify the category or categories of drugs affecting the individual examined.

Describe the basis for the drug category identification.

This session is similar to sessions XV and XVIII. You will once again review some drug influence evaluation "exemplars", consider all of the "evidence" they provide, and determine what categories of drugs -- if any -- are present. Now that we have covered all seven categories, you can expect to find any or all of the categories in these exemplars. Some exemplars might involve combinations of drug categories. Pay close attention to all of the information in these exemplars when making your determinations.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. M. FOURNIER | DRE NO.: 16078 | ROLLING LOG NO.:

RECORDER/ WITNESS: CST. C.D. JONES | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 25-A-1

ARRESTEE'S NAME (LAST, FIRST, M): ALLEN, THOMAS E. | DOB (YY-MM-DD): 78-03-19 | AGE: 30 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): CST. D. LEVESQUE

DATE EXAMINED/TIME/LOCATION: FEB. 03/09 - 2030HRS | BREATH RESULTS: ☐ Refused Results N/A Instrument # N/A | CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST D. LEVESQUE

What have you eaten today? "COOKIES" — When? "A FEW HRS AGO"

What have you been drinking? How Much? COFFEE 2 cups — Time of last drink? N/A

Time now? "NO IDEA" | When did you last sleep? How long? "DON'T REMEMBER"

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical disabilities? ☐ Yes ☒ No

Are you under the care of a doctor/dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: COOPERATIVE SLOW, DISINTERESTED

COORDINATION: DISORIENTED, UNSTEADY

SPEECH: SLOW, THICK

BREATH: STALE ODOUR

FACE: NOTHING NOTED

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☐ Reddened Conjunctiva ☒ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 112 / 2040	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 114 / 2056	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 112 / 2110	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☒ No

Convergence — Right Eye / Left Eye

ONE LEG STAND: 27/30 (15) — 28/30 (6, 27)

ROMBERG BALANCE: EYELID TREMORS 2" 2" 2" 2" — CIRCULAR SWAY

WALK AND TURN TEST — LOWER BODY TREMORS

Cannot keep balance: √√

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	√√√	√√√
Actual Steps Taken	9	9

√√ Sways while balancing

√ Uses arms to balance

Ø Hopping

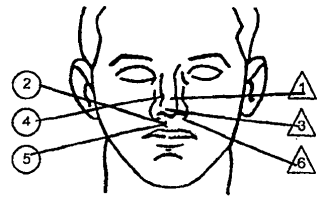
√ Puts foot down

INTERNAL CLOCK: 43 Estimated as 30 sec. — Describe Turn: AS INSTRUCTED, BUT SLOW

Cannot do Test (explain): N/A

Type of Footwear: SNEAKERS

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	5.5	7.0	5.0
Right Eye	5.5	7.0	5.0

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: BROWNISH, GREEN COATING ON TONGUE

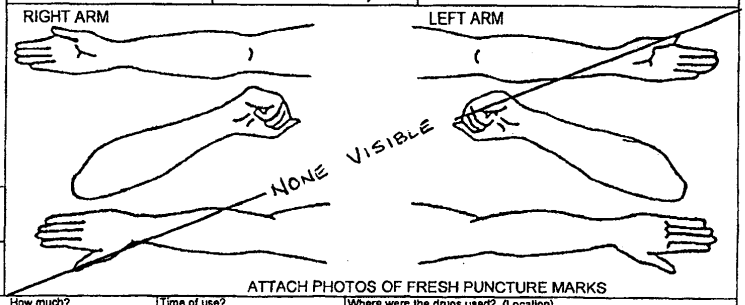
REACTION TO LIGHT: NORMAL

BLOOD PRESSURE: 140 / 100 TEMP: 37.0 °

MUSCLE TONE: ☒ Near Normal ☐ Flaccid ☐ Rigid

Comments:

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? "NOTHING" | How much? N/A | Time of use? NO ANSWER | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST: FEB 03/09 - 2010 HRS | TIME DRE NOTIFIED: 2020 HRS | EVAL START TIME: 2030HRS | TIME COMPLETED: 2140HRS

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☒ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Breath Testing Room, Surette Municipale, Ville de Quebec

(2) **Witnesses:** Arresting officer Constable C.D. Jones

(3) **Source:** The writer was contacted by radio and advised to contact Cst Jones for a drug evaluation. Cst Jones advised that he stopped Allen after observing him exit the highway at a high rate of speed then fail to stop at a stop sign. Allen seemed unconcerned about his driving and told Constable Jones that he was "just having some fun". After performing poorly on the SFSTs he was arrested for impaired driving.

(4) **First Observations Of Subject:** Allen was first observed in the Breath Testing Room. He was moving and speaking slowly, appeared disinterested but was cooperative. He also appeared disoriented and unsteady, there was a stale odour from his breath and his eyes appeared bloodshot.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Allen had a circular sway of 2", estimated 30 seconds in 43 seconds, and also exhibited eyelid tremors. **Walk & Turn Test** – Allen could not keep his balance twice during the instruction stage. During the first 9 steps, he used his arms for balance 3 times. He made his turn slowly and during his second 9 steps, he used his arms for balance 3 times. Throughout the entire test he exhibited lower body tremors. **One Leg Stand Test** – While balancing on his left leg, Allen put his foot down on his count of 15, swayed while balancing, and used arms for balance. While balancing on his right leg, Allen put his foot down on his counts of 6 & 28, swayed while balancing, and used arms for balance. **Finger To Nose Test** – Allen missed the tip of his nose on attempts 1, 2, 4, 5, & 6.

(6) **Clinical Signs:** Allen's pupils were dilated in room and direct light, pulse rate was up, blood pressure was up, body temperature was normal, and muscle tone was normal.

(7) **Statements:** Allen indicated he had not taken any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Melanie Fournier, a certified Drug Recognition Expert, that:

_____.

(10) **Miscellaneous:** Allen provided a urine sample.

DRUG INFLUENCE EVALUATION

EVALUATOR: CST. C. MCLEOD | DRE NO.: 10909 | ROLLING LOG NO.:

RECORDER/ WITNESS: CST. J. ERMEL

CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 25-A-2

ARRESTEE'S NAME (LAST, FIRST, MI)	DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
BROWN, Jack	71-06-04	31	M	W	CST. John Ermel

DATE EXAMINED/TIME/LOCATION: 05 JAN09 - 2210 DETACH.

BREATH RESULTS: ☐ Refused Results .00% Instrument # N/A

CHEMICAL TEST: ☐ Refused ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: CST. COLE

What have you eaten today? When? NO RESPONSE

What have you been drinking? How Much? NO RESPONSE — Time of last drink? N/A

Time now? NO RESPONSE — When did you last sleep? How long? "EAT? I HAD A HOTDOG"

Are you sick or injured? "NOTHING" ☐ Yes ☐ No

Are you diabetic or epileptic? NO RESPONSE ☐ Yes ☐ No

Do you take insulin? NO RESPONSE ☐ Yes ☐ No

Do you have any physical disabilities? "I DIDN'T DRINK ANYTHING" ☐ Yes ☐ No

Are you under the care of a doctor/dentist? NO RESPONSE ☐ Yes ☐ No

Are you taking any medication or drugs? ANSWERED "NO" VERY SLOW ☐ Yes ☐ No

ATTITUDE: PASSIVE, NON RESPONSIVE

COORDINATION: VERY POOR, STAGGERING

SPEECH: SLOW, REPETITIVE AT TIMES

BREATH: ODOUR OF MARIHUANA

FACE: SWEATY, BLANK STARE

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Normal ☒ Bloodshot ☐ Watering ☐ Reddened Conjunctive

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☒ Yes ☐ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 108 / 2218	Lack of Smooth Pursuit	☒ Yes ☐ No	☒ Yes ☐ No
2. 110 / 2230	Max. Deviation	☒ Yes ☐ No	☒ Yes ☐ No
3. 108 / 2242	Angle of Onset	30°	30°

Vertical Nystagmus? ☒ Yes ☐ No

Convergence — Right Eye / Left Eye

ONE LEG STAND: 28/30 — 26/30

STOPPED TEST

ROMBERG BALANCE (VERY RIGID): 1" 1" 3" 3"

WALK AND TURN TEST: ARMS & LEGS RIGID

Cannot keep balance √√

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	√	Ø
Misses Heel -Toe	ALL	STEPS
Steps off Line	Ø	Ø
Raises Arms	√√√√	√√√
Actual Steps Taken	9	9

☒ Sways while balancing ☒ Uses arms to balance ☐ Hopping ☒ Puts foot down

INTERNAL CLOCK: 55 Estimated as 30 sec.

Describe Turn: DID NOT LEAVE LEAD FOOT STATIONARY

Cannot do Test (explain): N/A

Type of Footwear: RUNNING SHOES

○ Right △ Left — Draw lines to spots touched

HAD TO BE REMINDED TO LOWER ARMS

(RIGID ARMS)

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	5.5	7.5	5.0-7.5
Right Eye	5.5	7.5	5.0-7.5

Rebound Dilation ☒ Yes ☐ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: GREEN MATERIAL IN TEETH

REACTION TO LIGHT: NORMAL

BLOOD PRESSURE: 148 / 102 TEMP: 37.6

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments:

RIGHT ARM / LEFT ARM — NO VISIBLE MARKS

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? NO RESPONSE (BLANK STARE) | How much? | Time of use? NO RESPONSE | Where were the drugs used? (Location) "I'm NOT SAYING"

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
05 JAN09 - 2130HRS	2145	2210	2305

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ ALCOHOL ☐ STIMULANT ☐ DISSOCIATIVE ANESTHETIC ☐ INHALANT ☐ OPERATIONAL
☐ MEDICAL ☐ DEPRESSANT ☐ HALLUCINOGEN ☐ NARCOTIC ANALGESIC ☐ CANNABIS ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Brown; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** The evaluation of the Brown Jack Brown was conducted in the breath room of the R.C.M.P. Deschambault Lake Detachment.

(2) **Witnesses:** Constable John Ermel

(3) **Source:** The writer was advised by Cst.John Ermel that he had placed the Brown under arrest for Impaired Operation after stopping him for speeding along Highway #911. Brown, when approached, was non-responsive. He had a blank stare and was sweating profusely. He performed very poorly on the SFST battery at the side road.

(4) **First Observations of Brown:** Brown was first observed in the breath room of the detachment. He was looking straight ahead with a blank stare. When asked questions he was slow to respond and at times did not respond at all. His speech was slow and repetitive. Brown was perspiring heavily and had an odour of marihuana on his breath. When he stood, he would stagger and nearly fell several times.

(5) **Psychophysical Tests:**

Romberg Balance Test: Brown had an approximately 3" side to side sway and estimated the passage of 30 seconds in 50 seconds. **Walk and Turn Test**: Brown lost his balance during the instructions, stopped walking once, missed heel to toe on every step and raised his arms for balance. **One Leg Stand Test**: While balancing on his left leg, Brown swayed, used arms to balance, and put his foot down on his counts of 16 & 25. While balancing on his right leg, he swayed, used his arms for balance, and put his foot down on his counts of 5, 8, & 12. **Finger to Nose Test**: Brown missed the tip of his nose on each attempt and had to be told to put his arm back to his side after each attempt.

(6) **Clinical Signs:** Brown displayed a lack of smooth pursuit and exhibited distinct and sustained nystagmus at maximum deviation. Brown also exhibited a lack of convergence and had vertical nystagmus. Brown's pulse rate was elevated at 108,110 and 108bpm (normal range 60-90bpm). Brown's blood pressure was elevated at 148/102mmHg (normal range 120-140mmHg / 70-90mmHg). Brown's body temperature was elevated at 37.6°Celsius (normal range 37.0°C +/- .5°C) The pupils were dilated in room light measuring 5.5mm (normal range 2.5mm-5.0mm) and in direct light they were dilated with rebound dilation at 5.0mm-7.5mm.

(7) **Statements:** Brown denied taking any drugs.

(8) **Medical Problems/Treatment:** None.

(9) **Opinion:** It is the opinion of Chad McLeod, a certified Drug Recognition Expert that :

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(10) **Miscellaneous:** Brown provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Molly Smith | DRE NO. 16267 | ROLLING LOG NO. 176

RECORDER/ WITNESS: Garland Carmichael | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE # S-Session 25-B-1

ARRESTEE'S NAME (LAST, FIRST, M): COLE, Adam | DOB (YY-MM-DD): 91-11-01 | AGE: 18 | SEX: M | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Garland CARMICHAEL

DATE EXAMINED/TIME/LOCATION: 2009-12-10 2200 HRP DRE Room-Halifax | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☑ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No Given by: G. Carmichael | What have you eaten today? Two Big Macs When? 6pm | What have you been drinking? How Much? Coke N/A | Time of last drink? —

Time now? About 10pm | When did you last sleep? How long? Last night 6hours | Are you sick or injured? ☐ Yes ☑ No | Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No | Do you have any physical disabilities? ☐ Yes ☑ No | Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☐ Yes ☑ No | ATTITUDE: Cooperative, disinterested | COORDINATION: Poor Barely able to stand

SPEECH: Slurred, mumbling | BREATH: Paint/Chemical odour | FACE: Paint residue on lips and chin (gold)

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft | Eyes: ☐ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☑ Watery | Blindness: ☑ None ☐ L. Eye ☐ R. Eye | Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain) | Nystagmus Present: ☑ Yes ☐ No | Able to follow stimulus: ☑ Yes ☐ No | Eyelids: ☑ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 104 / 2210	Lack of Smooth Pursuit	☑ Yes ☐ No	☑ Yes ☐ No
2. 102 / 2224	Max. Deviation	☑ Yes ☐ No	☑ Yes ☐ No
3. 104 / 2240	Angle of Onset	30°	30°

Vertical Nystagmus? ☐ Yes ☑ No

Convergence: Right Eye ↻ Left Eye ↺

ONE LEG STAND: STOPPED TEST (1 2 R) STOPPED TEST (1 L R)

ROMBERG BALANCE: TEST STOPPED

WALK AND TURN TEST: STOPPED - UNABLE TO STAND

Cannot keep balance: VVV (3)

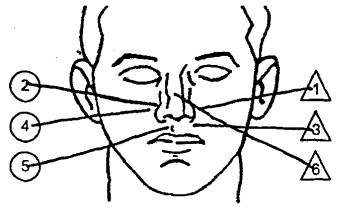
Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking	Ø	Ø
Misses Heel -Toe	Ø	Ø
Steps off Line	Ø	Ø
Raises Arms	Ø	Ø
Actual Steps Taken	0	0

☑ Sways while balancing ☑ Uses arms to balance ☑ Hopping ☑ Puts foot down

INTERNAL CLOCK: N/A Estimated as 30 sec. | Describe Turn: N/A | Cannot do Test (explain): Unable to stand for instructions | Type of Footwear: Running shoes

○ Right △ Left — Draw lines to spots touched



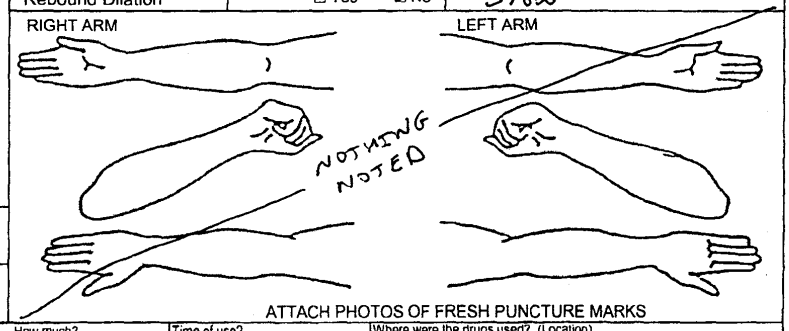
PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	4.0	6.5	3.5
Right Eye	4.0	6.5	3.5

Rebound Dilation: ☐ Yes ☑ No

NASAL AREA: Paint residue on nose

ORAL CAVITY: Odour of paint

REACTION TO LIGHT: Slow



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE: 150 / 100 | TEMP: 37.2 °

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? NO ANSWER | How much? NO ANSWER | Time of use? NO ANSWER | Where were the drugs used? (Location) NO ANSWER

DATE/TIME OF ARREST: 2009-12-10 2110hrs | TIME DRE NOTIFIED: 2125hrs | EVAL START TIME: 2200hrs. | TIME COMPLETED: 2255hrs

MEMBERS SIGNATURE: | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** DRE Room, Halifax Regional Police HQ, Halifax, NS

(2) **Witnesses:** Constable Garland Carmichael

(3) **Source:** The writer was in HQ on an unrelated matter when Constable Garland Carmichael brought in the subject – Adam Cole for a drug evaluation. Carmichael stated that he observed Cole travelling along South Street 30 km/h below the posted 60 km/h speed limit. During the traffic stop, Carmichael noticed that Cole was cooperative but somewhat dazed. There was a smell of fresh paint coming from Cole. Cole performed poorly on the SFSTs. A half empty can of spray paint was located on the back seat of the vehicle along with paint stained rags.

(4) **First Observations of Subject:** The writer first saw Cole when he staggered into the DRE Room. He appeared dazed and oblivious to his surroundings. He had to be seated in a chair for fear he would fall over. He appeared to have gold paint around his nose.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Cole was unable to stand up during the instructions and the test was stopped for safety reasons. **Walk & Turn Test** – Cole lost his balance three times during the instruction stage and the test was stopped for safety reasons. **One Leg Stand Test** – While balancing on his left leg, he swayed, used arms for balance, and put his foot down on his counts of 1 & 2 immediately. The test was stopped for safety reasons. While balancing on his right leg, he swayed, used arms for balance and put his foot down right away at 1 and almost fell over. The test was stopped for safety reasons. **Finger to Nose Test** – Elliott missed the tip of his nose on all six attempts.

(6) **Clinical Signs:** Cole's pulse rate and blood pressure were above the normal range. His reaction to light was slow. He exhibited a lack of smooth pursuit, distinct and sustained nystagmus at maximum deviation, with an onset of nystamus at 30 degees.He had a lack of convergence.

(7) **Statements:** Cole denied taking any drugs or medication.

(8) **Medical Problems/Treatment:** Cole set out that he didn't have any medical problems or disabilities. None were noted during the evaluation.

(9) **Opinion:** It is the opinion of Holly Smith, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Cole provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: Paulena GIODA | DRE NO.: 8479 | ROLLING LOG NO.: 198

RECORDER/ WITNESS: Kim Greener | CRASH: ☑ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 25-B-2

ARRESTEE'S NAME (LAST, FIRST, M): DAVIS, RYAN | DOB (YY-MM-DD): 800514 | AGE: 30 | SEX: m | RACE: W | ARRESTING OFFICER (NAME, SERIAL/REG #): Cst. Kim Greener

DATE EXAMINED/TIME/LOCATION: 2010-05-20 1805hrs | BREATH RESULTS: ☐ Refused Results N/A Instrument # | CHEMICAL TEST: ☐ Refused ☑ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☑ Yes ☐ No — Given by: K. Greener

What have you eaten today? Nothing — When? N/A

What have you been drinking? How Much? Dr. Pepper — Time of last drink? N/A.

Time now? About 7pm | When did you last sleep? How long? Last night 5 hours

Are you sick or injured? ☐ Yes ☑ No

Are you diabetic or epileptic? ☐ Yes ☑ No

Do you take insulin? ☐ Yes ☑ No

Do you have any physical disabilities? ☐ Yes ☑ No

Are you under the care of a doctor/dentist? ☐ Yes ☑ No

Are you taking any medication or drugs? ☑ Yes ☐ No — Methadone

ATTITUDE: Cooperative, Passive

COORDINATION: Unstable, slow, relaxed

SPEECH: Low, Raspy

BREATH: Normal

FACE: Normal

CORRECTIVE LENS: ☑ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☑ Normal ☐ Reddened Conjunctiva ☐ Bloodshot ☐ Watery

Blindness: ☑ None ☐ L. Eye ☐ R. Eye

Tracking: ☑ Equal ☐ Unequal

PUPIL SIZE: ☑ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☑ No

Able to follow stimulus: ☑ Yes ☐ No

Eyelids: ☐ Normal ☑ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 56 / 1817	Lack of Smooth Pursuit	☐ Yes ☑ No	☐ Yes ☑ No
2. 58 / 1827	Max. Deviation	☐ Yes ☑ No	☐ Yes ☑ No
3. 58 / 1847	Angle of Onset	NONE	NONE

Vertical Nystagmus? ☐ Yes ☑ No

Convergence: Right Eye → Left Eye ←

ONE LEG STAND: 14/30 | 16/30

ROMBERG BALANCE: 1" 1" 3" 3"

WALK AND TURN TEST

Cannot keep balance ✓

Starts too soon Ø

	1st Nine	2nd Nine
Stops Walking	✓✓ (3)	✓✓ (2)
Misses Heel -Toe	✓✓ (3)	✓✓ (2)
Steps off Line	✓	Ø
Raises Arms	Constant	Constant
Actual Steps Taken	9	9

☑ Sways while balancing ☑ Uses arms to balance Ø Hopping ☑ Puts foot down

INTERNAL CLOCK: 44 Estimated as 30 sec.

Describe Turn: Slow, deliberate

Cannot do Test (explain): N/A

Type of Footwear: Cowboy Boots

○ Right △ Left — Draw lines to spots touched

Had to be told to put arm to side all 6 times

Very slow

PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	2.0	2.0	2.0
Right Eye	2.0	2.0	2.0

Rebound Dilation: ☐ Yes ☑ No

NASAL AREA: NOTHING NOTED

ORAL CAVITY: NOTHING NOTED

REACTION TO LIGHT: NONE VISIBLE

BLOOD PRESSURE: 110 / 64 | TEMP: 35.8°

MUSCLE TONE: ☐ Near Normal ☑ Flaccid ☐ Rigid

Comments:

RIGHT ARM / LEFT ARM — XXXX — Fresh injection marks

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using? "Just methadone, man" | How much? "The normal" | Time of use? 3pm | Where were the drugs used? (Location) "The clinic"

DATE/TIME OF ARREST: 2010-05-20 1720hrs. | TIME DRE NOTIFIED: 1745 hrs. | EVAL START TIME: 1805 hrs. | TIME COMPLETED: 1856 hrs

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR: ☐ RULE OUT ☐ MEDICAL ☐ ALCOHOL ☐ DEPRESSANT ☐ STIMULANT ☐ HALLUCINOGEN ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC ☐ INHALANT ☐ CANNABIS ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Breath Testing Room – N. Vancouver RCMP Detachment

(2) **Witnesses:** Constable Kim Greener

(3) **Source:** The writer was contacted by radio and advised to contact Constable Kim Greener at the North Van detachment regarding a need for a drug evaluation to be conducted on Ryan Davis. Greener stated that she conducted a traffic stop on Davis who was driving a stolen vehicle. Greener noticed that Davis' speech was slow, slurred, and raspy. His coordination was poor and he was licking his lips repeatedly. His pupils were constricted and he performed poorly on the SFSTs.

(4) **First Observations of Subject:** The writer first observed Davis in the Breath Testing Room. He appeared to be asleep. His eyes were closed, his head kept nodding forward, and his breathing was slow. Davis would respond to questions and seemed otherwise alert, aside from his physical condition. His pupils were constricted and he continuously licked his lips. He moved slowly.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Davis had a 1" front to back and a 3" side to side sway. He estimated 44 seconds to be 30 seconds. **Walk & Turn Test** – Davis lost his balance once during the instruction stage. During the walking stage, he stopped after his 1st step then missed heel to toe on his 2nd step. He stopped on his 4th step then missed heel to toe on his 5th step then stepped off line. He stopped at his 7th step then missed heel to toe on his 8th step. He mad a slow deliberate turn, then stopped after his 2nd step, missed heel to toe on his 3rd step, stopped after his 6th step, then missed heel to toe on his 7th step. **One Leg Stand Test** – While balancing on his left leg, he swayed, used arms for balance, and put his foot down on he counts of 5 & 11. While balancing on his right leg, he swayed, used arms for balance and put his foot down at 3, 9, and 15. **Finger to Nose Test** – Elliott missed the tip of his nose on all six attempts except the 4th attempt.

(6) **Clinical Signs:** Davis' pulse rate, blood pressure, and body temperature were all below the normal range. His pupils were constricted in room light and near total darkness. He had droopy eyelids and there was little to no reaction to light. His muscle tone was flaccid. He had 4 fresh injection marks on the inside of his right forearm.

(7) **Statements:** Davis indicated the only drugs he had taken was his usual dose of methadone.

(8) **Medical Problems/Treatment:** Davis had no reported or noted medical problems.

(9) **Opinion:** It is the opinion of Paulena Gidda, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** Davis provided a urine sample for analysis.

DRUG INFLUENCE EVALUATION

EVALUATOR: SGT. H. OLSON | DRE NO.: 9957 | ROLLING LOG NO.:

RECORDER/ WITNESS: Cst. Len White | CRASH: ☒ None ☐ Fatal ☐ Injury ☐ Property | FILE #: S-Session 25-B-3

ARRESTEE'S NAME (LAST, FIRST, M)	DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)
ELLIOTT, JOAN E.	84-01-16	25	F	W	CST. L. WHITE # 721

DATE EXAMINED/TIME/LOCATION: Oct. 04/09 - 2300hrs

BREATH RESULTS: ☐ Refused — Results: N/A — Instrument #:

CHEMICAL TEST: ☐ Refused — ☒ Urine ☐ Oral fluid ☐ Blood

CHARTER WARNING GIVEN: ☒ Yes ☐ No — Given by: Cst. L. White

What have you eaten today?	When?	What have you been drinking? How Much?		Time of last drink?
NOTHING	N/A	NOTHING	N/A	N/A

Time now?	When did you last sleep? How long?	Are you sick or injured?	Are you diabetic or epileptic?
"Don't know"	"I don't remember"	"Sick to my stomach" ☒ Yes ☐ No	☐ Yes ☒ No

Do you take insulin?	Do you have any physical disabilities?	Are you under the care of a doctor/dentist?
☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

ATTITUDE: Dazed, but cooperative

COORDINATION: Poor, unsteady

SPEECH: Rambling, slurred

BREATH: Normal

FACE: Sweaty, dazed, appearance

CORRECTIVE LENS: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctive ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ L. Eye ☐ R. Eye

Tracking: ☒ Equal ☐ Unequal

PUPIL SIZE: ☒ Equal ☐ Unequal (explain)

Nystagmus Present: ☐ Yes ☒ No

Able to follow stimulus: ☒ Yes ☐ No

Eyelids: ☒ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. 100 / 2310	Lack of Smooth Pursuit	☐ Yes ☒ No	☐ Yes ☒ No
2. 108 / 2325	Max. Deviation	☐ Yes ☒ No	☐ Yes ☒ No
3. 104 / 2337	Angle of Onset	None	None

Vertical Nystagmus? ☐ Yes ☒ No

Convergence: Right Eye / Left Eye

ONE LEG STAND: Test Stopped (1 3 4 / R) — Test Stopped (1 2 7 / L)

ROMBERG BALANCE: 1" 1" 3" 3"

WALK AND TURN TEST

Cannot keep balance: √√

Starts too soon: Ø

	1st Nine	2nd Nine
Stops Walking		
Misses Heel -Toe	√√√√√	√√√√√√√
Steps off Line	ALL	STEPS
Raises Arms	√√√	√√√
Actual Steps Taken	10	9

Ø Sways while balancing — √√√ Uses arms to balance — Ø Hopping — √√√ Puts foot down

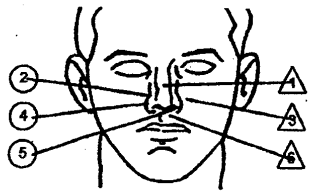
INTERNAL CLOCK: 90 Estimated as 30 sec.

Describe Turn: Turned wrong direction

Cannot do Test (explain): Kept stopping

Type of Footwear: Flip - Flops

○ Right △ Left — Draw lines to spots touched



PUPIL SIZE	Room (2.5-5.0)	Darkness (5.0-8.5)	Direct (2.0-4.5)
Left Eye	6.5	8.5	6.5
Right Eye	6.5	8.5	6.5

Rebound Dilation: ☐ Yes ☒ No

NASAL AREA: Nothing noted

ORAL CAVITY: Nothing noted

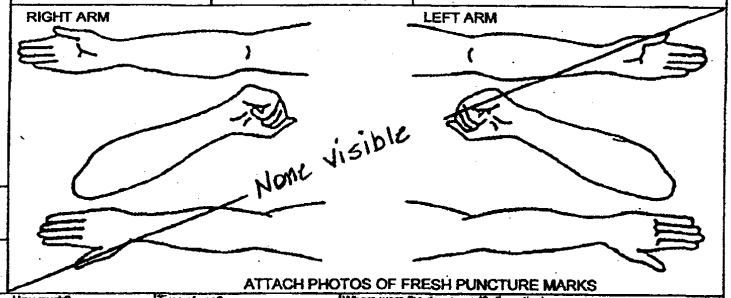
REACTION TO LIGHT: Normal

BLOOD PRESSURE: 150 / 110 TEMP: 37.8

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☒ Rigid

Comments: VERY RIGID ARMS

RIGHT ARM / LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

What medicine or drug have you been using?	How much?	Time of use?	Where were the drugs used? (Location)
"Nothing"	No answer	NO answer	No answer

DATE/TIME OF ARREST	TIME DRE NOTIFIED	EVAL START TIME	TIME COMPLETED
Oct. 04/09 - 2235hrs	2245	2300	2355

MEMBERS SIGNATURE | SERIAL/REG. # | REVIEWED BY:

OPINION OF EVALUATOR:

☐ RULE OUT ☐ MEDICAL — ☐ ALCOHOL ☐ DEPRESSANT — ☐ STIMULANT ☐ HALLUCINOGEN — ☐ DISSOCIATIVE ANESTHETIC ☐ NARCOTIC ANALGESIC — ☐ INHALANT ☐ CANNABIS — ☐ OPERATIONAL ☐ TRAINING

DRUG EVALUATION

NARRATIVE: (1) Location; (2) Witnesses; (3) Source; (4) First Observations Of Subject; (5) Psychophysical Tests; (6) Clinical Signs; (7) Statements; (8) Medical Problems /Treatment; (9) Opinion; (10) Miscellaneous

(1) **Location:** Cell Block – Abbottsford Police Department, Abbottsford, BC

(2) **Witnesses:** Constable Len White

(3) **Source:** The writer spoke with Constable L. White who advised that the subject – Joan Elliott was found standing on the engine hood of her motor vehicle in the intersection of Blueridge Dr and Townline Rd. She was observed by Constable Len White waving her arms and screaming at cars as they passed by. It was determined from witnesses that she had driven her motor vehicle to this location. Further information indicated that she had been involved in a minor MVC west on Blueridge Dr. at Blue Jay St. The subject was arrested for Impaired Operation and Fail to Remain.

(4) **First Observations of Subject:** The writer first observed Elliott in the cellblock area. She appeared sweaty, dazed, disoriented and her coordination was poor and unsteady. The subject's speech was rambling and slurred.

(5) **Psychophysical Tests:**

Modified Romberg Balance Test – Elliott had a 1" front to back sway and a 3" front to back sway & estimated 90 seconds to be 30 seconds. **Walk & Turn Test** – Elliott could not keep balance twice during the instruction stage. She missed heel to toe all steps, stepped off line every step, turned in the wrong direction, and took 10 steps instead of 9 on the way up the line before missing heel to toe and stepping off line on every step on the way back. She raised her arms the entire time. **One Leg Stand Test** – While balancing on his left leg, she used arms for balance, and put her foot down on he counts of 1, 3, & 4 before the test was stopped for safety reasons. While balancing on his right leg, she used arms for balance and put her foot down at 1, 2, & 7 before the test was stopped for safety reasons. **Finger to Nose Test** – Elliott missed the tip of his nose on all six attempts.

(6) **Clinical Signs:** Elliott's pulse rate was elevated at 100bpm, 108bpm and 104bpm. The subject's blood pressure was above the normal range at 150mmHg/110mmHg. Her pupils were dilated in room light at 6.5mm and in direct light at 6.5mm.

(7) **Statements:** Elliott denied taking any drugs.

(8) **Medical Problems/Treatment:** Elliott indicated she was "sick to my stomach".

(9) **Opinion:** It is the opinion of Howard Olson, a certified Drug Recognition Expert, that:

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(10) **Miscellaneous:** A urine sample was provided by Elliott.

SESSION XXVI

PREPARING THE NARRATIVE REPORT

SESSION XXVI PREPARING THE NARRATIVE REPORT

Upon successfully completing this session the student will be able to:

Discuss the essential elements of the drug influence evaluation report.

Prepare a clear and concise narrative description of the results of the drug influence evaluation.

The Importance of Documentation

Successful prosecution of a DRE case will depend, more than anything else, on the evidence that you supply, and on how clearly and convincingly you present that evidence. The chemist or toxicologist may also be able to provide some important evidence. The results of the blood or urine analysis definitely play a supportive, or corroborative role. However, the chemical test simply cannot prove that the subject was impaired at the time the violation occurred. It is up to you to prove that, and to prove that the nature of the impairment was consistent with some category or categories of drugs. Your observations, examinations and your expertise are the prosecution's strongest weapons. In some cases, they will be the only weapons. You have to get your evidence across, and you have to make it as believable as possible. You start doing this in your DRE report.

The Components of the Drug Influence Evaluation Report

The DRE report has two major components. The first is the standard Drug Influence Evaluation face sheet. Its purpose is to document the results of all observations and examinations that you personally made of the subject. This face sheet is a unique document. It is used by every law enforcement agency that participates in the Drug Evaluation and Classification program. It contains some very important information, and it must be filled out clearly, accurately and completely. Every box on the face sheet should be completed. The face sheet does not constitute the entire DRE report. A **narrative** section also must be prepared. The narrative section must be a clear, plain English, detailed rendition of all evidence obtained during all twelve components of the DRE evaluation, including the breath test result; the information obtained from your interview of the arresting officer; statements, actions, gestures, etc. made by the subject; paraphernalia found in the subject's possession; to name a few. Bear in mind that the face sheet is a **technical document**. As a DRE, you must be very familiar with the face sheet, and with its various symbols, and abbreviations. However, many prosecutors and most judges won't know how to interpret the face sheet. It is up to you to "translate" the face sheet and all other evidence into language that they can understand. That's where the narrative section of your report comes in.

Standard Procedures for Completing the Face Sheet

The Drug Influence Evaluation face sheet should be completed in its entirety, every time you conduct an evaluation of a person suspected of drug impairment. Follow the guidelines given in the paragraphs below every time you complete a face sheet.

In order to assist with the interpretation of the information on the face sheet, boxes on the face sheet should not be left blank. It is recommended that "N/A" or "None Observed" be used.

The first two lines of the drug influence evaluation face sheet consists of spaces to record data consistent with your department's standard operating procedures.

EVALUATOR	DRE No.	Rolling Log No.		
Recorder/Witness	Crash: [] None [] Fatal [] Injury [] Property			

On the next three full lines of the report, you will record identifying information about the subject, the arresting officer, and the time and place where the DRE evaluation was conducted. You will also note the results of the breath test (if available), and note the type of sample (blood or urine) collected for drug analysis. You will indicate whether the subject was given the Charter Warning.

SUBJECT'S NAME (LAST, FIRST, MI)	DOB	SEX	RACE	Arresting officer (Name, ID No)	
DATE EXAMINED/TIME/LOCATION	BREATH RESULTS: [] Refused Instrument #			CHEMICAL TEST [] Urine [] Blood [] Refused	
CHARTER WARNING GIVEN: [] Yes [] No	What have you eaten today? When?			What have you been drinking? How much?	Time of last drink?

Starting on the sixth line, and continuing through the tenth line, you will record the results of the preliminary examination of the subject. If the subject merely responds "yes" or "no" to a question, you may simply put a mark through the appropriate box on the right side of the space provided for the question. But if they embellish the response, you should use the space provided to document the response. For example, if the subject were to answer the question "what have you eaten today" in an obviously false or ridiculous manner ("I haven't eaten for six years"), you should record that answer verbatim.

Time Now?	When did you last sleep? How Long?	Are you sick or injured? [] Yes [] No	Are you diabetic or epileptic? [] Yes [] No
Do you take insulin? [] Yes [] No		Do you have any physical defects? [] Yes [] No	Are you under the care of a doctor or dentist? [] Yes [] No
Are you taking any medication of drugs ? [] Yes [] No		ATTITUDE	COORDINATION
		BREATH	FACE
SPEECH	EYES: [] Reddened Conjunctiva [] Normal [] Bloodshot [] Watery	Blindness: [] None [] L Eye [] R Eye	Tracking: [] Equal [] Unequal
CORRECTIVE LENS: [] None [] Glasses [] Contacts, if so [] Hard [] Soft	PUPIL SIZE: [] Equal [] Unequal (explain)	Able to follow stimulus: [] Yes [] No	Eyelids: [] Normal [] Droopy

After completing the preliminary questioning of the subject, be sure to record brief descriptions of their attitude, coordination, speech, breath and facial appearance. Check to determine the type of corrective lenses the subject is wearing, if any, and record the general appearance of the subject's eyes. Be sure to indicate whether the subject is or claims to be blind in either eye. Check the subject's tracking ability (just as you would test for lack of smooth pursuit). While you are assessing the subject's tracking ability, you can also perform a preliminary assessment of whether horizontal gaze nystagmus is present in the subject's eyes. In particular, if the nystagmus or "jerking" is observed, an initial estimation of the angle of onset can be made. The

approximate angle of onset may help to determine whether the subject has consumed some drug other than alcohol. Note whether the subject's pupils are of equal size, and the condition of their eyelids.

Almost midway down the form, and on the left side, is the space to record the three measurements of the subject's pulse that are required during the DRE evaluation. Always record the pulse in beats per minute. For example, since you use a 30 second interval to count the pulse, be sure to multiply the count by two, and record that result on the form. Also, always record the time at which each pulse count was taken.

PULSE & TIME
1. _____/_____
2. _____/_____
3. _____/_____

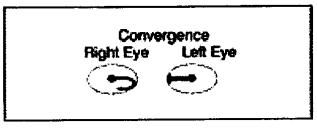
Record the results of the checks for Horizontal Gaze Nystagmus, Vertical Gaze Nystagmus and Lack of Convergence in the spaces at the center of the form. For HGN, write the word "YES" to indicate that there was a Lack of Smooth Pursuit, and write "NO" if the eye does pursue smoothly. In other words, "YES" means that evidence of HGN is present and "NO" means that the evidence wasn't found. Similarly, along the "Max. Deviation" line, write "YES" if there is distinct and sustained jerking when the eye is held as far to the side as possible, and write "NO" if the eye does not jerk distinctly. Along the "Angle of Onset" line, write the number of degrees at which the jerking first is noticed; estimate the angle to the nearest five degrees (i.e., 30, 35, 40, etc.). If the eyes actually jerk while the subject stares straight ahead, write the word "RESTING" on the "Angle of Onset" line. If the jerking begins before the eye has moved to the 30-degree point, write the word "IMMEDIATE". Be sure to check each eye independently, and record the evidence of HGN separately for each eye.

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit		
Max. Deviation		
Angle of Onset		

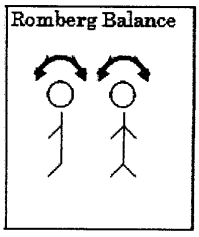
For the Vertical Gaze Nystagmus test, simply check either the "YES" or "NO" box, depending on whether the evidence was present or absent.

Vertical Nystagmus?
[] Yes [] No

For the Convergence test, draw a circle in the middle of each "eye socket" provided on the form, and connect arrows to the circles to depict how the eyes moved when the test was given. For example, the

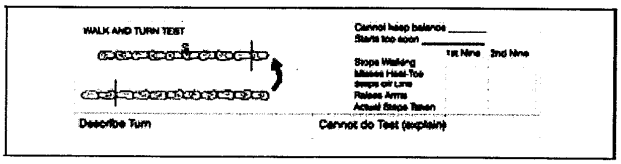


sketch at the right shows that the left eye converged properly, while the right started to move in, and then drifted back out.



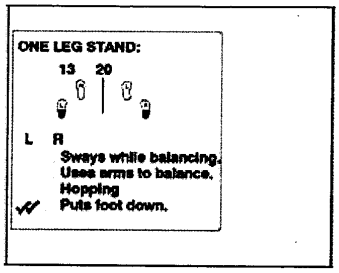
Spaces are provided to record in detail the subject's performance of the four divided attention tests. Make sure that the Romberg Balance test is the first one that you administer. The two "stick figures" are used to indicate how much the subject sways while standing with the eyes closed. The figure on the left (with only one arm and one leg visible) is used to depict front to back swaying; at the arrow points above the "head", write the approximate number of inches the subject sways forward and backwards from center. The figure on the right (with two arms and legs) is used to depict side to side swaying. If the subject sways in a circular manner, indicate by writing "Circular Swaying" across the "stick figures". In the space marked "Internal Clock", write the number of seconds that the subject actually stood with the eyes closed, while he or she attempted to estimate the passage of 30 seconds.

Internal clock Estimated At 30 Sec.



For the Walk and Turn test, you must diagram how the subject walked, and you must indicate how often each of the eight validated clues was observed. On the diagram of steps, when the subject steps off the line, indicate with half a slash mark at an angle in the direction the step was taken. If the subject misses heel to toe, indicate it with a slash mark between the feet with an "M" marked underneath. If the subjects stops walking, indicate that with a slash mark between the feet with an "S" marked underneath.

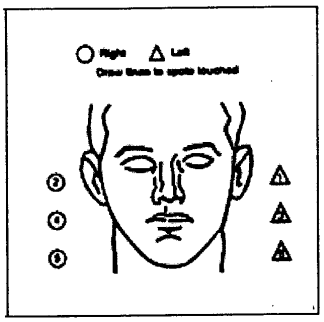
Anything else that is unusual or noteworthy about how the subject walked should be indicated in writing near the diagram (e.g., "stopped counting aloud after the third step"). In the spaces provided to the right of the diagram of the feet, use check marks to record how often each clue was seen and the actual numbers of steps the subject took. In the space below the diagram of the feet, write a brief but clear description of how the subject executed the turn; if he or she turned in the proper fashion, simply write "AS INSTRUCTED". If the subject was unable to complete the test, write an explanation of why the test was stopped. For the One Leg Stand, you will diagram when the subject put the foot down (if at all) and you will indicate how often each of the four validated clues was observed. Always have the subject first perform this test by standing on the left foot. If the subject puts the elevated foot down, indicate above the foot the number they were counting when they put their foot down. In the example to the left, the subject put the right foot down when they had counted to "one thousand thirteen" and again when the count reached "one thousand twenty". Put check marks in or near the boxes below the sketch to indicate how



often each of the four clues was seen while the subject stood on the left foot. Place the count the subject reached in 30 seconds in the top of the box over the foot they were standing on.

Then, have the subject repeat the test by standing on the right foot, and use the right side sketch to record the results of that test. In the box below, indicate the type of footwear the subject was wearing while performing these tests.

Type of Footwear



For the Finger to Nose test, you will diagram exactly where each finger tip touched the subject's face. Simply draw a line from the point touched on the face to the symbol representing each finger (this makes it easier to draw a straight line). The finger symbols are numbered in the sequence in which you should instruct the subject (i.e., "left, right, left, right, right, left"). If the subject inadvertently uses the incorrect hand at some point, draw in an additional appropriate symbol (circle or triangle), write the number in it (1 to 6) and draw a line from it to the spot touched on the face. Then, cross out the symbol for the finger that he or she should have used on that attempt.

Pupil size estimations are to be recorded in the boxes provided. Using a pupillometer, record the size of the circle or semi-circle that comes closest to the size of the pupil. If a pupil appears to be slightly smaller than the 3.0 mm circle/semi-circle, DO NOT write 2.8 or 2.9 as the pupil size. Always record to the nearest half mm.

PUPIL SIZE	Room Light	Darkness	Direct	NASAL AREA
Left Eye				ORAL CAVITY
Right Eye				
			REBOUND DILATION [] Yes [] No	Reaction to Light

In the spaces provided, write a brief but clear description of anything noteworthy that you found in your examinations of the subject's nose and mouth. If rebound dilation is observed, note that in the appropriate space. Rebound dilation is a period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size. For example, the pupil might initially expand to 5.0 mm, constrict, and then "balloon out" to 7.0 mm, constrict, then expand back to 7.0 mm, etc. REMEMBER that sloppy procedure with the penlight could induce a response that could be confused with rebound dilation. If you inadvertently move the penlight closer to the subject's eye and then draw it farther away, you will change the intensity of the light flooding into the eye and you may cause the pupil to constrict or dilate. Make sure that you always hold the light steady while making these examinations.

In the space provided, indicate how the subject's pupils reacted when the light was directed into the eye. If the reaction appeared to be normal, write "Normal"; if it appeared to be a slow reaction but some constriction of the pupil was evident, write "Slow"; if the pupil did not appear to constrict at all, write "Little to None Visible". Approximately one (1) second is normal.

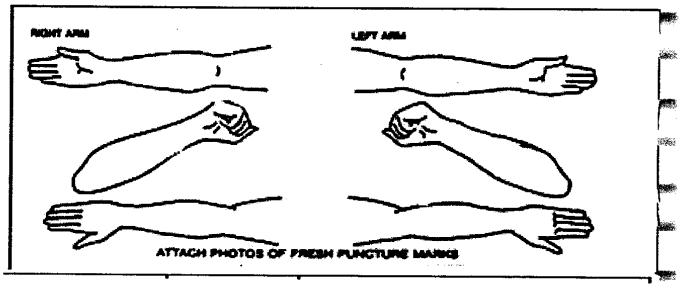
Record both the systolic and diastolic blood pressure (in even numbers), and the subject's body temperature, in the spaces provided. Also indicate whether the subject's muscle tone appeared to be rigid, flaccid or normal.

BLOOD PRESSURE _____/_____ TEMP_____ °

Muscle Tone: [] Normal [] Flaccid [] Rigid

Comments

On the fourth line from the bottom, record the subject's responses to the final three questions. Remember that most, if not all, courts generally hold that a subject must be advised of constitutional rights before these kinds of questions should be asked.



What Medicine or Drug Have You Been using? How Much?	Time of Use?	Where Were the Drugs Used?

You will examine the subject's arms and hands for injection marks and puncture wounds. These will be documented in the box as accurately as possible and include both new and old marks. Tattoos are a favourite spot to inject a drug so should be examined closely. Photographs may be taken, if possible, but you must be cognizant of your services' policies on photographing and documenting evidence. Limit your examination to arms, hands, and in some instances, the neck.

Date/Time of Arrest	Time DRE Notified	Eval Stat Time	Time Completed
Member Signature (Include Rank)	ID No.	Reviewed By:	
Opinion of Evaluator: [] Rule Out [] Alcohol [] Stimulant [] Dissoc. Anesthetic [] Inhalant [] Medical [] Depressant [] Hallucinogen [] Narcotic Analgesic [] Cannabis			

The last three lines on the form are used to record information about basic time parameters of concern to the evaluation, and to record additional pertinent information about you, the DRE

who conducted the evaluation, and your opinion of the evaluation. If another DRE supervised your evaluation, their name should be written in the "Reviewed By" block on the lower right corner of the form. That is especially important during your certification training phase.

The reverse side of the form should be used for the narrative drug evaluation report, and continuation sheets should be attached, as appropriate. Guidelines for organizing the narrative report include the following: (Refer to next page)

Guidelines for Writing the Narrative Report

The narrative portion of a standard DRE report has thirteen segments, which include:

1. **Location**

State where the drug influence evaluation was conducted.

Example: **The evaluation was conducted in the DRE examination room of the Edmonton Police Service North Division.**

2. **Witnesses**

List the names, agency affiliations and other identifiers of any persons who witnessed all or portions of the evaluation. State the person who served as the evaluator and recorder with complete agency names.

Example: **The entire evaluation was witnessed and recorded by Sergeant Conrad Moschansky of the Edmonton Police Service.**

3. **Source**

Indicate when you were first notified of the request for a drug influence evaluation and summarize the information you were given at that time. This can include reason for the traffic stop and observations of the subject up until the time the subject is turned over to the evaluating officer. Include a summary of your interview of the arresting officer which can include if a breath test was taken, and state who administered the test. Give the test results, the time of the test and record the serial number or other identifier of the instrument on which the test was taken.

Example: **At approximately 9:20 p.m. the writer was contacted by dispatch and requested to conduct a DRE evaluation for Constable Thompson. Writer attended the North Division arriving at 9: 34 p.m. I contacted Constable Thompson in the detention area where it was determined that Richardson had been observed driving slowly and failed to stop at a red light. Constable Thompson stated Richardson appeared sleepy and was "on the nod." He also noted the subject's voice was low in volume, raspy in tone and slow in tempo and his balance and coordination was poor and he was arrested for impaired driving.**

4. **First Observation of Subject**

Document in detail your personal initial observations of the subject. Describe where and when you first saw the subject. Highlight any noteworthy or unusual actions, appearances, etc. that you observed. Summarize the findings of your Preliminary examination of the subject.

Example: **Writer first observed the subject in the North Division DRE examination room. He moved very slowly, was unstable on his feet and when he walked across the**

room he stumbled and nearly fell. His head nodded forward repeatedly and he appeared to be "on the nod." When he answered questions from the investigating officer his words were slow and slurred. His eyelids were droopy and his pupils appeared to be constricted. His first pulse was checked at 58 BPM.

5. **Psychophysical Signs**

Give a brief but clear, complete and accurate description of the subject's performance of the Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose tests.

Example: **Romberg Balance: The subject exhibited an approximate 2" front to back sway and An approximate 3" side to side sway. The suspect had a slow internal clock estimating 30 seconds in 52 seconds and his head repeatedly dropped forward towards his chest during the test. Walk & Turn: The subject lost his balance during the instruction stage, missed heel to toe three times during the first nine steps and three times on the second nine steps. He turned incorrectly on the ball of his right foot in a complete circle and nearly fell. One Leg Stand: The subject ..... etc.**

6. **Clinical Indicators.**

Give a brief but clear, complete and accurate description of your examinations of the subject's eyes, vital signs and any tremors observed.

Example: **Lack of Convergence was observed. The suspect's pupils were constricted in all three lighting conditions . The Pupils being below normal range at 1 mm in room light, normal range 2.5mm to 5 mm. In near total darkness the subject's pupils were below normal range at 1 mm, the normal range for this lighting condition being 5.0 mm to 8.5 mm. In direct light his pupils were below normal range at 1 mm, the normal range being 2.0 mm to 4.5.mm. The subject's reaction to light was little to none visible and his eyelids were droopy. The suspect's pulse rates were below the normal range of 60 to 90 beats per minute at 58, 56, 58 BPM. His blood pressure was also below the normal range of 120-140 mm/Hg systolic and 70-90 mm/Hg diastolic at 114/68 mm/hg.**

7. **Statements**

Document the subject's statements, both in response to your questions and spontaneous utterances. Use verbatim quotes whenever possible. Document your Charter and secondary caution to the subject and his or her responses.

Example: **The subject repeatedly denied using drugs, stating "I told you, I don't do drugs."**

8. **Medical Problems and Treatment**

Describe your own observations concerning possible injuries or illness that the subject may be suffering. Document subject's statements or claims concerning illness or injury. Document any medical attention or treatment that the subject received while in your care.

Example: **The suspect claimed no illness or injury. No evidence of injury or illness was observed during the evaluation**.

9. **Opinion**

State the category or combination of categories of drugs that you believe is/are affecting the subject and state your opinion concerning the subject's ability to operate a motor vehicle safely.

Example: **In my opinion as a Drug Recognition Expert, Mark Richardson is impaired by a Narcotic Analgesic and is unable to operate a motor vehicle safely**.

10. Miscellaneous

Include anything in this section that you feel is relevant to the matter being investigated. You can include the results of your examinations of the subject's oral and nasal cavities, search for injection marks, etc. Describe any odors detected on the subject's breath, hands, clothing, etc. Describe any physical debris of drugs or drug paraphernalia found on the subject's person etc.

Example: **Three fresh puncture wounds were located on the subject's left forearm. Numerous scar lines ("track marks") were observed on his left inside forearm. (Photographs attached)**

SESSION XXVII

PRACTICE: TEST ADMINISTRATION

SESSION XXVII PRACTICE: TEST ADMINISTRATION

Upon successfully completing this session the student will be better able to:

Administer selected portions of the battery of examinations that constitute the drug influence evaluation.

Describe the evaluation procedures.

Document the results of the examinations.

In this session, you will have an opportunity to practice conducting a complete drug influence evaluation. You will work in a team with one or two fellow students. When you conduct the evaluation, your teammate will serve as your test subject. And, you will serve as the subject for a teammate when he or she conducts the evaluation.

This is an opportunity for you to practice the components of the evaluation in a controlled setting. Gaining confidence in your ability to conduct the evaluation now will assist you when you are examining drug impaired subjects who may not be as cooperative as your fellow students. When not serving as a test subject or examiner, pay close attention to the evaluation conducted by your team members.

SESSION XXVIII

CASE PREPARATION AND TESTIMONY

SESSION XXVIII CASE PREPARATION AND TESTIMONY

Upon successfully completing this session the student will be able to:

Conduct a thorough pre-trial review of all evidence and prepare for testimony.

Provide clear, accurate and descriptive direct testimony concerning drug influence evaluations.

Respond effectively and appropriately to cross examination in Drug Evaluation and Classification cases.

A. Guidelines for Case Preparation

Case preparation actually begins with your first contact with the suspect. At that point you begin "collecting" the evidence that you will organize and present at trial.

To begin properly, make sure that you complete each portion of the standard drug influence evaluation report form. Be especially careful to take accurate notes of your observations of the suspect, and to record their statements accurately. Note and document all relevant information you obtain during your interview of the arresting officer.

When you are notified of the trial date, you should conduct a careful review of all records and reports associated with the case. If you made the arrest, or were summoned to the scene, revisit the scene. During discovery, list and properly document all evidence. Compare your notes with the arresting officer, and clarify or resolve any discrepancies, if possible.

If at all possible, try to arrange a pre-trial conference with the prosecutor. Review with the prosecutor all evidence and all basis for your conclusions. If there are weak points in your case, bring them to the prosecutor's attention. Ask the prosecutor to review the questions he or she intends to ask you on the witness stand. Point out when you do not know the answer to a question. Ask the prosecutor to review questions and tactics that they anticipate the defense attorney may use. Make sure your curriculum vitae is current. Review your credentials and qualifications with the prosecutor. Offers to assist and educate prosecutors are usually appreciated.

If you cannot have a pre-trial conference, try to identify the main points about the case, and be sure to discuss these with the prosecutor during the few minutes you will have just before the trial. It is important for you to advise a prosecutor that has no experience in DRE, that the case can not be treated like a, "typical DUI case".

B. Guidelines for Direct Testimony

1. Testifying about your qualifications as a Drug Recognition Expert. Remember that having been qualified as an expert in the past does not automatically guarantee that this court and judge will deem that you are an expert in this case. You may have to testify in some detail as to your relevant training, education and experience. In fact, it often is to the prosecution's advantage to have you provide such detailed testimony.

   The Courts may be favorably impressed by the depth and scope of your experience and other credentials, and may attach added "weight" to your opinions and conclusions if they have had an opportunity to learn how well qualified you are to render them. For this reason, you should encourage the

prosecutor, if possible, not to accept the defense's stipulation as to your expertise. Instead, always try to enter testimony as to your credentials into the record.

When testifying about your qualifications, try to relate your training and experience to the specific categories of drugs involved in the case at hand. Highlight the number of times you have seen a person under the influence of those categories. Explicitly highlight the number of times you have examined subjects and concluded they were not under the influence of drugs: this helps to demonstrate the fairness and impartiality of your evaluations.

Voir Dire is a French expression literally meaning "trial within a trial". In a law or court context, one application of Voir Dire is to question a witness to assess his or her qualifications to be considered an expert in some matter pending before the court.

2. Testifying about the facts of the case.

Your basic task is to establish that the suspect was under the influence of a drug or combination of drugs. When you testify about the suspect's performance of the Standardized Field Sobriety Tests, do not use the terms "pass" or "fail". Also, do not refer to the suspect's "score" on the test or the number of "points" he or she produced. Instead, describe clearly and explicitly how the suspect performed (e.g., "stepped off the line twice, raised the arms three times, etc."). By presenting your observations clearly and convincingly, you will allow the fact of the suspect's impairment to speak for itself. In the same way, describe exactly what you observed and measured during the eye examinations and vital signs examinations, and relate these observations and measurements to your training and experience. In this way you will establish a solid foundation for introducing your opinions and conclusions.

Always keep in mind that Courts typically focus on an officer's demeanor as much or more than on the content of their testimony. Strive to maintain your professionalism and impartiality. Be clear in your testimony: explain technical terms in layman's language; don't use jargon, abbreviations, acronyms, etc. Be polite and courteous. Do not become agitated as a result of questions by the defense. Above all, if you don't know the answer to a question, say so. Don't guess at answers, or compromise your honesty in any way.

Introduction of Evidence Involving "New" Scientific Principles

As a DRE, you will be asked to offer opinions and conclusions based on scientific principles that are quite unfamiliar to the Courts. These principles aren't really "new", but they are newly discovered, and they aren't yet within the common realm of knowledge of average people. Your task is to help see to it that the evidence you have obtained through your special knowledge and your hard work will be acceptable to the court.

Canadian Courts use the case R vs MOHAN for determining if the witness can be considered an expert. The Basic Rule as described in MOHAN states that an expert witness is: A person killed in some art, trade, science or profession, having knowledge of matters not within knowledge of persons with average education, learning and experience, may assist the courts in arriving at a verdict by expressing an opinion on a state of facts shown by the evidence and based upon his or her special knowledge.

Only the Court can determine whether or not a witness is qualified to testify as an expert. The DRE officer's training and experience is critical to establishing this foundation for admissibility. This training and experience will be provided to the court in the form of a Curriculum Vitae (CV). The DRE will be expected to bring copies of his/her CV to court. It is recommended that the DRE bring enough copies to satisfy the Crown, Defense, Judge and ensure that he/she has one copy for themselves to refer to.

As previously discussed, a defense lawyer may waive the option of holding a "Voir Dire" and accept the DRE's qualifications based soley upon what is contained in the CV. The defense may also wish to probe into the information contained in the CV in hopes of having the officer denied the status of an 'expert witness' or to minimize the area or areas of expertise the officer may be asked to provide an expert opinion.

The "trial within a trial" provides the defense an opportunity to question the officer on the training and qualifications listed in the CV. At the end of the Voir Dire, the Court will then determine if the witness can be considered an expert.

The DRE's demeanor and credibility will heavily impact the "weight" the Court gives to this evidence.

C. Typical Defense Tactics

In a DRE case, you will be the key witness for the prosecution. Therefore, the defense will try very hard to cast doubt on your testimony.

The defense may ask some questions to challenge your observations and interpretations. For example, you may be asked whether the signs, symptoms, and behaviors you observed in the suspect couldn't have been caused by an injury or illness, or by alcohol, or by something else other than the drug categories you concluded were present. You may also be asked questions whose purpose is to make it appear that you weren't really certain that you actually saw what you say you saw. Answer these questions honestly, but carefully. If your observations are not consistent with what an illness or injury or alcohol would produce, explain why not. Make it clear that your conclusions about drug influence are not simply one plausible interpretation of the observed facts, but the only logical interpretation.

The defense may also ask some questions to challenge your credentials. These questions may try to disparage or deprecate the formal training you have had as a DRE. There may also be an attempt to ask questions to "trip you up" on technical or scientific issues, to make it appear that you are less knowledgeable than you should be or claim to be. Stick to absolute honesty. Answer

all questions about your training fully and accurately, but don't embellish. Don't try to make the training appear to have been more elaborate or extensive than it really was.

Answer scientific and technical questions if you know the answer. Otherwise, admit that you don't know. Don't try to fake or guess the answers.

The defense may ask questions to challenge your credibility. You may be asked several very similar questions, in the hope that your answers will be inconsistent. You may be asked questions whose purpose is to show that you had already formed your opinion well before you completed the evaluation of the suspect. And, you may be asked questions that try to suggest that you eliminated portions of the evaluation, or only gave very cursory attention to some portions. Guard against these kinds of defense challenges by always performing a complete, painstaking evaluation, exactly as you have been taught. Standardization will help ensure both consistency and credibility.

ATTACHMENT A

DRE DEFENSE CROSS EXAMINATION QUESTIONS

The following are representative of questions the defense may use to challenge the DRE's testimony in court. (The defendant is identified as Miss Alicia Ann Ace.)

Missing Symptoms/Normals

This line of questions attempts to elicit the fact that the defendant did not have all of the expected signs or symptoms of the drug (s) in question.

Officer, you were taught that bruxism or grinding of the teeth is a sign of CNS Stimulant influence, isn't it? Miss Ace didn't have that sign, did she?

The defense may also focus on those signs or symptoms that were normal, and were therefore, not consistent with the drug in question.

Officer, you learned the normal range of temperature in DRE training, didn't you? And that range is 98.6 plus or minus one degree, isn't it? What was Miss Ace's temperature? (98) 98 is within normal ranges, isn't it? Miss Ace's temperature was normal, wasn't it? CNS Stimulants cause elevated temperature, don't they? Miss Ace's was not elevated, was it?

Alternative Explanations

The defense elicits alternative explanations for the signs and symptoms of the drug (s) in question. These alternative explanations usually deal with medical conditions, stress, a traffic crash, etc.

Officer, an elevated pulse rate can be caused by things other than drugs, can't it? Excitement may cause it? Stress may cause it? Being involved in a traffic crash is stressful, isn't it? And being involved in a traffic crash may cause elevated pulse, right? Being interviewed in the early morning by three police officers is stressful? And that may also cause the pulse to be elevated, can't it?

Defendant's Normals

The defense attempts to emphasize the fact that not everyone is so-called normal, that normal is subjective.

Officer, you were taught the normal range for pulse in DRE training, weren't you? And you agree that not all people fall in that normal range, don't you? That there are people with pulse rates above normal that aren't on drugs, right? A person's pulse changes over time, doesn't it? You don't know what Miss Ace's normal pulse is, do you? It could be in the normal range, right? But it could be above or below the normal range - normally for her, isn't that so?

Doctor Cop

The line of questioning challenges the credibility of the officer's teachers - that they are police officers, rather than medical professionals.

Officer, the teachers in this DRE school weren't doctors, were they? They weren't nurses either? Toxicologists? Pharmacologists? Paramedics? They were police officers, right?

Just a Cop

This line of questioning challenges the DRE's credentials - that they are "just a cop." This infers that the DRE evaluation is actually a medical evaluation that should be undertaken only by a medical professional.

Officer, you're not a doctor, are you? A toxicologist? A pharmacologist? A nurse? A physiologist? You don't have a degree in chemistry, do you? You're a police officer, right?

The Unknown

By causing the officer to state that they don't know how a sign or symptom is caused, the defense attacks the officer's credibility. This line of questioning challenges the officer's expertise, by implying that a real expert would know these things.

Officer, you don't know how CNS Stimulants dilate the pupil, do you? You don't know how alcohol supposedly causes Nystagmus, do you? You don't know how CNS Stimulants supposedly elevate the heart rate, do you?

Guessing Game

This tactic attacks the DRE's opinion as a subjective guess, a belief, rather than objective. Guesses can be wrong.

Officer, your opinion in a DRE case is subjective, isn't it? It's a belief on your part? You've made these beliefs in DRE cases in the past, haven't you? And sometimes toxicology didn't find the drug you predicted, isn't that so? And, in fact, sometimes, toxicology didn't find any drug, isn't that so? And so, sometimes your opinion is not correct, right? Sometimes, you guess wrong?

Document provided by Sgt. Tom Page (Retired), LAPD and DDA Linda Condron, Santa Clara County, CA.

SESSION XXIX

CLASSIFYING A SUSPECT (ROLE PLAY)

SESSION XXIX CLASSIFYING A SUSPECT (ROLE PLAY)

Upon successfully completing this session the student will be able to:

Conduct a complete drug influence evaluation using the systematic and standardized 12-step process.

Compile a complete, clear and accurate report documenting the results of a drug influence evaluation using the 13-step component narrative report format.

In this session, you will have opportunities to participate in conducting a complete DRE drug influence evaluation of "arrested suspects". Of course, these "suspects" will not actually be under the influence of any drug. However, at various points during the evaluation they will instruct you to record certain measurements and observations. In this way they will supply you with information simulating a possible drug impaired subject.

When you complete the evaluation, you will carefully review all of the data you have recorded and decide whether the "suspect" is simulating a person who is:

(1) under the influence of a drug or drugs; and,

(2) if so, what category or combination of categories of drugs is causing the simulated "impairment".

A word of caution: it is possible that one or more of these "suspects" will be role playing unimpaired subjects. That is, in some cases, the correct conclusion may be that the "suspect" is not under the influence of any drug. In addition, it highly likely that one or more "suspect" will be simulating a person who is under the influence of a combination of drug categories.

At some point during this practice session an instructor will approach you and notify you that you will have to prepare a complete narrative report on your evaluation of one of the "suspects". The particular "suspect" who will be the subject of your report could be any of the ones you examine. Therefore, it is very important that you take good, comprehensive and detailed notes on each evaluation.

You will work in this session as a member of a team with two or three fellow students. You and your teammates should "put your heads together" in reaching your conclusions concerning each "suspect"; that is, discuss the "evidence" you have recorded and reach a joint conclusion. You should divide the report writing work among yourselves in some equitable fashion. And, you should each take at least one turn at conducting the complete evaluation.

This is a very important session in this course. It is here that your instructors will begin to determine whether you have the skills needed to progress to Certification Training, or whether you need more practice before you are ready to move on.

SESSION XXX

TRANSITION TO CERTIFICATION TRAINING

SESSION XXX TRANSITION TO CERTIFICATION TRAINING

Upon successfully completing this session the student will be able to:

Demonstrate their mastery of the knowledge and skills the course was intended to help develop.

Summarize the key topics covered.

Offer comments and suggestions for improving the course.

Receive assignments for Field Certification Training.

Understand the steps involved in the DRE certification process.

This session completes the second phase, of your training as a Candidate DRE. Among other things, three important events will take place during this session.

(1) You will take a written, multiple choice test, designed to measure your knowledge of drugs, drug influence evaluation procedures, and related facts. This knowledge test is one indicator of whether you are ready for Certification Training. You must pass this examination with a score of 80% or better.

(2) You will take a proficiency examination, in which you will demonstrate your skills in conducting the drug influence evaluation. This skill test is the other indicator of your readiness for the next phase.

(3) You will complete a written -- but anonymous -- critique form, which gives you a chance to express your opinions about this course and the instructors. This information is very important. It will help improve the quality of the training, and to maintain the quality at the highest possible level.

A. Preparing For the Final Knowledge Examination

The following are not the questions that will appear on the Final Knowledge Examination. But some of them are quite similar to the examination questions, and all of them address subject matter that will be covered on the test.

If you can answer these questions correctly, you will have no problem in scoring very well on the knowledge examination.

Answers appear on the pages following the questions.

REVIEW QUESTIONS

1. What is the definition of "drug" that is used in this course? (Hint: it is a simple, enforcement oriented rather than medically oriented definition.)

2. Would Toluene be considered a "drug" under this definition? Would Alcohol? Would Nicotine?

3. What are the seven categories of drugs (name them all)?

4. To what category of drugs does Cocaine belong? How about Methamphetamine? How about Demerol? How about Psilocybin?

5. What do we mean when we refer to polydrug use?

6. What does it mean to say that two drugs are antagonistic?

7. What is the name of the pulse point that is located in the crease of the wrist?

8. What are the names of the two pressures that are recorded during a blood pressure measurement? Which is the higher pressure?

9. What category or categories of drugs generally will cause Horizontal Gaze Nystagmus? What categories will not?

10. To what category of drugs does Codeine belong? How about Secobarbital? How about STP?

11. What category or categories of drugs generally will cause the pupils of the eyes to constrict? What categories generally will cause dilation? What categories generally will not affect pupil size?

12. What are the eight clues that are considered in assessing the subject's performance on the Walk and Turn test? What are the four clues considered in the One Leg Stand test?

13. What category or categories of drugs generally will cause a Lack of Convergence of the eyes? What categories generally will not?

14. What is the formula that expresses the approximate relationship between blood alcohol concentration and Nystagmus onset angle?

15. How many times should you measure the suspect's pulse during the drug influence evaluation?

16. What category or categories of drugs generally will cause the body temperature to go down? What categories generally will cause the temperature to go up? What categories generally will not affect body temperature?

17. What are the two subcategories of Narcotic Analgesics?

18. What does the term "Synesthesia" mean?

19. What is Toluene?

20. What category or categories of drugs generally will cause the blood pressure to go up? What categories generally will cause the blood pressure to go down?

21. To what category of drugs does Chloral Hydrate belong? How about Phencyclidine?

22. About how far in front of the subject's face should the stimulus be held to test for Horizontal Gaze Nystagmus or Vertical Gaze Nystagmus?

23. Suppose a subject is under the influence of a combination of Amphetamines and Heroin. Will that subject exhibit Horizontal Gaze Nystagmus? Will the subject's pulse be up, down or normal?

24. What is a Sphygmomanometer? What are its major components, or parts?

25. What category or categories of drugs generally will cause muscle rigidity? What categories generally will not?

ANSWERS TO REVIEW QUESTIONS

1. For purposes of this course, a "drug" is "any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely".

2. Toluene definitely would be considered a drug. So would alcohol. But for our purposes, Nicotine is not considered a drug. It is certainly true that consumption of Nicotine, especially over a long period of time, can cause health problems. But there is no evidence of significant driving impairment from Nicotine.

3. The seven categories are CNS Depressants; CNS Stimulants; Hallucinogens; Dissociative Anesthetics; Narcotic Analgesics; Inhalants; and, Cannabis.

4. Cocaine is a CNS Stimulant. Methamphetamine also is a CNS Stimulant. Demerol is a Narcotic Analgesic. Psilocybin is an Hallucinogen.

5. Polydrug use means the ingestion of drugs from two or more drug categories. This is very common, especially combinations involving alcohol.

6. Two drugs are antagonistic when they produce some opposite signs and symptoms. An example would be a Narcotic Analgesic and a CNS Stimulant. The Narcotic Analgesics will cause the pulse rate and blood pressure to go down. The Stimulant generally will cause both pulse rate and blood pressure to go up. A person using both drugs might exhibit normal pulse rate and blood pressure, as the antagonistic effects of the two drugs mask each other's signs and symptoms.

7. The radial artery pulse point is located in the crease of the wrist.

8. The Systolic is the higher pressure. The Diastolic is the lower.

9. CNS Depressants, Dissociative Anesthetics, (most) Inhalants will cause Horizontal Gaze Nystagmus. CNS Stimulants, Hallucinogens, Narcotic Analgesics and Cannabis will not.

10. Codeine is a Narcotic Analgesic. Secobarbital (like all Barbiturates) is a CNS Depressant. STP is an Hallucinogen.

11. Narcotic Analgesics will cause constriction of the pupils. CNS Stimulants and Hallucinogens will cause pupil dilation. Cannabis might induce dilation or may be normal. Dissociative Anesthetics and (most) Inhalants generally won't affect pupil size. The specific CNS Depressant Methaqualone ("Quaalude") will dilate the pupils; other CNS Depressants won't affect pupil size.

12. For the Walk and Turn test, the eight clues are:

    (1) Whether the subject loses balance while the instructions are being given.
    (2) Whether they start walking too soon, i.e. before the instructions are completed.
    (3) Whether they step off the line;

(4) or fails to touch heel to toe;
(5) or raises the arms while walking;
(6) or stops while walking.
(7) Whether the subject turns improperly; and,
(8) Whether the correct number of steps are taken.

For the One Leg Stand test, the four clues are:

(1) putting the foot down;
(2) swaying;
(3) hopping;
(4) raising the arms.

13. Lack of Convergence generally will be caused by CNS Depressants; Dissociative Anesthetics; (most) Inhalants; and, Cannabis. Lack of Convergence will not be caused by CNS Stimulants, Hallucinogens or Narcotic Analgesics.

14. Either of the following formulae expresses the approximate, statistical relationship:

(1) BAC = 50 - ONSET ANGLE X 10

But remember: this is only a gross approximation. It is not an exact relationship. It can never be used as a substitute for a chemical test.

15. Pulse rate should be measured three times.

16. Narcotic Analgesics generally will cause the body temperature to go down. Dissociative Anesthetics, Stimulants and Hallucinogens generally will cause temperature to go up. Depressants and Cannabis generally will not affect temperature. Different Inhalants may affect temperature in different ways.

17. The two subcategories of Narcotic Analgesics are the Opiates and the Synthetic Opiates. Natural Alkaloids are actually found in, and can be isolated from, the sap of the Opium Poppy. The Opium Derivatives are produced by chemically treating the Natural Alkaloids. The Synthetic Opiates have nothing at all to do with the opium poppy, but are produced entirely artificially.

18. Synesthesia is a mixing of the sensory modes. For example, a person may look at a particular color, and that visual input may cause the person to hear a sound or smell an odor. Synesthesia is an effect generally associated with Hallucinogens.

19. Toluene is one of the active ingredients in various volatile solvents, a subcategory of the Inhalants.

20. CNS Depressants and Narcotic Analgesics cause the blood pressure to go down. CNS Stimulants, Hallucinogens, Cannabis and Dissociative Anesthetics generally cause the blood pressure to go up. With Inhalants, it depends on the particular subcategory:

Anesthetic Gases lower blood pressure, while Aerosols and Volatile Solvents raise blood pressure.

21. Chloral Hydrate is a CNS Depressant. Phencyclidine is a Dissociative Anesthetic.

22. It is good practice to hold the stimulus about 12 to 15 inches in front of the subject's face.

23. Amphetamine is a CNS Stimulant. Heroin is a Narcotic Analgesic. Neither category will cause Horizontal Gaze Nystagmus. Therefore, their combination also will not cause Nystagmus.

However, the combination of Amphetamine and Heroin may have unpredictable effects on pulse rate. The stimulant, by itself, will tend to cause the pulse to go up, the narcotic will tend to cause the pulse to go down. A person using both drugs may exhibit a pulse that is up/down/normal. And, this can change during the course of the examination.

24. A Sphygmomanometer is a device used for measuring blood pressure. Its major parts are:

- the compression cuff, which contains an inflatable rubber bladder.
- the manometer, or pressure gauge.
- the pressure bulb, which is squeezed to inflate the bladder.
- the pressure control valve, which regulates inflation and deflation of the bladder.

25. Muscle rigidity generally will be caused by Dissociative Anesthetics, and possibly will be caused by CNS Stimulants or Hallucinogens. CNS Depressants, Narcotic Analgesics, Inhalants or Cannabis generally will not cause muscle tone to be rigid.

B. Preparing For The Proficiency Examination

On the three pages that immediately follow, you will find a copy of the Proficiency Examination Checklist that your instructors will use to assess your skills in conducting the drug influence evaluation. Review the checklist carefully. It will give you a good idea of what factors will be considered in your examination, i.e. the errors of omission or commission that you need to avoid.

Practice conducting the procedures before submitting yourself to this proficiency examination. Make sure you can administer the procedures flawlessly. It would be a good idea to conduct some after class hours practice with fellow students, so that you can coach each other and help each other progress to Certification Training.

PROFICIENCY EXAMINATION CHECKLIST

(For Use During Certification Training)

Student's Name _____

Date _____ Examiner _____

I. Preliminary Examination

1. Did the student ask all preliminary examination questions?

_____ yes _____ no

(If No: What questions were deleted? _____

_____

2. Did the student properly estimate pupil size?

_____ yes _____ no

3. Did the student properly assess the eyes' tracking ability?

_____ yes _____ no

4. Did the student properly measure pulse rate?

_____ yes _____ no

II. Eye Examinations

1. Did the student properly administer the Horizontal Gaze Nystagmus test?

_____ yes _____ no

2. Did the student properly administer the Vertical Gaze Nystagmus test?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

3. Did the student properly administer the test for Lack of Convergence?

_____ yes _____ no

(If no, explain deficiences) _____

_____

III. Psychophysical Tests

1. Did the student properly administer the Modified Romberg Balance Test?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

2. Did the student properly administer the Walk and Turn test?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

3. Did the student properly administer the One Leg Stand test?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

4. Did the student properly administer the Finger To Nose test?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

IV. Vital Signs Examinations

1. Did the student properly measure blood pressure?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

2. Did the student properly measure temperature?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

3. Did the student properly measure pulse?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

V. Dark Room Examinations

1. Did the student properly control the pen light for the two checks of pupil size?

_____ yes _____ no

2. Did the student accurately estimate pupil size?

_____ yes _____ no

3. Did the student properly check the nasal area?

_____ yes _____ no

4. Did the student properly check the oral cavity?

_____ yes _____ no

VI. Examinations of Muscle Tone

1. Did the student adequately inspect for muscle tone?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

VII. Examinations of Injection Sites and Third Pulse

1. Did the student adequately inspect for injection sites?

_____ yes _____ no

(If no, explain deficiencies) _____

_____

2. Did the student properly measure pulse?

_____ yes _____ no

(If no, explain deficiencies) _____

VIII. Evaluator's Opinion of Student's Proficiency

(Offer appropriate, specific comments concerning the student's progress)

C. The Anonymous Written Critique

A Student's Critique Form will be provided to you by the course coordinator. You will have time, during the final session of the course, to complete this form and offer any comments that you think are appropriate. It will be especially helpful to hear your suggestions for improving this training.

Please look over the critique form prior to the final session, to start organizing your thoughts and feelings about the instruction you have received.

D. Maintaining the Log of Drug Influence Evaluations

Beginning with your first night of Certification Training, **and continuing throughout your career as a DRE**, you will maintain a log of all persons you examine for possible drug impairment. The log is your personal record of your work as a DRE, and it will have a major impact on three things that should be of major importance to you:

(1) Whether or not your instructors can recommend you for your initial certification as a DRE.

(2) Whether or not you qualify for re-certification, when your initial certification expires.

(3) Whether or not the Courts in a particular drug impairment case qualifies you as an expert, and allows you to render your opinion as evidence.

Under the International Standards for the Drug Evaluation and Classification Program established by IACP, your instructors cannot endorse you for certification unless your log of drug influence evaluations is up-to-date, complete and accurate. The next-to-last line on the Certification Progress Log that you received at the beginning of the DRE Pre-School, and that you handed back in at the start of this School, is titled "Rolling" Log Approved. ("Rolling Log" is the informal name of the log used to document your drug influence examinations.) If a valid instructor's signature does not appear on that line, IACP cannot grant you a certificate. Once you do receive a certificate, it usually will be valid for two years. At that time, to qualify for re-certification, you must submit a copy of the entries in your "Rolling Log" since you were certified, as proof that you have maintained your proficiency. And, each time you go to court as a DRE, you must bring your "Rolling Log" along, to help establish your credentials as an expert. Remember that your state may have more stringent requirements.

What is the "Rolling Log"? Five copies of it appear on the final pages of this manual. Remove one of those copies now, so that you can refer to it as you read the instructions for entering information on it.

At the top of the Log, there is a space in which you will print your name ("Drug Recognition Expert"); another space for the page number (obviously, the first page will be #1, the second #2,

and so on; as you continue your career as a DRE, the page number will grow very large); and, a third space in which to print your DRE certification number assigned to you by IACP.

Until you have completed your certification training, you will print the word "STUDENT" in that space.

Each subsequent line of the log corresponds to a drug influence evaluation in which you participated. In the "Evaluation Number" box, you will print the number that you assign to the evaluation; i.e. if this is the seventh examination in which you participated in 2005, the control number would be 2005-7. If you were the actual examining DRE for this particular case, you need not print anything other than the evaluation number in that box. But if you served only as the recorder, you must print "RECORDER" in the box, immediately below the control number. Likewise, if you were participating only as a witness, you will print "WITNESS" in the box.

In the box to the right of the evaluation number, you will print the subject's full name (last, first, middle initial); further to the right, enter the subject date of birth. In the next box, print the date on which the evaluation began; in other words, an evaluation that starts one minute before midnight on March 17th is recorded on that date, not on the 18th, despite the fact that almost all of the work took place on the later day.

The next box, of course, is very important. Record your opinion in complete detail. If you conclude that the subject is not impaired, that is what you will record. If you conclude that the person is under the influence of alcohol only, that is what you must record. If you believe the subject is suffering from an injury or illness, print "Medical Rule Out" in the box. Otherwise, print the category or combination of categories of drugs that you believe is causing the impairment. If the subject has a positive BAC, consider alcohol as a contributing factor to the impairment.

In the "Toxicologic Results" box, you will print the outcome of all chemical tests performed on the subject. Obviously, days or weeks will usually pass by before you have the results of blood,urine, oral fluid tests, so you will routinely have to "update" your log. Don't forget to include the BAC obtained from the breath test in this space if applicable. And, if the suspect refused to submit to the toxicological sample, indicate that.

In the final box, print the names of persons who witnessed the evaluation, and include any other appropriate comments. Use the reverse side of the page, or add continuation sheets, if longer comments are appropriate.

Experienced DREs usually maintain two copies of their "Rolling Log" to ensure preservation of this most important record.

E. Certification Requirements

At a minimum you will need to conduct 12 DRE evaluations with an instructor. You need to be the evaluator on at least 6 of these evaluations, and at least 75% of your opinions must be collaborated by toxicological results.

If no instructor is available you may still be able to complete an evaluation. Check with your DRE Provincial Coordinator or DRE Agency Coordinator to determine what polices pertain to this situation. The ultimate goal of this program is to remove the drugged driver from the roadway.

Remember, you must have a DRE Instructor present when you conduct an evaluation to receive credit for certification.

DRUG EVALUATION AND CLASSIFICATION PROGRAM

LOG OF DRUG INFLUENCE EVALUATIONS

Drug Recognition Expert _____ Page: _____

IACP Certification Number _____

Evaluation NUMBER	SUSPECT'S NAME	DATE OF BIRTH	DATE	OPINION OF DRE	TOXICOLOGIC RESULTS

SESSION XXVIII

LEGAL ENVIRONMENT

SESSION XXVIII Legal Environment

Upon successfully completing this session the student will o:

- o have an understanding of the history of impaired driving law within Canada.
- o have an understanding of the provisions Bill C-2 "Tackling Violent Crime" enhanced police powers dealing with drug impaired driving.
- o have an understanding of the Criminal Code provisions and how they relate to Standardized Field Sobriety testing.
- o have an understanding of the Criminal Code provisions and how they relate to the Drug Recognition Expert procedures.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Legislative History	Instructor-Led Presentations
B. New Provision of Bill C-2	Review of Criminal Code
C. Standardized field Sobriety Provisions	
D. Drug Recognition Expert Procedures	

A. History of Impaired driving law in Canada.

Canada first introduced legislation dealing with impaired driving in 1921, when "driving while intoxicated" became a summary offence under the Criminal Code. The new section of the Criminal Code set forth relatively lenient sanctions when compared to present day laws. An individual found guilty of driving while intoxicated was subject to a term not exceeding thirty days and not less than seven days for a first offence, for a term not exceeding three months and not less than one month, for a second offence, and for each subsequent offence for a term not exceeding one year and not less than three months

In 1930, impaired driving became a hybrid offence, on which the Crown could elect to proceed either as a summary conviction offence or by indictment. The prison terms for a summary offence remained unchanged, while the terms for an indictable offence became 30 days to three months for a first offence and, three months to one year for a subsequent offence.

In 1951 significant amendments were made to impaired driving legislation. The hybrid offence of driving while impaired by alcohol was added with a fine of not less than $50 and not more than $500 and up to 3 months imprisonment for a first offence. Fines were also introduced in the sentencing provisions of the new "driving while impaired" offence. The offence was either summary or indictable, with punishments ranging from a $50 to $500 fine, a maximum three-month prison term, or both, for the first offence, 14 days to three months' imprisonment for a second offence, and three months' to one year's imprisonment for each subsequent offence. The maximum sentence for either offence was one year's imprisonment.

In 1969, there were extensive changes to the Criminal Code, including the repeal of the offence of operating a motor vehicle while intoxicated and the establishment of the status offence of driving with a Blood Alcohol Content (BAC) of over 80 milligrams of alcohol in 100 milliliters of blood or 80 mg% a summary conviction offence. As well, refusing to provide a breath sample on an approved instrument was added with the same penalty as the over 80mg % offence.

Both the "over 80 mg %" offence and the "failure to blow" offence became hybrid offences in 1976. At the same time, breath sampling with roadside screening devices was added, when police officers have reasonable grounds to suspect that there is any alcohol in the driver's body. A hybrid offence was created for refusing to give a sample. Penalties for impaired driving, driving in excess of 80 mg %" and the refusal offences were harmonized.

In 1985 new amendments signaled a new phase, in the form of a rather dramatic toughening of the impaired driving sentencing provisions. First, the 1985 amendments created new offences of impaired driving causing bodily harm with a maximum punishment of 10 years in prison and impaired driving causing death with a maximum punishment of 14 years in prison. Second, the 1985 amendments raised the minimum

mandatory punishment for impaired driving, driving with a BAC "over 80 mg %" and refusing to provide a breath sample to $300 for a first offence, maintained 14 days imprisonment for a second offence and 90 days imprisonment for a subsequent offence. Finally, the 1985 amendments introduced a mandatory minimum driving prohibition of 3 months (first offence), 6 months (second offence) and one year (subsequent offences) as well as a maximum 10 year prohibition from driving following a conviction for impaired driving causing bodily harm or death.

While minor amendments to the Criminal Code took place between 1985 and 1999, Bill C-18 was passed by Parliament in 2000. This Bill raised the maximum sentence for impaired driving causing bodily harm from 14 years to life and added drug detection to the blood-sampling warrant provision, and removed driving while disqualified from the list of offences within the absolute jurisdiction of a provincial court judge.

B. New Police Powers Provided by Bill C-2 "Tackling Violent Crime" Enacted July 2nd 2008.

The provisions of Bill C-2 allowed peace officers to improve investigations of Criminal Code drug-impaired driving offences by authorizing police to demand:

1. Standardized Field Sobriety Tests (SFST), administered at the roadside, when there is a reasonable suspicion that a driver has a drug in the body.
2. Drug Recognition Expert (DRE) evaluations, when a police officer believes a drug-impaired driving offence was committed. This includes a situation where the driver fails the SFST. The DRE evaluations are administered at the police station.
3. A sample of bodily fluid, should the DRE officer identify that the impairment was caused by a class of certain drugs.

Refusal to comply with these demands would be a criminal offence, punishable by the same *Criminal Code* penalties for refusing a demand for an alcohol breath test.

C. Criminal Code Provisions and how they relate to Standardized Field Sobriety testing.

The Criminal Code provides authority in Section 254 (2) for peace officers to conduct physical coordination tests on drivers to determine if a demand can be made for a breath test in the case of alcohol or an evaluation by an evaluating officer in the case of alcohol and/or drugs.

Section 254(2) of the Criminal Code states;

"If a peace officer has reasonable grounds to suspect that a person has alcohol or a drug in their body and that the person has, within the preceding three hours, operated a motor vehicle or vessel, operated or assisted in the operation of an aircraft or railway equipment or had the care or control of a motor vehicle, a vessel, an aircraft or railway equipment, whether it was in motion or not, the peace officer

may, by demand, require the person to comply with paragraph (*a*), in the case of a drug, or with either or both of paragraphs (*a*) and (*b*), in the case of alcohol:
(*a*) to perform forthwith physical coordination tests prescribed by regulation to enable the peace officer to determine whether a demand may be made under subsection (3) or (3.1) and, if necessary, to accompany the peace officer for that purpose; and

(*b*) to provide forthwith a sample of breath that, in the peace officer's opinion, will enable a proper analysis to be made by means of an approved screening device and, if necessary, to accompany the peace officer for that purpose."

The peace officer conducting the investigation does not have to believe the person they are dealing with is impaired just that the person has alcohol and/or a drug in his/her body. The peace officer with the requisite suspicion should be the officer giving the demand for either physical coordination tests or a breath sample. Only officers who are trained in the Standard Field Sobriety test protocols can administer these physical coordination tests.

The Regulations of the Criminal Code state the physical coordination test that are to be conducted according to Section 254(2) are the following standard field sobriety tests;

- Horizontal Gaze Nystagmus
- Walk and Turn test
- One Leg Stand test

These are the field sobriety tests that will be used in Canada. This section allows a peace officer to conduct both physical coordination tests and allows for breath sampling utilizing an approved screening device if necessary.

Section 254(5) creates a refusal offence for refusing or failing to comply with a demand made under Section 254. This section states "**Everyone commits an offence who, without reasonable excuse, fails or refuses to comply with a demand made under this section.**"

D. Criminal Code provisions and how they relate to the Drug Recognition Expert procedures.

The Criminal Code provides specific authorities for the evaluating of and collecting of toxicological samples from drug impaired drivers. These provision allow specially trained and designated officers to conduct the testing and make certain demands of suspected drug impaired drivers.

Section 254(3.1) gives peace officers the ability to demand that drivers suspected of being impaired by drugs or a combination of drugs and alcohol submit to an evaluation by an evaluating officer. Any peace office can make the demand as long as he/she has reasonable grounds to believe an offence under 253(1) (a) and drugs or drugs and alcohol

are involved. There is no requirement that a Standardized Field Sobriety test be conducted on a driver if the peace officer has reasonable grounds to believe the party is impaired by a drug.

The section states " **If a peace officer has reasonable grounds to believe that a person is committing, or at any time within the preceding three hours has committed, an offence under paragraph 253(1)(*a*) as a result of the consumption of a drug or of a combination of alcohol and a drug, the peace officer may, by demand made as soon as practicable, require the person to submit, as soon as practicable, to an evaluation conducted by an evaluating officer to determine whether the person's ability to operate a motor vehicle, a vessel, an aircraft or railway equipment is impaired by a drug or by a combination of alcohol and a drug, and to accompany the peace officer for that purpose."**

The evaluation is a Drug Influence evaluation and must be conducted by an evaluating officer. An evaluating officer is defined in the regulations as a ***certified*** drug recognition expert accredited by the International Association of Chiefs of Police (IACP). Only officers who are designated and accredited by the IACP as evaluating officers can conduct a Drug Recognition Expert examination.

The tests to be conducted and the procedures to be followed during an evaluation under subsection 254(3.1) of the *Criminal Code* are;

(*a*) a preliminary examination, which consists of measuring the pulse and determining that the pupils are the same size and that the eyes track an object equally;
(*b*) eye examinations, which consist of
(i) the horizontal gaze nystagmus test,
(ii) the vertical gaze nystagmus test, and
(iii) the lack-of-convergence test;
(*c*) divided-attention tests, which consist of
(i) the Romberg balance test,
(ii) the walk-and-turn test referred to in paragraph 2(*b*),
(iii) the one-leg stand test referred to in paragraph 2(*c*), and
(iv) the finger-to-nose test, which includes the test subject tilting the head back and touching the tip of their index finger to the tip of their nose in a specified manner while keeping their eyes closed;
(*d*) an examination, which consists of measuring the blood pressure, temperature and pulse;
(*e*) an examination of pupil sizes under light levels of ambient light, near total darkness and direct light and an examination of the nasal and oral cavities;
(*f*) an examination, which consists of checking the muscle tone and pulse; and
(*g*) a visual examination of the arms, neck and, if exposed, the legs for evidence of injection sites.

If it has not already been done and the evaluating officer has reasonable suspicion he/she may demand a sample of breath to determine the subject's blood alcohol concentration. The section states **"If the evaluating officer has reasonable grounds to suspect that the person has alcohol in their body and if a demand was not made under paragraph (2)(*b*) or subsection (3), the evaluating officer may, by demand made as soon as practicable, require the person to provide, as soon as practicable, a sample of breath that, in the evaluating officer's opinion, will enable a proper analysis to be made by means of an approved instrument"** This is not a explicit section in the Canadian Criminal Code regulations and can only be done if the evaluating officer has suspicion the person has alcohol in his/her body.

During the evaluation, the evaluating officer at some points will ask the subject questions. The IACP DRE protocol, for example, explicitly includes asking some questions as part of step three (Preliminary examination) and step ten (Interview and Statements). Questioning is not, however, a prescribed part of the Canadian drug evaluation and classification process as set out in the legislation and regulations. The subject is not required to answer questions asked by the evaluator and not doing so does not constitute a refusal offence. The subject may voluntarily answer questions. The content of any utterances by an accused, which the Crown wishes to use at trial, would have to be shown to be have been made voluntarily and in accordance with the Charter cautions.

Evaluating officers, upon completion of the evaluation, can demand a toxicological sample from an accused driver for analysis. This demand can only be given if the evaluating officer determines **after and as a result of the evaluation** that the person is impaired by a drug or a combination of alcohol and drug. The toxicological samples can be blood, oral fluids or urine. **The choice of sample is made by the evaluating officer.**

The Criminal Code states **"if, on completion of the evaluation, the evaluating officer has reasonable grounds to believe, based on the evaluation, that the person's ability to operate a motor vehicle, a vessel, an aircraft or railway equipment is impaired by a drug or by a combination of alcohol and a drug, the evaluating officer may, by demand made as soon as practicable, require the person to provide, as soon as practicable, (*a*) a sample of either oral fluid or urine that, in the evaluating officer's opinion, will enable a proper analysis to be made to determine whether the person has a drug in their body; or (*b*) samples of blood that, in the opinion of the qualified medical practitioner or qualified technician taking the samples, will enable a proper analysis to be made to determine whether the person has a drug in their body."**

There is no Criminal or Civil liability for any medical practitioner or qualified technician for refusing to take a sample under this section as per Section 257 of the Criminal Code.

Refusing or failing to comply with any of the evaluating officers demands constitutes a criminal offence.

SESSION XXXI

PROFESSIONAL STANDARDS AND ETHICS WITHIN THE DRUG EVALUATION AND CLASSIFICATION PROGRAM

SESSION XXXI **PROFESSIONAL STANDARDS AND ETHICS WITHIN THE DRUG EVALUATION AND CLASSIFICATION PROGRAM**

Upon successfully completing this session the student will be able to:

A. Define the following terms as they relate to law enforcement and the DEC Program

1. Ethics
2. Morals
3. Professionalism

B. Identify and discuss what factors or influences are present in the following stages of the DEC Program.

1. Classroom Instruction
2. Alcohol Correlation Workshops
3. Certification Training

C. Given the 'codes' and 'rules' of the DEC Program, identify possible discipline options

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Definitions	Instructor-Led Presentations
B. Identification and Discussion	Participants- Led Presentations
C. Ethical Dilemmas	Interactive Discussion

A. Define the following terms as they relate to law enforcement and the DEC Program

Briefly review the definition of the following topics:

A. Ethics

Definition (Merriam-Webster Dictionary)

- The discipline dealing with what is good and bad with moral duty and obligation
- A set of moral principles: a theory or system of moral values, the principles of conduct governing an individual or a group < Professional ethics>, a guiding philosophy, a consciousness of moral importance.
- A set of moral issues or aspects (as rightness)

B. Morals

Definition (Merriam-Webster Dictionary)

- the moral significance or practical lesson (as of a story), a passage pointing out usually in conclusion the lesson to be drawn from a story
- moral practices or teachings, modes of conduct <Ethics>

C. Professionalism

Definition (Merriam-Webster Dictionary)

- The conduct, aims, or qualities that characterize or mark a profession or a professional person
- The following of a profession (as athletics) for gain or livelihood

The terms "moral" and "ethical" in our daily conversations are almost synonymous. Generally, *morality is the measure of conduct and ethics is the study of morals.1*

As Police Officers we have to abide by moral codes or "rules" of the society in which we work. This is classified as 'professional ethics".

The term "professionalism" is considered the most important moral parameter for all Police Officers. If an officer is professional, the officer is an example of one who stays within the rules of the law enforcement profession while at the same time enforces such laws.

Point out that these codes or rules are laid out through in each Police Agency's "Code of Ethics", the corresponding "Police Act" for that jurisdiction and the Agency's "Policy and Procedure Manual".

In addition, the International Association of Chiefs of Police (IACP) has adopted a set of standards that to the operation of the DEC Program. Presented in this document are the standards specifying the requirements for certification and recertification of DRE's and DRE Instructors; standards for decertification and reinstatement; and standards for agency participation. Also, for those agencies participating in the program, a set of administrative guidelines is provided

All candidates are to be reminded that while they are in attendance and participating in the DEC Program training, they are to abide by the 'codes' and 'rules' as outlined by their particular agency.

It may be important to highlight what these codes and rules are for IACP as a general guide?

Successful outcomes will only be ensured if the identification is done in a professional and ethical manner.

B. Identify and discuss what factors or influences are present in the following stages of the DEC Program.

1. Classroom Instruction

The Drug Evaluation and Classification program has received international recognition for its success in identifying the drug impaired driver. The goal of this program is to train and certify law enforcement personnel as Drug Recognition Experts (DREs). DREs are frequently called upon to differentiate between drug influence and medical and/or mental disorders. The Accredited DRE is an extremely valuable tool for combating the adverse impact of drug and alcohol impaired driving. **DRE School is extremely demanding**. To receive certification as a DRE, the following training must be completed:

Phase 1 – Standardized Field Sobriety Testing Course (SFST)

Phase 2 – 10 Day (80) hour DRE School

Phase 3 – Field Certification.

Or the Candidate may complete the ten (10) day "Accelerated" DRE Course which includes the SFST component in the curriculum.

Due to the demanding nature of the training and coupled with 80 hours of classroom instruction, difficulties have been identified in the classroom. These include but are not limited to:

- Dress and Deportment
- Class attendance and punctuality
- Lack of Professional etiquette for the Instructors, fellow students or

workshop volunteers

- Lack of effort on behalf of the candidate
- Incomplete assignments
- Evidence of poor performance
- Or other acts on the part of the Candidate that reflect discredit upon the Drug Evaluation and Classification Program.

Solicit the students' for any other Classroom Difficulties that may be encountered.

Print their responses on a chart.

Any act on the part of the Candidate that reflect discredit upon the Drug Evaluation and Classification Program or;
that can be deemed to be in contravention of the codes or rules of that Candidates Agency's "Code of Ethics", or;
the corresponding "Police Act" for that Candidates jurisdiction or;
the Candidates Agency's "Policy and Procedure Manual"
may be documented and could be used to remove the Candidate from the classroom/program or to assist an agency in following internal disciplinary or administrative procedures.

Remind the candidates that the Instructors are to be recognized as a **"Person in Authority"** As such, all instructors, regardless of their current rank or position, will garner the same respect and recognition as would a member of higher rank or position.

2. Alcohol Correlation Studies

Both the SFST and DRE ten-day courses require alcohol workshops and the use of volunteer drinkers. This testing includes participation of volunteers who will consume carefully measured quantities of alcohol and submit to examinations administered by the students. Without these volunteers, students have no opportunity to practice administering the tests under reasonably realistic circumstances, and they do not get an opportunity to practice 'interpreting' these tests.

Drinking volunteers are an essential resource for this training, however, they can be a difficult, even unpleasant, resource with which to work. Careful steps must be taken to insure that the volunteers contribute to a worthwhile learning experience, and suffer no harm themselves nor cause any harm to others.

Be cognizant that they are volunteering their time to ensure that you are appropriately educated. They deserve utmost respect and should be dealt with in a professional manner at all times.

Point out to the students that "The action of the individual officer reflect on every other officer".

- As you interact with the public, YOU as an individual become the agency you represent.

- The people you come in contact with will base their opinion of other officers and agencies on their experience with you.

Issues specific to the Alcohol Correlation studies to be aware of:

- The volunteers may be civilians and may have had negative experiences with Police Officers in the past.

- The subjects have been drinking alcohol. As a result they may become:
  - Agitated
  - Depressed
  - Extremely friendly or amorous towards the student or instructor.
  - Combative
  - Nausea or sickness

While the symptoms of a drinking person cannot be predicted there is an endless list of situations that can come up during these sessions.

Solicit the students' to identify other indicia they may encounter from a volunteer who has been drinking.

Print their responses on a chart.

Point out to the students that being "Professional" in these types of situations is the most effective way to make sound and ethical decisions.

Students are to be reminded that they seen as being in 'position of authority' when dealing with a volunteer

Issues such as, but not limited to, derogatory comments, sexual remarks, inappropriate fraternization or aggressive behavior on behalf of the student towards the volunteers will not be tolerated.

Any act on the part of the Candidate that reflect discredit upon the Drug Evaluation and Classification Program or;
that can be deemed to be in contravention of the codes or rules of that

**Candidates Agency's "Code of Ethics", or;
the corresponding "Police Act" for that Candidates jurisdiction or;
the Candidates Agency's "Policy and Procedure Manual"
may be documented and could be used to remove the Candidate from the classroom/program or to assist an agency in following internal disciplinary or administrative procedures.**

3. Field Certifications

The Third Phase of the DRE Training is the Field Certification.

Point out to the students that this training may take place at their home agency, at another Agency's facility or quite possibly out of the Country.
Eg. Maricopa County Jail, Phoenix-Arizona.

Remind the students that the 'Drug Impaired Volunteers" are to be treated with the same respect and professionalism that was accorded the 'volunteer drinkers'.

Any inappropriate comments or actions may be documented and used in an internal investigation as described earlier. As such, issues such as, but not limited to, derogatory comments, sexual remarks, inappropriate fraternization or aggressive behavior on behalf of the student towards the volunteers will not be tolerated.

It should be noted that the 'intensity' of the DRE Training remains high even during the Field Certification Phase. The limited time allotted to complete the training coupled with the high student costs make it imperative that the candidate arrive ready to complete the training.

Candidates attending Field Certification must:

- Arrive ready for duty. On time, proper dress and deportment (Properly groomed, mentally prepared and fit for duty)
- Have a fully stocked DRE Kit.
- Work hours deemed necessary by the Instructors to complete the Field Certifications
- Complete all Face Sheets and Narratives to the satisfaction of the Instructional Staff prior to departing the Certification Location

Solicit questions from students regarding the Professional Standards and Ethics Portion of the Drug Evaluation and Classification Program.

References

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