



DRE, SFST & Oral Fluid Devices

working together to keep our roads safe

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Drug Evaluation and Classification Program

National Traffic Services



Our New World

- Government set to legalize cannabis by July 2018
- After alcohol, cannabis the number one drug found in drivers. Recent studies show that approximately 33% of drivers killed in traffic collisions have a drug in their system.
- Experience from legal US states indicates we will see an increase of drivers with THC in their bodies
- How do we increase our ability to keep the roads safe



Sequence of detection

- Sequence to detect an impaired driver
 - Phase 1 - Vehicle in Motion
 - observe violation or unusual driving/behaviour
 - Phase 2 – Personal Contact
 - Use senses to detect impairment (Sight, Hearing, Smell)
 - Phase 3 – Pre-Arrest Screening/Opinion
 - 3 tools to assist in the decision making process
 - ASD
 - SFST
 - Oral Fluids (pending legislation)



Sequence of detection

- Not all tools may be required
 - With new legislation, should the officer have suspicion of drug impairment then an oral fluid screener can be used as an alternate tool to SFST.
- Decision based on totality of evidence
 - An arrest is dependent on the totality of all information acquired. Ex. ASD or SFST would not be required for a driver that stumbles out of his vehicle, in this instance an arrest may be made on observations alone.



- At present for drug impairment there is only SFST and DRE
 - Curriculum focuses on abilities needed for safe driving
 - A certified DRE/SFST is known as an Evaluating Officer and must be accredited by the International Association of Chiefs of Police (IACP) as per the Criminal Code Regulations. The tests that can be used are also set out in the Criminal Code Regulations.
 - The RCMP must follow and use the training/standards provided by the IACP.
 - The training legal sections are modified to reflect Canadian statutes/case law.
 - R vs. Bingley
- SFST
 - 3 tests performed at roadside to determine if a driver is impaired
 - 4 day training / \$1000/Student



- DRE
 - 12 step standardized and systematic process to determine if a motorist is driving while impaired by drugs and is performed primarily at a secondary location.
 - Stage 1: DRE Classroom - 10 day School
 - Stage 2: DRE Field Certification - 4 days
 - \$8000/Student
 - 12 evaluations on subjects under the influence of a drug in at least 3 of the 7 categories
 - Use an outreach clinic in Jacksonville, FL and a detention facility in Phoenix
 - Canadian sites
 - » Vancouver and Winnipeg.
 - » Toronto in assessment phase



New Science?

- DRE
 - Nothing in the DRE procedure is new or novel
 - Modified versions of tests physicians have used for decades
 - Direct relationship between vital signs and foreign substances



Canadian Program

- DRE
 - Approximately 600 currently active across Canada
 - 2 yr recertification process
 - There have been approximately 1500 police officers trained since the inception of the DRE program in 1995
 - Cost \$8000/student
- SFST
 - Makeup approximately 15% of all frontline officers in Canada.
 - No mandatory recertification process
 - Cost \$1000/student



SFST's

- Battery of three tests:
- Horizontal Gaze Nystagmus (HGN), Walk and Turn (WAT) and One Leg Stand (OLS) Tests.
- The training is focused on alcohol impairment.
- Existing validation studies show that if a person displays 4/ 6 clues on the HGN, 2/8 on the WAT and 2/4 on the OLS. 91% of the time they have a BAC over 80 mg%



What is HGN

- The involuntary jerking of the eye as it moves from side to side.
- There are 3 clues to the HGN test; lack of smooth pursuit, distinct and sustained nystagmus at maximum deviation, and angle of onset prior to 45 degrees. When observed in each eye it makes a total of 6 clues
- 4 of 6 clues on HGN are 83 percent reliable on their own for alcohol impairment over 80mg%



Lack of smooth pursuit



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Distinct and sustained nystagmus



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Angle of onset prior to 45 degrees



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Vertical nystagmus



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WAT and OLS

- The walk and turn and one leg stand are psychophysical tests used to divide a persons attention while assessing their physical coordination.
- 2 of 8 clues in the walk and turn are 79 percent reliable on their own for alcohol impairment over 80 mg %
- 2 of 4 clues in the one leg stand are 83 percent reliable on their own for alcohol impairment over 80mg%



DRE process

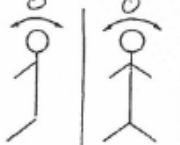
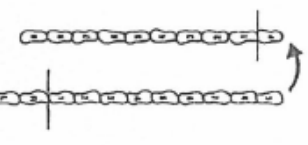
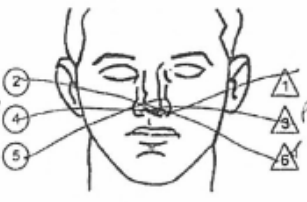
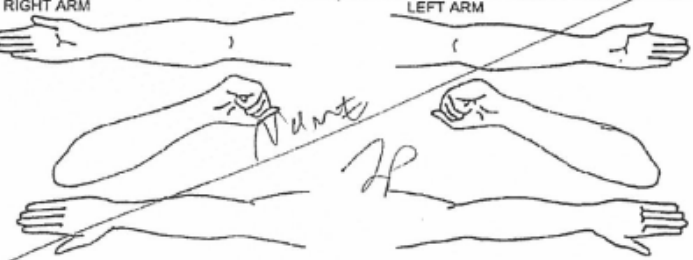
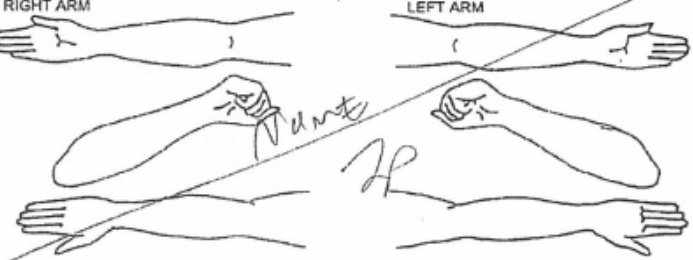
- 12 steps to a DRE evaluation
- 1- Breath Alcohol Test (Only if there is a suspicion of alcohol in the body)
- 2. Interview of arresting officer
- 3. Preliminary Examination (1st pulse, estimation of pupil size, ensuring equal pupil size)
- 4. Eye exams (HGN, Vertical Gaze Nystagmus, Lack of convergence)



DRE process cont.

- 5. Divided attention tests (Modified Romberg, WAT, OLS (both legs), Finger to Nose.
- 6. Clinical indicators and second pulse
- 7. Dark room checks of pupil size
- 8. Check of muscle tone
- 9. Check for injection marks and third pulse
- 10. “Interview” of accused, other observations
- 11. Opinion of evaluator
- 12. Toxicological sample (if applicable)



DRUG INFLUENCE EVALUATION				EVALUATOR	DRE NO	ROLLING LOG NO	
CRASH: <input type="checkbox"/> None <input type="checkbox"/> Fatal <input type="checkbox"/> Injury <input type="checkbox"/> Property				FILE #			
ARRESTEE'S NAME (LAST, FIRST, MI)		DOB (YY-MM-DD)	AGE	SEX	RACE	ARRESTING OFFICER (NAME, SERIAL/REG #)	
DATE EXAMINED/EVALUATED		BREATHER RESULTS		CHEMICAL TEST			
2016-04-28		Results N/A		<input type="checkbox"/> Urine <input type="checkbox"/> Oral fluid <input type="checkbox"/> Blood <input type="checkbox"/> Refused			
GIVEN BY: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes				What have you been drinking? How Much?		Time of last drink?	
Nothing				Bottle of Gatorade		11:30 PM	
Time now?	When did you last sleep? How long?	Are you sick or injured?		Are you diabetic or epileptic?			
3:30 pm	last night 3 hrs	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Do you have any physical disabilities?				Are you under the care of a doctor/dentist?			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Are you taking any medication or drugs?				ATTITUDE		COORDINATION	
Nope, not prescribed any				Co-operative		Fair	
SPEECH				BREATH		FACE	
clear, slowed				Nothing noted		Nothing noted	
CORRECTIVE LENS: <input checked="" type="checkbox"/> None <input type="checkbox"/> Glasses <input type="checkbox"/> Contacts, if so <input type="checkbox"/> Hard <input type="checkbox"/> Soft				Eyes: <input type="checkbox"/> Reddened Conjunctiva <input type="checkbox"/> Normal <input type="checkbox"/> Bloodshot <input type="checkbox"/> Watery		Blindness: <input checked="" type="checkbox"/> None <input type="checkbox"/> L. Eye <input type="checkbox"/> R. Eye	
PUPIL SIZE: <input checked="" type="checkbox"/> Equal <input type="checkbox"/> Unequal (explain)				Vertical Nystagmus: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Able to follow stimulus: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PULSE & TIME		HGN		Left Eye		Right Eye	
1. 88 bpm, 16:23		Lock of Smooth Pursuit		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
2. 49 bpm, 16:37		Max. Deviation		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3. 92 bpm, 16:44		Angle of Onset		N/A		N/A	
MODIFIED ROMBERG BALANCE				WALK AND TURN TEST			
							
Cannot keep balance				Stops too soon			
				Stops Walking			
				Kisses Heel - Toe			
				Steps off Line			
				Raises Arms			
				Actual Steps Taken			
INTERNAL CLOCK				Describe Turn		Cannot do Test (explain)	
39 Estimated as 30 sec				Improper Turn, full pivot on left foot 15 pm		Greater. N/A	
<input type="radio"/> Right <input checked="" type="radio"/> Left Draw lines to spots touched				PUPIL SIZE		REBOUND DILATION	
				Room (2.5-5.0)		Darkness (5.0-8.5)	
				Direct (2.0-4.5)		NASAL AREA	
				Left Eye		Right Eye	
				5.0mm		7.5mm	
				5.0mm		7.5mm	
				4.5mm		4.5mm	
						Nothing noted	
						Nothing noted	
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		REACTION TO LIGHT	
						Slow	
BLOOD PRESSURE				RIGHT ARM			
110/70				LEFT ARM			
TEMP							
36.6°C							
MUSCLE TONE: <input type="checkbox"/> Near Normal <input type="checkbox"/> Flaccid <input checked="" type="checkbox"/> Rigid				ATTACH PHOTOS OF FRESH PUNCTURE MARKS			
Comments:				Who were the drugs used? (Location)			
What medicine or drug have you been using?				How much?		Time of use?	
Weed using - this morning				0.2 grams		Noon	
DATE/TIME OF ARREST				TIME DRE NOTIFIED		EVAL START TIME	
2016-04-28 15:22 hrs				+3:15:22 hrs		15:55 hrs	
MEMBERS SIGNATURE				SERIAL/REG #		TIME COMPLETED	
						16:47 hrs	
OPINION OF EVALUATOR/				REVIEWED BY:			
<input checked="" type="checkbox"/> RULE OUT <input type="checkbox"/> ALCOHOL <input type="checkbox"/> STIMULANT <input type="checkbox"/> DISSOCIATIVE ANESTHETIC <input type="checkbox"/> INHALANT <input checked="" type="checkbox"/> OPERATIONAL <input type="checkbox"/> MEDICAL <input checked="" type="checkbox"/> DEPRESSANT <input type="checkbox"/> HALLUCINOGEN <input type="checkbox"/> NARCOTIC ANALGESIC <input type="checkbox"/> CANNABIS <input type="checkbox"/> TRAINING							



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DRE Matrix

	CNS DEPRESSANTS	INHALANTS	DISSOCIATIVE ANESTHETICS	CANNABIS	CNS STIMULANTS	HALLUCINOGENS	NARCOTIC ANALGESICS
HGN	YES	YES	YES	NO	NO	NO	NO
VERTICAL 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 (1)	NORMAL (4)	NORMAL	DILATED (6)*	DILATED	DILATED	CONSTRICTED
REACTION TO LIGHT	SLOW	SLOW	NORMAL	NORMAL	SLOW	NORMAL (3)	LITTLE OR NONE VISIBLE
PULSE RATE	DOWN (2)	UP	UP	UP	UP	UP	DOWN
BLOOD PRESSURE	DOWN	UP / DOWN (5)	UP	UP	UP	UP	DOWN
BODY TEMP	NORMAL	UP / DOWN NORMAL	UP	NORMAL	UP	UP	DOWN
MUSCLE TONE	FLACCID	FLACCID	RIGID	NORMAL	RIGID	RIGID	FLACCID



Approaches to Drug Testing

- Urine – reflects **past use** - collection ‘issues’
- **Blood** –is the ‘gold standard’ but currently Qualified Medical Practitioner must sign off that collection will not harm accused – **time delay can be critical when determining the concentration of a drug in the blood.**
- Oral Fluid reflects **recent use** and collection is viewed as **quick and easy** and ‘non-invasive’



What does OFD Test For...

- In a single test, device may screen for; Cannabis, Cocaine, and Methamphetamines, Sample carries any drug protein along the test strip and the antibodies on the strip bind to the drug to form a red line.
- Device: -10C to 60C / Tests: 5C to 40C



OFD Limitations

- Shows the **presence** of a drug / Does not show impairment
- OFD with per-se limit –could be an effective enforcement option
- Limited testing spectrum, cost increase as more drugs are tested
- Many prescription and OTC impairing drugs (diphenhydramine) are not tested for(Benadryl).



OFD complements DRE/SFST

- OFD another tool for police
 - Provides additional tool for screening.
- DRE detects impairment by any drug
 - synthetic opiates (fentanyl), prescription drugs, synthetic cannabinoids, etc



Where does this leave us..

- Canadian Center of Substance abuse (CCSA) – recommends Canada should have 2000-2200 DRE's.
- Supreme court Decision R vs. Bingley
- OF testing will be implemented pending the recommendation of standards from the Drugs and Driving Committee.
- Waiting on per se legislation
- The solution in the meantime is ramping up DRE and SFST training and providing training materials on “Drugs that Impair”



Training Initiative #1

Updating and implementing the new *Drugs That Impair* curriculum. Pilot will be conducted the week of October 23rd in Halifax.

- Training will focus on what are the most commonly seen clues that indicate recent drug use and impairment with a specific in-depth focus on Cannabis impairment.
- This training will immediately follow the SFST course.
- Provides the building blocks towards being able to detect a drug impaired driver.



Training Initiative #2

New online SFST and Drugs That Impair for already trained SFST officers.

-Will be delivered through CKPN with a goal to have it available by Jan 2018

-Provincial and Territorial Working groups have identified that some officers would appreciate and could use a online refresher of the theory involved in SFST.

-Many officers have never gotten the drugs that impair course and would benefit greatly in this information being given to them



Training Initiative #3

Online basic education session about drug impaired driving for non SFST trained members (in progress)

- Will be delivered through CKPN with a goal to have it available by March 2018
- As approximately only 15% of frontline police officers currently are trained in SFST. There is a need to advise all frontline police officers of the signs of drug impairment in relation to driving.
- The goal will be to provide sufficient information so that an untrained police officer will be able to identify when to ask for the assistance of a SFST / DRE trained officer.



Training Initiative #4

In person IACP certified SFST refresher.

- Will be delivered in class by SFST instructors. Will be ready to provide to P/T's in the near future.
- Consultations with Provinces and Territories identified that within the 15 percent of SFST trained members there is a percentage of people who are no longer comfortable with the skills that they have been taught. They have identified the need for an “in person” skills refresher as the SFST's are a perishable skill



Training Initiative #5

Oral Fluid Operators Course

- This training will be developed upon standards and an Oral Fluid Device being identified.
- 3 possible methods of training
 - - 5 day SFST/Drugs that Impair/ Oral Fluid Operators
 - - 2 Day Drugs that Impair / Oral Fluid Operators
 - - . 5 day Oral Fluid Operators course.
- Operator training will only be given to SFST trained members.





Questions and Discussion



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