“Detecting & Documenting Drug Impairment”

7 Drug categories and their observable effects - Field Impairment Testing

Generally drugs fit into 7 different categories:

- Central Nervous System (CNS) Depressants
- Inhalants
- Dissociative Anesthetics
- **Cannabis**
- CNS Stimulants
- Hallucinogens
- Narcotic Analgesics

Central Nervous System Depressants

"Slows down operation of the brain"

- **Combinations of these sub-categories**
- **Alcohol**
- **Barbiturates**
  (Secobarbital, Diazepam, Alprazolam, Nembutal)
- **Anti-Anxiety Tranquilizers (minor psychological probs. Librium, Valium, Halcion, Ativan, Restoril)**
- **Non-Barbiturates**
  (Chloral Hydrate "Mickey Finn", Soma, Quaaludes, Percobarb)
- **Anti-Psychotic Tranquilizers (major psychological probs. Lithium, Haldol, Thorazine)**

Depressants of the CNS are NOT "psychological" depressants.

ATIVAN BELONGS TO A CLASS OF DRUGS CALLED BENZODIAZEPINES.

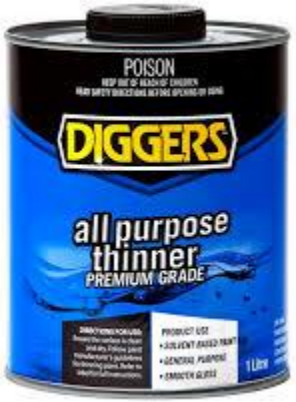
Benzodiazepines are central nervous system (CNS) depressants that work by slowing down activity in the brain and causing relaxation.

Inhalants

<u>"Variety of effects – oxygen blocker to the brain"</u>

- **Volatile Solvents**
  (model glue, paint, gasoline, thinners)
- **Aerosols**
  (hair spray, hydrocarbon gases, freon)
- **Anesthetic Gases**
  (ether, chloroform, nitrous oxide)

We wouldn't normally consider volatile solvents/aerosols (Inhalants) as "Drugs"

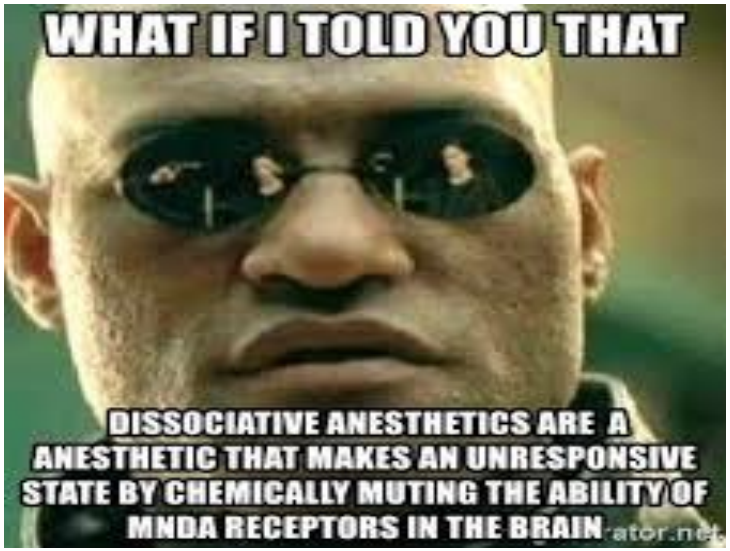


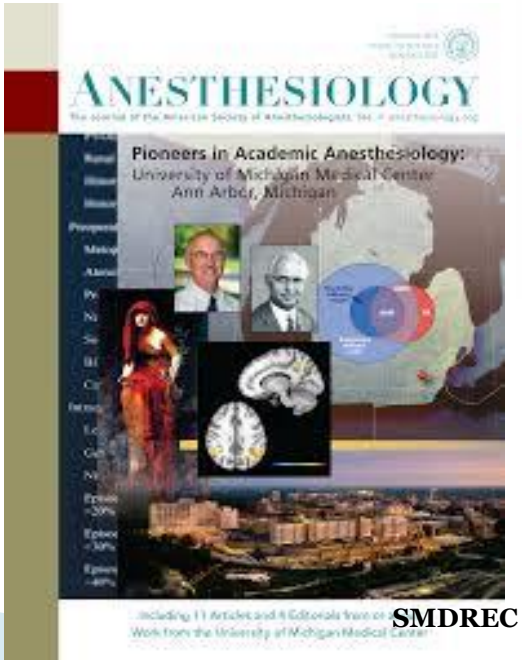
Dissociative Anesthetics

"Powerful anesthetic combining effects of depressants, stimulants and hallucinogens"

- **PCP and analogs of PCP**
- **Dextromethorphan**
- **Animal tranquilizers (Ketamine)**

D.A.'s "Detach" the brain from the body so to speak (nerve signals)





Cannabis

"Impairment of the attention process"

- **Marihuana**
- **Hashish**
- **Hashish oil**
- **Marinol**

Weed, Mary Jane, Skunk, 1000's…

Attention process awareness:

Attention process awareness:

Per se laws: Why don't the experts agree?

- Manisha Krishnan and this guy.

Cannabis impairment is characterized by :

- **Divided attention impairment.**
- **Poor coordination and balance.**
- ***Slowed* internal clock.**
- **Pupils usually dilated but may be normal.**
- **Reddening of the Conjuctiva.**
- **Diminished inhibitions or lack of situational awareness. (Drugs in plain view)**
- **Eyelid and body tremors.**
- **Residue in mouth.**
- **Odour on clothing, hair, belongings.**

Central Nervous System Stimulants

"Accelerate, elevate, speed up."

- **Cocaine (Coke, Crack)**
- **Amphetamines (Dexedrine, Desoxyn)**
- **Methamphetamines**
  (illicit amphetamines – Speed, Meth, Crystal, Ice)
- **Non-cocaine and non-amphetamine stimulants licit drugs or medications such as: Ritalin, Preludin, Cylert**

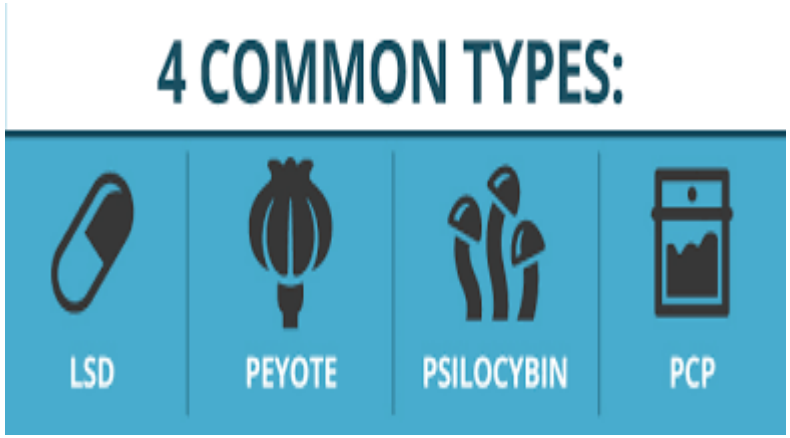
CNS Stimulants :

Hallucinogens

"Distortion of senses = hearing colours, seeing tastes etc."

- **Naturally occurring Hallucinogens (mescaline, peyote = *cactus*, psilocybin = *mushrooms* – *Bufotenin = Colorado river toads*)**
- **Synthetic Hallucinogens (LSD, MDA, MDMA-ecstasy)**

Hallucinogenic drugs :

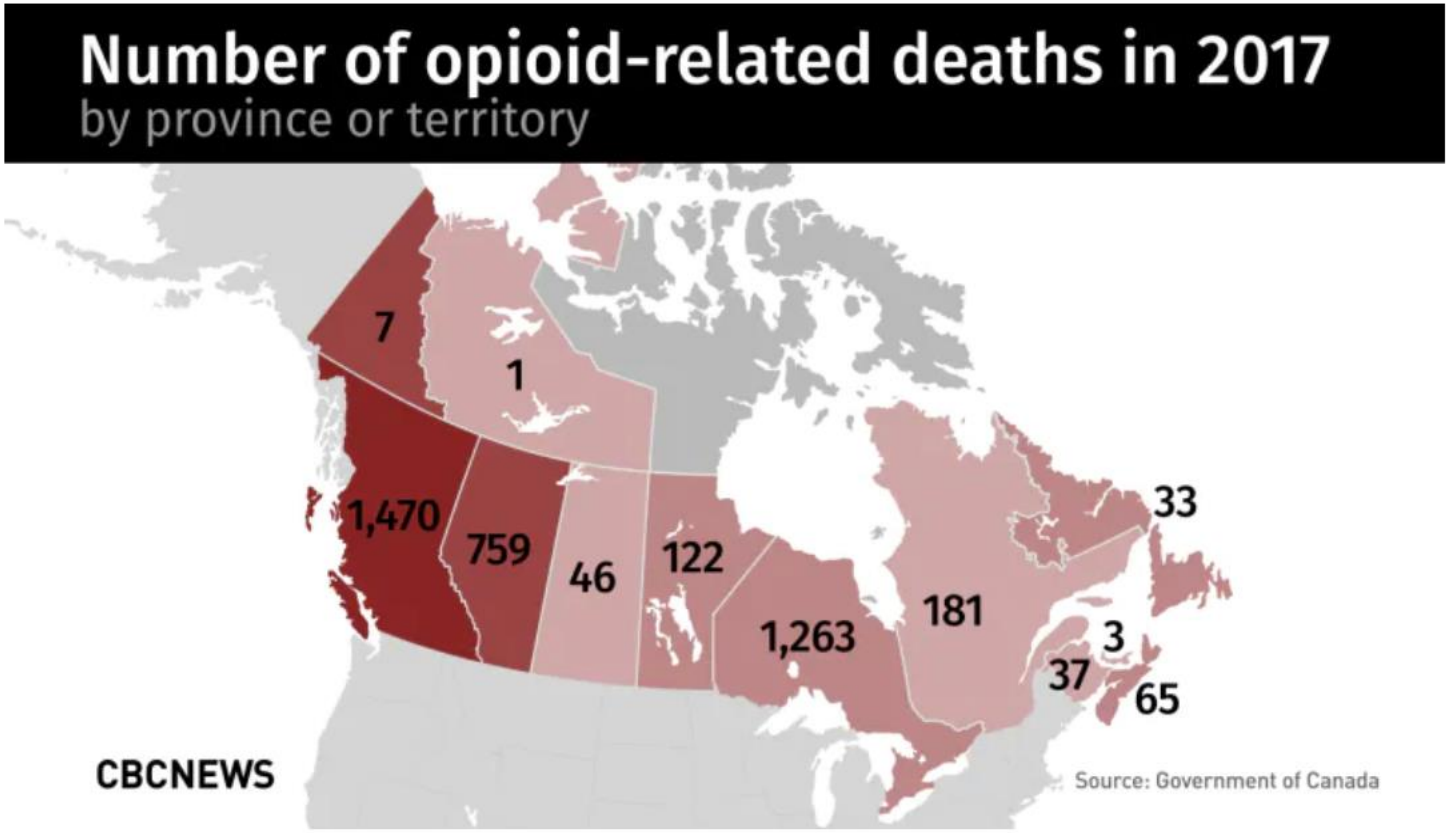


Narcotic Analgesics

"Pain relievers"

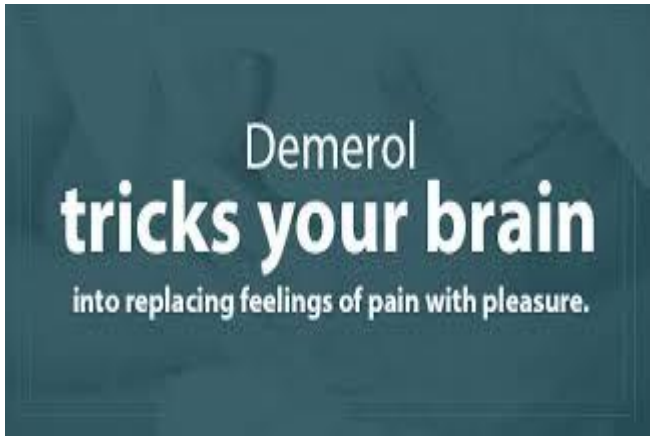
- **Natural Alkaloids of Opium**
  (Morphine, Codeine, Thebaine)
- **Opium Derivatives - chemically treated Natural Alkaloids.**
  (Heroin, Dilaudid, Hycodan, Percodan)
- **Synthetic Opiates**
  (Methadone, Demorol, Numorphan, Fentanyls, Talwin)

Canada's Opioide Crisis :



The numbers for apparent opioid-related fatalities show a national death rate of 10.9 for every 100,000 people in the population in 2017, up from 8.2 in 2016. (CBC/Government of Canada)

Can you see drug use ?



Poly Drug Use

Many substance abusers routinely use more than one drug at a time. There are innumerable studies that confirm the poly drug use phenomenon. The term "poly drug use" describes these and other examples of drug combinations.

Common combinations include:

- **Alcohol and anything….**
- **Cannabis and anything….**
- **Cocaine and Cannabis (Bush)**
- **Cocaine and Heroin (Speedball, Belushi, Mayo, Snowball)**
- **PCP and Cannabis (Happy Sticks, Killer, Killer Weed)**
- **Heroin and Amphetamine (Poor Man's Speedball)**
- **Heroin and PCP (Fireball)**
- **Crack Cocaine and PCP (Space base)**
- **CNS Depressants and Narcotic Analgesics**

How do we recognize impairment?

- There is no magic answer however every single one of us has 5 powerful tools at our disposition:
- **The 5 human senses.**
- **Sight** (what does the evaluator see)
- **Smell** (take notice of unusual odours)
- **Hearing** (elocution, statements, body process)
- Touch (possibly?)
- *Taste (let's not!)*

Recognizing impairment

- **Sight:**

- A manager, HR personnel, Union, corporate security, health and wellness.
- Any or each of these people may or may not be involved.
- What kinds of signs and symptoms did they see and/or note? Describe physical attributes.
- Note ALL observations from the beginning of your involvement specifically coordination and physical attributes.

Recognizing impairment

- **Smell:**

- The same involved parties may also note different smells.
- It can be helpful to try and determine if any odours are emanating from clothing or from the concerned individuals breath.
- Notes, use words that are meaningful to you to describe what you're smelling.

Recognizing impairment

- **Hearing:**

- Describe the subjects speech, give examples. ("Slurred speech" isn't good enough: phonetically spell out examples if need be)
- Note whether or not what's being said is logical given the current situation.
- Ask unusual or distracting questions, observe and note how these are handled.
- Body processes make sounds, note them.

Recognizing impairment

- **Touch:**

- Of course the idea of “touching” an employee can be somewhat, ahem, “touchy”.
- Possibly in the course of helping someone up, guiding as they walk, offering a chair etc.
- On-site nursing staff assisting with an injury?

- **Taste:** No. Just no!

Recognizing impairment

- All the information gathered, noted/written down, preserved, be it from:
- Co-worker witnesses/Complainants/Citizens
- Video surveillance
- The 3, possibly 4 of the 5 human senses
- **ALL OF IT** goes to the reasonableness of elevating suspicions of impairment to requiring the subject submit to FIT or other testing.

3 Senses can lead you to FIT !

- **Field Impairment Testing (FIT) is non invasive and highly reliable when properly <u>administered by qualified personnel.</u>**

- 3 FIT have been widely scientifically validated:
- **Horizontal Gaze Nystagmus Test**
- **Walk and Turn Test**
- **One Leg Stand Test**

- Others such as the **Modified Romberg Balance Test** and the **Finger to Nose Test** have proven very useful for gauging a subjects internal clock and sense of proprioception (how they situate themselves in space and time)

Horizontal Gaze Nystagmus

- **Nystagmus : involuntary jerking of the eyes as they gaze to the side caused by various drugs = CNS Depressants, Inhalants, Dissociative Anaesthetics**

- A simple test which checks the eyes for several different clues (tolerance doesn't negate) :

- **Lack** of smooth pursuit.
- Nystagmus at maximum deviation (D & S).
- Onset of nystagmus prior to 45 degrees.
- Vertical nystagmus?

Walk and Turn Test

- Consists of an instruction phase and a walking/counting phase
- This test divides a subjects attention
- The subject is placed in a standing heel to toe position to listen to scripted test instructions.
- The subject must then walk 9 heel to toe steps along a line, turn around in a prescribed manner and walk another 9 heel to toe steps.
- All whilst keeping arms at sides, looking at feet and counting out loud.

One Leg Stand Test

- Consist of providing scripted instructions to the subject.
- The subject will stand on the foot of their choice and raise the other about 6”.
- Whilst looking at the raised foot, keeping arms at sides and both legs straight will count out loud 1000-1, 1000-2, 1000-3 and so on until told to stop.
- No putting foot down, using arms for balance, swaying or hoping.

Modified Romberg Balance Test

- The test subject will:
- Stand heels and toes together arms at sides.
- Tilt head back.
- Close eyes.
- Estimate the passage of 30 seconds.

- The evaluator will time the test and observe for significant swaying side to side or front to back, and any other unusual signs like eyelid tremors, body tremors, muscle tone…

Finger to Nose Test

- The test subject will:
- Stand heels and toes together arms at sides.
- Tilt head back.
- Close eyes.
- Close hands, palms forward, index extended.
- Touch the tip of their nose with the tip of their index finger.

- The evaluator will dictate which hand to use in sequence L,R,L,R,R,L and will note the subjects performance, signs and symptomes.

FIT is divided attention testing

- From the time we wake up in the morning most tasks we perform require us to divide our attention among many external stimuli.

- A good divided attention test is:
  - 1 Simple to administer and perform
  - 2 Divides attention

  - Is it a perfect system?

FIT Validation

- Agreed it is not a "**perfect system**", best of luck with that: **It doesn't exist**!
- However, FIT is non invasive, is scientifically validated and holds to a high standard (CCC).
- In order for the test results to be "reliable or validated" **a significant requirement is that your test be properly administered.**
- Rigorous adherence to pre-established test administration protocols is a MUST!

FIT Limitations

- During the validation studies it was revealed that some people had difficulty with the W&T and the OLS tests
- They were:
- Over 65 year of age or
- Had back problems (ex: prior injuries…) or
- Leg problems (ex: bad knees, surgery…) or
- Inner ear problems (ex: balance issues…)
- Shoes with a heel over 2” should be removed
- More than 50lbs overweight (OLS Test only)

What has FIT accomplished?

- If we operate on the principle that:
- the CCC holds us to a higher standard/burden of proof than civil suits, WSIB, corporate policies and procedures and;
- FIT are reliable enough to elevate suspicion to R&PG to arrest, charge with criminal offences, suspend licences etc;
- ultimately taking away freedom for a period of time, or revoking a privilege we would normally enjoy;
- one would could conclude that **FIT are sufficiently reliable evidence of impairment** to suspend an employee or demand more invasive toxicological sampling.

Discussion & Questions

- **It's your time to shine!**
- General information on signs and symptoms by category follows.
- Always happy to help, we offer training for all staffing levels.
- Courses include general impairment awareness and Field Impairment Test training

- www.DREhelp.ca

Thank you very much for your attention and participation !

大成 DENTONS

When used in sufficient quantities CNS Depressants can cause:

- **Divided attention impairment.**
- **Poor coordination and balance.**
- **Droopy eyelids.**
- **Watery or bloodshot eyes.**
- **‘Drunken’ behavior.**
- **Thick, slurred speech.**
- **Uncoordinated, drowsy, disoriented.**
- ***Slow*** **internal clock.**
- **Normal pupil size.**
- **HGN usually present.**

In sufficient concentration Inhalants can cause:

- **Divided attention impairment.**
- **Poor coordination and balance.**
- **Disorientation, slurred speech.**
- **Distorted perceptions of time and distance.**
- **Unconsciousness.**
- **Nausea.**
- **Residue of substance present on face, hands, clothing.**
- **HGN present.**
- **VGN present at high dose for that individual.**
- **Pupil size normal or dilated.**

Dissociative Anesthetics

- **Divided attention impairment.**
- **Slow, slurred speech.**
- **Exaggerated or under-exaggerated movements.**
- ***Slowed* internal clock.**
- **Subject will have a blank stare.**
- **Cyclic up and down behavior.**
- **Agitation, excitement.**
- **Rigid muscle tone.**
- **Noticeable perspiration.**
- **HGN present, VGN generally present.**
- **Pupil size is normal.**

Central Nervous System Stimulants

- **Divided attention impairment (illicit drugs).**
- ***Fast* internal clock.**
- **Rapid and jerky movements.**
- **Pupils will be dilated. (possibly with licit as well)**
- **Restlessness, talkative.**
- **Grinding of teeth (Bruxism).**
- **Redness to nasal area, runny nose.**
- **Loss of appetite.**
- **Body tremors.**
- **Exaggerated reflexes.**
- **Euphoria excitation <u>self aggrandizing behaviours</u>.**

Hallucinogens

- **Severe divided attention impairment**
- **Poor perception of time and distance**
- **Uncoordinated**
- **Poor balance**
- **Disoriented internal clock**
- **Pupils will usually be dilated**
- **Hallucinations**
- **Piloerection**
- **Perspiring**
- **Body tremors**
- **Nausea**
- **Difficulty in coherent speech**
- **Paranoia**
- **This persons behaviour could seem really strange or scary to you!**

Narcotic Analgesics

- **Divided attention impairment**
- **Poor coordination and balance**
- **Slow internal clock**
- **Eyelids will be droopy – “on the nod”**
- **Low raspy speech**
- **Flaccid muscle tone**
- **Dry mouth**
- **Fresh injection sites**
- **Facial itching**
- **Pupils will be constricted**