

Dissociative Anesthetics



Dissociative Anesthetics

- ❖ Drugs that inhibit pain by cutting off or dissociating the brain's perception of pain**
- ❖ Induce a state of sedation, immobility, amnesia and analgesia**

Types of Dissociative Anesthetics

- ❖ **PCP**

 - **Analogs**

- ❖ **Ketamine**

- ❖ **Dextromethorphan (DXM)**

PCP - Phencyclidine

- ❖ Developed in the late 1950's
- ❖ An effective intravenous anesthetic
- ❖ Patented in 1963 under trade name of "Sernyl"
- ❖ Used in treating mental and psychological disorders



History of PCP

- ❖ Produced undesirable side effects
- ❖ Use as an anesthetic for humans was discontinued in 1967
- ❖ Re-patented in 1968 as an animal tranquilizer under the trade name of “Sernylan”



PCP

❖ **Psychedelic anesthetic**

❖ **Shared effects**

- **CNS Depressants (slurred speech, slow responses & nystagmus)**
- **CNS Stimulants (elevated vitals & restlessness)**
- **Hallucinogens**

PCP

- ❖ **Potassium cyanide and hydrochloric acid**
- ❖ **Easily absorbable in liquid**
 - **Transdermal**
 - **Eye drops**
- ❖ **Burns extremely hot**
 - **Mentholated “Super Kools” and “Sherms”**
 - **White paper stained brown**
 - **Brown paper with white crystals**

Ketamine

❖ Used as a rapid surgical anesthetic in both animals and humans

❖ Also used for burn victims



Methods of Ingestion



Orally



Insufflation



Transdermal



Smoked



Injection

DXM - Dextromethorphan

- ❖ Synthetically produced
- ❖ Found in numerous over the counter cough and cold products



DXM

- ❖ Effects similar to CNS Depressants, CNS Stimulants and Hallucinogens
- ❖ Chemically related to codeine



Methods of Ingestion



Orally



Insufflation



Injection

General Indicators

- ❖ Delirium
- ❖ Agitation
- ❖ Anxiety
- ❖ Rigid muscle tone
- ❖ Elevated blood pressure
- ❖ Convulsions
- ❖ Difficulty in speech
- ❖ Hallucinations
- ❖ Violent reactions
- ❖ Sensory distortions
- ❖ Chemical odor
- ❖ Perspiring
- ❖ Loss of memory

Onset and Duration - PCP

❖ Onset:

- Smoked: 1 - 5 min
- Injected: 1 - 5 min
- Snorted: 2 - 3 min
- Orally: 30 - 60 min

❖ Peak effects:

- 15 - 30 minutes

❖ Duration

- 4 - 6 hours

❖ Return to normal

- 24 - 48 hours



Onset and Duration - Ketamine

❖ Onset:

- **Smoked: Seconds**
- **Injected: 1 - 5 min**
- **Snorted: 5 - 10 min**
- **Orally: 15 - 20 min**

❖ Duration:

- **Smoked: Varies**
- **Injected: 30 - 45 min**
- **Snorted: 45 - 60 min**
- **Orally: 1 - 2 hours**



Onset and Duration - DXM

❖ Onset:

➤ Orally: 15 - 30 min

❖ Peak effects:

➤ 2 ½ hours

❖ Duration:

➤ 3 - 6 hours

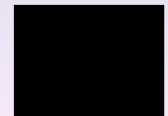


DXM - Plateaus

- ❖ 1st – Mild inebriation**
- ❖ 2nd – Alcohol intoxication**
- ❖ 3rd – Altered consciousness**
- ❖ 4th – Mind & body dissociation**

Overdose Signs

- ❖ **Deep coma (up to 12 hours)**
- ❖ **Seizure and convulsions**
- ❖ **Respiratory depression**
- ❖ **Heart attack**
- ❖ **Blank stare**



Drug Matrix Chart

HGN	Present *
VGN	Present
LACK OF CONVERGENCE	Present
PUPIL SIZE	Normal
REACTION TO LIGHT	Normal
PULSE RATE	Up
BLOOD PRESSURE	Up
BODY TEMPERATURE	Up
MUSCLE TONE	Rigid

* Immediate or resting possible with very high dose