Recreational Pharmaceuticals

Presenter: Doug Wildermuth
Working Definition of “Drug”

Any substance, which when taken into the human body, can impair the ability of that person.
On something?
Incidence and Characteristics of Drug Use in America (2012)

23.9 million Americans aged 12 or older were current illicit drug users and Marijuana is the most commonly used drug (was 21.6 million)

6.8 million people used prescription type drugs non-medically (was 7.0 million)

About 10.3 million illicit drug users admitted driving after using an illicit drug in 2012 (was 10.6 million)

Source: 2012 National Survey on Drug Use and Health (NSDUH)
Predominant Ages

Percent Using in Past Month

- 14-15: 3.6, 4.0
- 18-20: 9.0, 9.3
- 26-29: 23.1, 22.2
- 35-39: 8.0, 8.1
- 45-49: 6.5, 6.9
- 55-59: 5.4, 3.1
- 65+: 0.9, 1.1

2009 vs. 2010
Predominant Ages

The graph shows the percent of people using a certain product in the past month, categorized by age groups for the years 2011 and 2012. The age groups are labeled from 12-13 to 65+. The bars indicate the percentage of users in each age group for both years.
The Seven Drug Categories

Central Nervous System Depressants
Central Nervous System Stimulants
Hallucinogens
Dissociative Anesthetics
Narcotic Analgesics
Inhalants
Cannabis

? Drug Combinations ?
Interrelated Body Systems
How a Neurotransmitter Works

Steps are numbered sequentially:

1. Neuron makes a neurotransmitter
2. Vesicles store neurotransmitter
3. Neurotransmitter enters gap to transmit electrical impulse to receptor site
4. Receptor performs a function

Acetylcholine  Norepinephrine  Dopamine
GABA (gamma aminobutyric acid)
Glutamate  Serotonin  Endorphin
A Simple Concept of a Nerve
Video of Synaptic Clefts
The Concept of Tolerance for a Drug

1. The same dose of the drug will produce diminishing effects.

2. A steadily larger dose is needed to produce the same effects.
Eye Indicators

Pupil size is very important.

Pupillary reaction to light.
Eye Indicators

Horizontal Gaze Nystagmus (HGN) could be present.

Vertical nystagmus could be present with a high dose for that individual.
# Vital Signs Chart

<table>
<thead>
<tr>
<th>Vital Sign</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HGN</td>
<td>Present or not?</td>
</tr>
<tr>
<td>Vertical Gaze Nystagmus</td>
<td>Present or not?</td>
</tr>
<tr>
<td>Pupil Size</td>
<td>Normal, Miosis, Mydriasis?</td>
</tr>
<tr>
<td>Reaction to Light</td>
<td>Slow or sluggish, Normal?</td>
</tr>
<tr>
<td>Pulse Rate</td>
<td>Down, Elevated, Normal?</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>Down, Elevated, Normal?</td>
</tr>
<tr>
<td>Temperature</td>
<td>Normal</td>
</tr>
<tr>
<td>Muscle Tone</td>
<td>Flaccid, Rigid</td>
</tr>
</tbody>
</table>
Common Signs of Drug Use

- Verbal and/or physical abuse
- Moody
- Secretive behavior
- Withdrawal from family & friends
- Lack of sleep, personal hygiene and appetite
- Too hyperactive or too little energy
- Weight loss or gain
- Loss of interest in work or simple tasks
Masking Medical Conditions

- Diabetes
- Conjunctivitis
- Multiple Sclerosis & similar conditions
- Shock
- Head Trauma
- Stroke
QUESTIONS?
Central Nervous System
Depressants
Alcohol is the MOST ABUSED DRUG in the United States

Alcohol is a CNS Depressant

DITEP – Drug Impairment Training for Educational Professionals
What We Do For Alcohol?
Major Types of Non-alcohol CNS Depressants

- Barbiturates
- Non-Barbiturates
- Anti-Anxiety Tranquilizers
- Anti-Depressants
- Anti-Psychotic Tranquilizers
- Combinations
**Xanax Tablets**

- Upjohn
- 0.25 mg 29*
- 0.5 mg 55*
- 1.0 mg 90*

Xanax® Tablets
(alprazolam tablets, USP)

**Valium Tablets**

- Roche
- 2 mg
- 5 mg
- 10 mg

*† Valium®
(diazepam/Roche)

**Phenobarbital**
Gamma-Hydroxy Butyrate (GHB)

Rohypnol

Prozac
Methods Of Ingestion

*Oral* - principle method of ingestion

*Injection*
**Possible Effects of CNS Depressants:**

- Reduced inhibitions
- Divided attention impairment
- Slowed reflexes
- Impaired judgment and concentration
- Impaired vision
- Lack of coordination
- Slurred mumbled or incoherent speech
- Emotional instability
Central Nervous System Stimulants
Subcategories of CNS

Stimulants

Cocaine
Packaged Rocks of Crack Cocaine
Coca Plant

“Erythroxylon Coca”
Coca Leaves
Subcategories of CNS
Stimulants (continued)

The Amphetamines
- Methamphetamine
- Amphetamine Sulfate
- Desoxyn
ERROR: stackunderflow
OFFENDING COMMAND: ~
ERROR: stackunderflow
STACK: