Lecture 7b

Drug Altered States of Consciousness

Drugs: altering states of Consciousness
- Psychoactive Drug
  - a chemical substance that alters perceptions and mood
- Physical Dependence
  - physiological need for a drug
  - marked by unpleasant withdrawal symptoms
- Psychological Dependence
  - a psychological need to use a drug
  - for example, to relieve negative emotions

Dependence and Addiction
- Tolerance
  - diminishing effect with regular use
- Withdrawal
  - discomfort and distress that follow discontinued use

Psychoactive Drugs
- Depressants
  - drugs that reduce neural activity
  - slow body functions
    - alcohol, barbiturates, opiates
- Stimulants
  - drugs that excite neural activity
  - speed up body functions
    - caffeine, nicotine, amphetamines, cocaine

Psychoactive Drugs
- Hallucinogens
  - psychedelic (mind-manifesting) drugs that distort perceptions and evoke sensory images in the absence of sensory input
    - LSD

Psychoactive Drugs
- Barbiturates
  - drugs that depress the activity of the central nervous system, reducing anxiety but impairing memory and judgment
Psychoactive Drugs

- Opiates
  - opium and its derivatives (morphine and heroin)
  - opiates depress neural activity, temporarily lessening pain and anxiety

- Amphetamines
  - drugs that stimulate neural activity, causing speeded-up body functions and associated energy and mood changes

Psychoactive Drugs

- Ecstasy (MDMA)
  - synthetic stimulant and mild hallucinogen
  - both short-term and long-term health risks
- LSD
  - lysergic acid diethylamide
  - a powerful hallucinogenic drug
  - also known as acid
- THC
  - the major active ingredient in marijuana
  - triggers a variety of effects, including mild hallucinations

Caffeine - FMRI

Subjects performing a task with no caffeine
Subjects performing a task after taking caffeine

Cocaine on the Brain

Cocaine also blocks Sodium receptors, in some areas; Long term effects are a decrease in activity.

Effects of ecstasy on the brain
**PET of marijuana users**

Marijuana abuser: a long term user of marijuana

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**Psychoactive Drugs**

A 1973 guide to selected psychoactive drugs:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Type</th>
<th>Pleasurable Effects</th>
<th>Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>depressant</td>
<td>Alcohol-induced nausea and intoxication</td>
<td>Nausea, increased anxiety, diaphoresis, hangovers</td>
</tr>
<tr>
<td>Marijuana</td>
<td>stimulant</td>
<td>Increased drowsiness and flickers</td>
<td>Depression, anxiety, irritability, increased appetite</td>
</tr>
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**Trends in Drug Use**

High school seniors reporting drug use:

- Alcohol
- Marijuana
- Hashish
- Cocaine

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**Perceived Marijuana Risk**

Perceived “great risk of harm” in marijuana use:

- Used marijuana

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