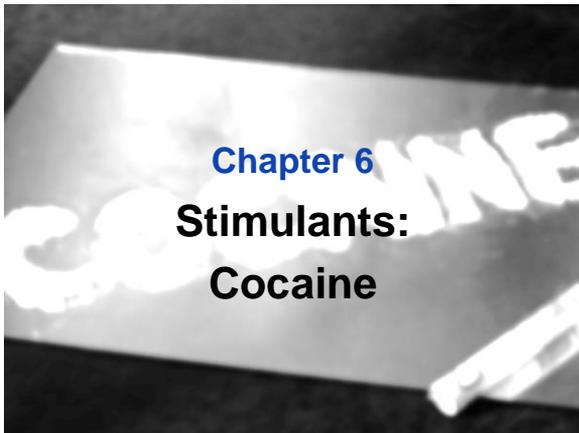


SOCI 270
Drugs, Society and Behavior

SPRING 2016
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Stimulants

- Stimulants, sometimes called “uppers,” are substances that keep a person going mentally and physically.

Examples:

- Cocaine** and **amphetamine** are restricted stimulants
- Caffeine** and **nicotine** are readily available stimulants



1. History of Cocaine

b. Early Capitalization: 1900-1914

- ii. Coca extract was later used in the United States in **Coca-Cola** and in many patent medicines.
- iii. By 1900, Americans could walk into any pharmacy and purchase a gram of pure cocaine for 25 cents. Cocaine was one of the country's five best-selling pharmaceuticals that year.



1. History of Cocaine

c. Medical History:

i. Local anesthesia: Dr. W. S. Halsted

- 1. Experimented with ability of cocaine to produce local anesthesia
 - Delivered via newly developed hypodermic syringe
- 2. Cocaine's active ingredient was isolated before 1860
- 3. Processing 500 kilograms of coca leaves yields 1 kilogram of cocaine



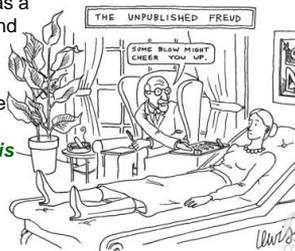
Drying coca leaves

1. History of Cocaine

c. ii. Early psychiatric uses:

Sigmund Freud

- 1. Studied use of cocaine as a treatment for depression and morphine dependence
- 2. Later opposed use of the drug after nursing a friend through **cocaine psychosis**



2. Legal Control of Coke

a. Early Control:

- i. 46 states passed **laws to regulate cocaine between 1887 and 1914**
- ii. Press and politicians made unsubstantiated claims about cocaine use among southern blacks:
 - Widespread
 - Associated with increased violent crime
- iii. Negative publicity about cocaine influenced the passage of the **1914 Harrison Act**

2. Legal Control of Coke

b. Contemporary Legal Controls on Cocaine

- i. Cocaine use began to **increase** again at the end of the **1960s**
- ii. **Prior to 1985**, the major form of the drug available was **cocaine hydrochloride**, snorted.
 - Cocaine was relatively expensive (\$100 a bag) and its use was associated with **status, wealth, and fame**
- iii. Then in the **late 80s** an inexpensive (\$5 to \$10 a hit) form of **smokable cocaine** became available — **crack**.
 - Smoked cocaine has a greater abuse potential than snorted cocaine



2.b. Legal Control of Coke

- iv. Media and politicians focused on **crack** use among **urban blacks**
 - Associated with violence and dependency
- v. **Anti-Drug Abuse Acts of 1986 and 1988**
 - Penalties for sale of crack cocaine significantly (100x) more severe than penalties associated with powder cocaine
 - Tougher penalties for first-time users of crack
- vi. **Concerns about federal cocaine sentencing policy**
 - Does it overstate the seriousness of most crack cocaine offenses? 100:1 sentencing (now 18:1)
 - Does it disproportionately affect the black community?
 - Is the “war on drugs” an **institutionalized form of racism**?

3. Forms of Cocaine

a. Coca paste

- i. Crude extract created during the manufacture of cocaine
- ii. Can be mixed with tobacco and smoked



b. Cocaine hydrochloride

- i. Most common form of pure cocaine
- ii. Stable water-soluble salt

Street names:
Nose Candy Snow
Powder White
Coke Lady
Blow Snowbirds
Big C Cookie

3. Forms of Cocaine

c. Freebase

- i. Prepared as a chemical base
- ii. Can be heated and the vapors inhaled



d. Crack or rock

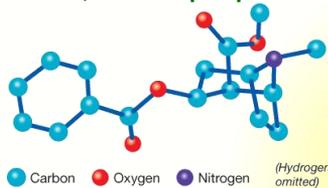
- i. Lumps of dried, smokable cocaine
- ii. Prepared by mixing cocaine with water and baking soda



4. Cocaine Practicum

a. Mechanism of Action

- i. Chemical structure does not tell us how or why cocaine affects the brain
- ii. Cocaine **blocks reuptake of dopamine, serotonin, and norepinephrine**



4. Cocaine Practicum

b. Modes of Administration

i. Chewing or sucking coca leaves

- Slow absorption and onset of effects

ii. "Snorting" through nasal mucous membranes

- Rapid absorption and onset of effects

iii. Injected intravenously

- Rapid and brief effects

iv. Smoked

- Rapid and brief effects



Source: *Better Off Dead* (1985)

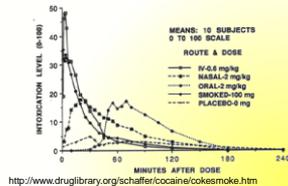
4. Cocaine Practicum

c. Elimination (metabolic breakdown)

i. Cocaine's **specific effects** are relatively short lived (**20-80 mins**)

ii. Cocaine is **metabolized by enzymes in the blood and liver**

iii. Major **metabolites** (detected by drug screens) have a half-life of **eight hours**



4. Cocaine Practicum

d. Potential Beneficial Uses

i. **Local anesthetic** properties of cocaine were discovered in 1860, but the drug was not used medically until 1884;

ii. Synthesized drugs (*novocaine*, *benzocaine*, *xylocaine*) have largely replaced cocaine for medical use; they are *not* derivatives of cocaine

iii. Cocaine remains in use for surgery in the **nasal, laryngeal, and esophageal regions.**

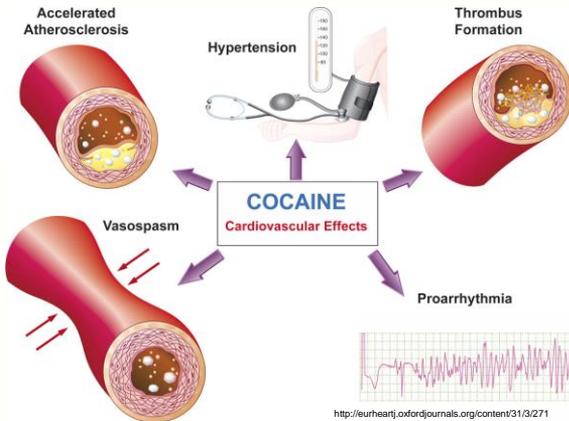


5. Causes for Concern

a. Acute Toxicity

Acute cocaine toxicity causes **profound CNS stimulation**, which can lead to respiratory or cardiac arrest

- i. Significant **individual variation** in the uptake and metabolism of cocaine
 - Difficult to estimate the size of a lethal dose
- ii. Rare, severe, and unpredictable reactions can cause **cardiac failure**
- iii. Cocaine **combined with alcohol** can cause the formation of the toxic chemical **cocaethylene**



5. Causes for Concern:

b. Chronic Toxicity

Risks of chronic cocaine snorting

- i. Damage to the nasal septum
- ii. Damage to the heart muscle

iii. Paranoid psychosis



5. Causes for Concern

- c. **Dependence** occurs in some users
 - i. Animal and human studies have shown that cocaine is a **powerfully reinforcing drug**
 - ii. Some people experience **withdrawal symptoms**

Addiction Rates of Crack Cocaine



5. Causes for Concern

- d. **Cocaine use during pregnancy**
 - i. **Increased risk** of miscarriage and torn placenta
 - ii. Long-term effects of prenatal cocaine exposure **still under study**



Infant exposed to cocaine being monitored in ICU

6. The War on Drugs: Cocaine

- a. **Supply of Illicit Cocaine**
 - i. Readily available in all major U.S. cities
 - ii. Street cocaine averages about 50-75 percent pure
 - iii. Most illicit cocaine comes from Peru, Bolivia, and Columbia



Seized cocaine



Coca Commerce

The town of Peñas Coloradas is a commercial center for the isolated settlements along a 90-mile (150-kilometer) stretch of the Caguan River. Surrounded by tropical forest, the river is the area's only highway. A fleet of boats—La Línea, or the Line—provides transport, but getting supplies into the region this way is expensive.

6. The War on Drugs: Cocaine

b. Mexico

The U.S.-Mexico border is where the majority of cocaine enters America.

- i. Mexican drug **cartels have increased violence** in recent years to protect their business turf.
- ii. Analysts estimate that wholesale earnings from illicit drug sales range from **\$13.6 billion to \$49.4 billion annually**
- iii. **35,000 people have died** in the violence over **last 5 years** (5 people every day).



7. Cocaine: Current Use and Future Trends

a. 2006 surveys indicate that **about 2 percent of American adults currently use cocaine**

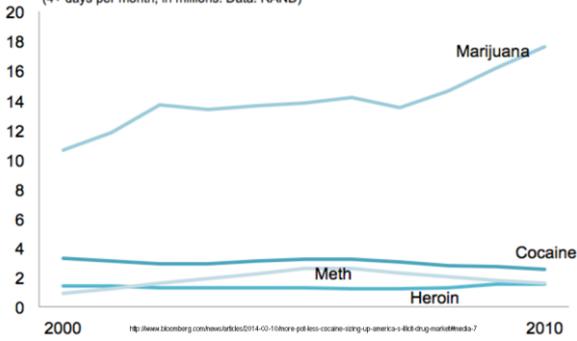
- Down from a high of 7 to 9 percent in the 1980s

b. Usage rates of cocaine and amphetamine tend to **cycle** in opposition to each other

7. Cocaine: Current Use

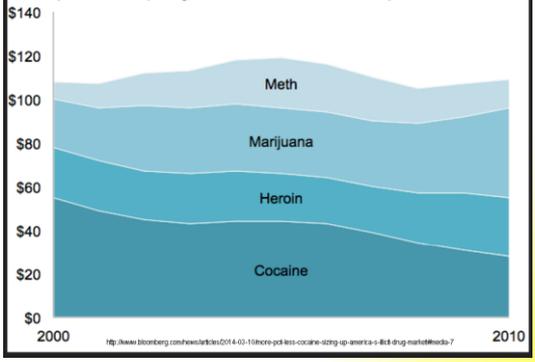
Chronic Drug Users

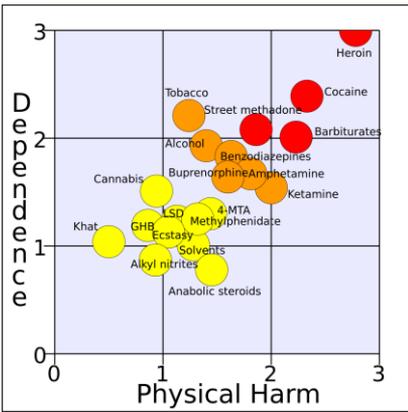
(4+ days per month, in millions. Data: RAND)



What America Spends On Drugs

(Estimated retail spending, in billions of 2010 dollars. Data: RAND)



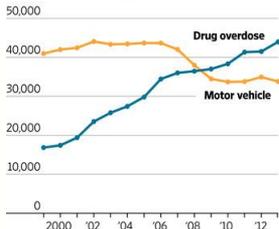


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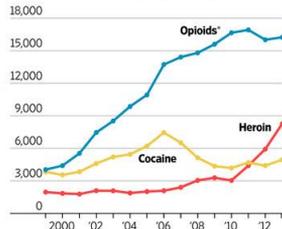
Growing Toll

The increase in drug-related deaths in America has become a topic of conversation for both parties in the 2016 presidential election campaign.

Motor vehicle and drug overdose deaths



Drug overdose deaths by type of drug



*Includes hydrocodone, oxycodone, morphine, codeine and others
Source: Centers for Disease Control and Prevention

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