

COCAINE

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Did you know...

- Today, 2,500 Americans will try cocaine for the first time.
- The U.S. sells cocaine for at least 100 dollars per gram.
- Worldwide sales of cocaine earns more than Microsoft, McDonald's, and Kellogg's combined.
- Taking cocaine increases the chance of having a heart attack within the hour by 2,400%.
- While less than 5% of the world's population lives in the U. S., they consume almost 37% of the world's cocaine.



What Is Cocaine?

- Highly addictive drug that made its start as a painkiller
- “Powder made from coca leaves often mixed with...”
 (“What is Cocaine”)
 - cornstarch
 - talcum powder
 - sugar
 - procaine (local anesthetic)
 - amphetamines

Nicknames

Cocaine can also be known as:

- Coke
- Powder
- Nose Candy
- Flake
- Smack
- Baseball
- Snow
- Big Rush
- Bump
- Blow
- Pearl
- Line
- White
- Candy
- Rail
- Toot
- Cola
- Stash
- Base
- Big Flakes
- Basa
- Yeyo



Paraphernalia: Snorting



“In most cases, these items are not purchased but instead are everyday items that are repurposed for drug use and abuse.” (“Paraphernalia...”)

- Clear bags or vials.
- Rings, necklaces, a pen
- a CD case or mirror.
- ID, credit card, or razor.
- A hollow tube to snort the drug with, usually a small piece of straw or rolled up dollar bill.
- A small lever to snort a “bump”, often a pen cap or key (white residue often remains).

Paraphernalia: Smoking

- Rolling papers.
- Large plastic bags with stems or seeds.
- Cigars, cigar wrappers, and tobacco from cigars.
- A bong or marijuana “bowl” pipe.



Paraphernalia: Injecting

- A cooker, usually a small metal round vessel with a trash tie secured around it to facilitate holding it over a lighter (“cooks” the cocaine or dissolves it in water before injecting).
- Needles, usually disposable and plastic.
- Lighters, usually disposable.
- Tie



Short-Term Effects

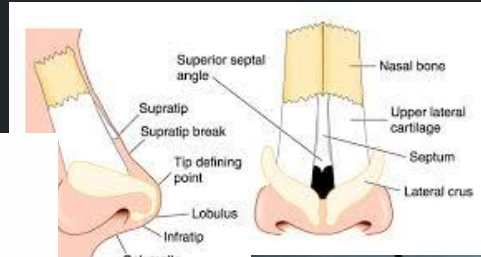
- “Cocaine makes the user feel euphoric, energetic, talkative, and mentally alert, especially to the sensations of sight, sound, and touch.(“What is Cocaine?”)
- Temporarily decreases the need for food and sleep.
- Physiological effects:
 - Constricted blood vessels.
 - Dilated pupils.
 - Increased body temperature, heart rate and blood pressure.
 - Bizarre, erratic, and violent behavior.
 - Restlessness, irritability, anxiety, panic, and paranoia.
 - Tremors, vertigo, and muscle twitches.
 - Cardiovascular effects: disturbances in heart rhythm and heart attacks.
 - Neurological effects: strokes, seizures, headaches, and coma.
 - Gastrointestinal complications: abdominal pain and nausea.
 - Cardiac arrest or seizures followed by respiratory.
 - Sudden death.



Long-Term Effects

- Snorting Cocaine:

- Loss of sense of smell
- Nose bleeds
- Problems with swallowing
- Hoarseness
- Irritation of the nasal septum; chronically inflamed runny nose



- Ingested Cocaine:

- Severe bowel gangrene; due to reduced blood flow

- Injected Cocaine:

- Puncture marks called “tracks” in forearms
- Allergic reactions to the drug or some additive in street cocaine resulting in death.



- Chronic Cocaine Users:

- loss of appetite
- significant weight loss
- malnourishment





1 AGE: 22



2 AGE: 23



1 AGE: 30



2 AGE: 32



Cocaine Abuse Will Affect You Mentally and Physically

How Cocaine Affects the Body

<http://learn.genetics.utah.edu/content/addiction/mouse/>

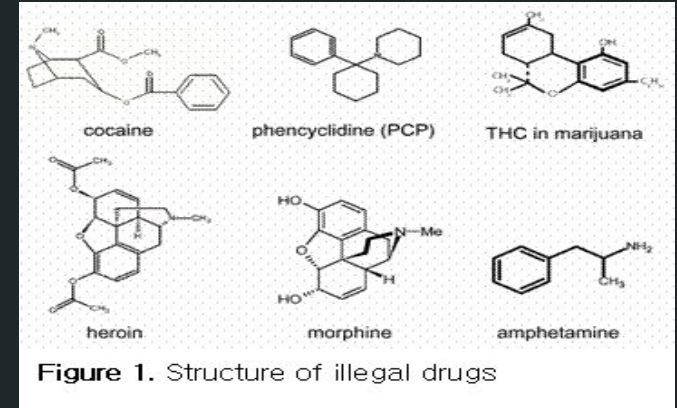
1. “Dopamine transporters are responsible for removing dopamine molecules from the synaptic cleft after they have done their job.
2. Cocaine blocks these transporters, leaving cocaine trapped in the synaptic cleft. As a result, dopamine binds again and again to the receptors over stimulating the cell.
3. Like other drugs, cocaine concentrates in the reward pathway. However, it is also active in the part of the brain controlling voluntary movements. This is why cocaine users are fidgety and unable to stay still.” (“Mouse Party”)

Analyzation and Identification: Forensic Drug Analysis

Two steps:

1. Screening
2. Confirmation

- a. Gas Chromatography (GC): “ separation of volatile samples by their unique affinity for the column” (“Forensic Drug Analysis”)
 - i. drug compounds identified by their retention times when samples are passed through chromatographic columns
- b. Mass Spectrometry
 - i. structures of unknown compounds can be identified if they have been separated by GC
- c. HPLC
- d. FTIR
- e. UV/Vis



Analyzation and Identification: Cocaine

1. Color Test

- Reagent 1: Dissolve 1.0 g cobalt thiocyanate in 50 ml of 10% acetic acid, then add 50 ml of glycerine
- Reagent 2: Hydrochloric acid (concentrated)
- Reagent 3: Chloroform

Method:

- Step 1: Place a small amount of the suspected material in a test tube. Add 5 drops of Reagent 1 and shake. Cocaine related substances produce a blue precipitate and a blue solution.
- Step 2: Add a drop of Reagent 2 and shake the mixture for a few seconds. The blue solution should turn pink.
- Step 3: Add 5 drops of Reagent 3 and shake. If cocaine is present, the lower chloroform layer will develop an intense blue colour, while the upper layer will be pink.



Analyzation and Identification: Cocaine

2. Platinic Chloride Test

- Reagent: Dissolve 1 g of platinic chloride in 20 ml of distilled water

Method:

- Place 2 drops of sample solution on a clean microscope slide
- Place 2 drops of the reagent near the drops of the sample and use a glass rod to create a tiny channel connecting the solutions.
- Observe the reaction and resulting crystals without a cover
- slip at 100-200 magnification using a polarized microscope.



Results:

“Cocaine forms V-shaped long, thin needles with branching”
 (“Research Methods...”)

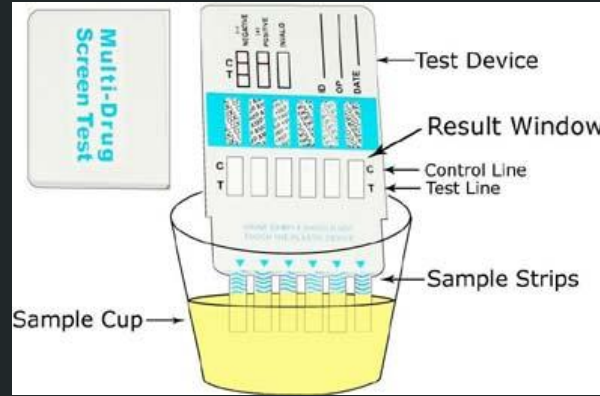
Analysis and Identification

TEST 1: URINE TEST

TEST 2: ORAL FLUID SWAB

TEST 3: SWEAT PATCHES

TEST 4: HAIR SAMPLES



Laws and Penalties

- “Simple” Possession
 - If he or she knowingly has cocaine on his or her person or under his or her personal, physical control.
- “Constructive” Possession
 - legal control over the drug.
 - the prosecutor must prove that the defendant had the power and intent to control the substance, and knowledge that the substance was cocaine.



Laws and Penalties



- Cocaine Possession Penalties:

- A person with no prior convictions of possession of any narcotic who is convicted of a first offense of cocaine possession may be sentenced to not more than one year in prison, fined not less than \$1,000, or both.
- A person convicted of cocaine possession after a prior conviction of cocaine or any other narcotic may be sentenced to not less than 15 days and not more than two years in prison, fined not less than \$2,500, or both.
- Two or more prior convictions of any narcotic may lead to a sentence of not less than 90 days in prison, a fine of not less than \$5,000, or both.
- The term of imprisonment and the amount of the fine may be affected by the quantity of the drug seized.
- A charge of possession with intent to distribute (sell) cocaine greatly increases the penalties.