Teacher Fact Sheet: Cocaine

Cocaine comes from the leaves of the coca plant, which grows primarily in Peru and Bolivia. Cocaine is a powerfully addictive drug that is snorted, sniffed, injected, or smoked. **Cocaine is a stimulant that directly affects the brain.** Cocaine and other stimulants (such as methamphetamine) cause an accumulation of the neurotransmitter dopamine in the brain. This excessive dopamine concentration appears to produce the stimulation and euphoric feelings in the user.

According to the Drug Enforcement Agency (DEA), cocaine is a Schedule II drug, which means it has a high potential for abuse. For doctors, **it has had legitimate medical uses such as a local anesthesia** for eye, ear, and throat surgeries. However, it is very seldom used for medical purposes now. It is more often used illegally. Cocaine is taken illegally by people who are hoping to experience a feeling of euphoria or a "high". A tolerance to cocaine can develop, and this tolerance causes illegal users to continually increase their dose to try to obtain the same high.

There are two types of cocaine: hydrochloride salt and freebase.

Hydrochloride salt is the powered form of cocaine and is usually taken intravenously (injected into a vein) or intranasally (inhaled through the nose). This type of cocaine is generally sold on the street as a fine, white, crystalline powder. Some of the slang names are *coke*, *C*, *snow*, *flake*, or *blow.* Street dealers tend to dilute cocaine with substances such as cornstarch, talcum powder, and/or sugar. They may also add active drugs such as procaine (a chemically-related local anesthetic) or stimulants such as amphetamines.

Freebase cocaine has been processed into a form which can be smoked. The street name for freebase cocaine is *crack.* Crack is highly addictive for many people.

Cocaine's effects appear almost immediately after a single dose, and last from a few minutes to hours. The short-term effects of cocaine include:

- increased energy
- decreased appetite
- increased mental alertness
- increased heart rate and blood pressure
- increased body temperature
- dilated pupils

Long term use of cocaine can cause irritability, mood disturbances, restlessness, paranoia, auditory hallucinations, physical dependence and addiction. Large amounts can cause bizarre and violent behavior. In rare cases, sudden death can occur on the first use of cocaine or unexpectedly thereafter.

Some of the medical consequences of cocaine abuse include:

- Cardiovascular effects: disturbances in heart rhythm, heart attacks
- Respiratory effects: chest pain, respiratory failure
- Neurological effects: strokes, seizures and headaches

- Gastrointestinal complications: abdominal pain, nausea

Combining cocaine with alcohol is extremely dangerous. The human liver combines these two drugs in the body and creates a third chemical called *coca ethylene*. This chemical intensifies the effects of cocaine and the risk of sudden death, especially from cardiovascular toxicity (heart attack or other heart problems).

REFERENCES:

http://www.nida.nih.gov/drugpages/cocaine.html
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http://teens.drugabuse.gov/drnida/drnida_stim1.php
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