

NARCOTIC EDUCATIONAL FOUNDATION OF AMERICA

Drug Abuse Education Provider of the:

California Narcotic Officers' Association

THE STORY OF COCAINE

QUICK FACTS:

Cocaine is a natural occurring drug. Cocaine, which is known as a strong central nervous system stimulant, can seriously affect the human body. The stimulant drugs speed up certain body functions by creating an artificial state of stimulation. Some of the signs of these body functions are increased heart and respiratory rate, elevated blood pressure, and the dilation of the pupils of the eyes. High doses have also caused very rapid and/or irregular heart beats, tremors, loss of coordination, stroke, and in some cases death.

The addictive qualities of cocaine are exerted on those regions of the brain and central nervous system that are responsible for the pleasure sensation of "reward", and the "physical / psychological dependence syndrome." The brain's neurochemicals associated with the stimulants are classified as those of "fight or flight" and "physical endurance." These artificial additions account for the abuser's loss of control. The abuser is not consciously taking care of diet or biological needs. Stimulants themselves, as well as the "drug abusing" lifestyle, may be expressed in a neurological depression. Neurological depression is usually associated with the "down" side of the drug.

HISTORY OF DRUG

Cocaine, first isolated in 1844, is one of 14 known alkaloids extracted from the leaves of the evergreen *coca* plant (*Erythroxylon coca*). Cocaine is the principal active ingredient of the South American coca plant. The chemical name for cocaine is **benzoylmethyl ecognine** ($C_{17}H_{21}NO_4$). It is best described as a bitter, white, odorless, crystalline drug that, in powder form, is somewhat similar in appearance to "snow."

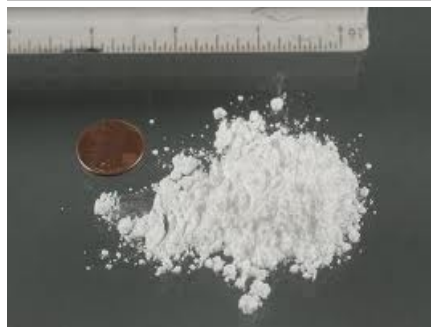
Cocaine, as a drug, is classified as a central nervous system stimulant. However, pharmacologically, cocaine is classified as a local anesthetic which can cause anesthesia at the point of injection or application. As a vaso-constrictor it will close small capillary bleeding. This is the basis of its prescription usage.

Chewing leaves of the coca plant gave the native Indians energy to withstand the long grueling hours needed to cultivate their rocky, unproductive terrain. Chewing the leaves also helped offset the cold temperature of the mountains by raising body heat and constricting surface blood vessels to hold onto the increased body heat. The coca leaves chewed by the Indians were sometimes sprinkled with alkaline ash to increase the absorption of oral cocaine.

(continued column 3, this page)

COCAINE ABUSE SIGNS AND SYMPTOMS

- ◆ Sleeping problems
- ◆ Runny nose
- ◆ Headaches
- ◆ Nasal Sores
- ◆ Lowered Appetite
- ◆ Decreased sexual drive
- ◆ Problems with relationships at home, school and work
- ◆ Financial difficulties
- ◆ Depressed
- ◆ Irritable
- ◆ Fatigued
- ◆ Redness of skin from itching
- ◆ Dilated pupils
- ◆ Tremors
- ◆ Nausea
- ◆ Talkative
- ◆ Fever
- ◆ Rapid heart beat
- ◆ Paraphernalia:
 - small spoons
 - small mirrors
 - small vials
 - razor blades
 - straws



COCAINE POWDER

History *(continued from column 1, this page)*

In the late 1800's cocaine was used for treatment of morphine addiction. It was also included in many patent medicines and other products touted as cures for fatigue, asthma, stomach ailments, "woman's illnesses", and inflammations. Patent-medicine quacks peddled it from brightly painted wagons. One of the most popular forms was a concoction of John Pemberton, a pharmacist, containing kola nut and cocaine - "**Coca-Cola**." In 1906 the Coca-Cola Company had switched to decocanized coca leaves instead of cocaine. In the early 1900's the addictive and psychosis-producing nature of cocaine was apparent. The Harrison Act of 1914 restricted cocaine to doctor's prescriptions and imposed fines and imprisonment for illegal sale or distribution.

Cocaine hydrochloride (powder), available on the street at 30 to 40 percent purity, became the most common coca product in the United States until the 1980's when rock and crack style cocaine usage became prevalent. Cocaine hydrochloride will decompose if smoked as a powder, it must be converted into a relatively pure base state before it is suitable for smoking. When in the smoking form, the "high" is more intense and has a more immediate onset. Base is either made the traditional way by using volatile chemicals (free-base), or by the heating and cooling method using baking soda (crack or rock).

COCAINE DISTORTS THE BODY

Cocaine use, though dose related, causes the eyes to dilate and the heart and blood pressure to increase. It contributes to a rise in body temperature and metabolic rate. It can enhance muscular strength that has decreased due to fatigue. It decreases the appetite to the degree that emaciation can develop among chronic dosage users.

Cocaine use initially offers pleasant feelings for many, creating the illusion of well being to the limits of that euphoric effect. Feelings of confidence, exhilaration, and talkativeness develop. These sensations entice the novice to repeat the intoxication. Feelings of anxiety, restlessness and irritability follow the “high” as use becomes regular, thus prompting additional dosage to overcome this discomfort.

Cocaine use can cause one to experience illusions of power, following or mixed with unshakable feelings of fear. This may proceed to delusions of paranoia and hallucinations. Suffering from such misconceptions, many users have “fought back”, inflicting injury or death upon innocent victims.

Cocaine produces a degree of physical and mental deterioration not found in connection with the use of opiates.

ADDICTION

The physical dependency part of addiction caused by drug use is relatively easy to overcome. It is routinely treated successfully, regardless of the severity of the symptoms. The psychological part of addiction is not as easy to overcome nor is it regularly treated with assured success. The overcoming of this part of addiction may be a life time effort.

PSYCHOLOGICAL PROBLEMS

- Dependent users **CANNOT STOP**
- Cocaine blocks brain chemicals that tell the body to produce dopamine and relax after stimulation.
- Euphoria fades

EXPERIENCES

- User has nagging depression
- Extreme paranoia
- Compulsive behavior
- Hallucinations
- Erratic and irrational ideas

CRAVING

Craving is defined as the daily symptom of the disease. The user experiences intense psychological preoccupation with getting and using the drug. It is a common phenomenon during the abuse of cocaine and is especially intense during the first 6 months after stopping its use.

Inpatients who have completed treatment and are continuing to participate in Narcotics Anonymous or Alcoholics Anonymous on a regular basis, receive reassurance that the overwhelming cocaine craving they experience is not abnormal and that it will lessen with time, though probably will never completely disappear.

PARANOIA

Paranoia is quite common during cocaine abuse and during the initial period of abstinence. The person will develop an intense paranoid state without provocation. This will lessen with the passage of time and will not respond to the use of anti-depressants.



COKE SMOKING PIPE



SNORTING COKE KIT

FORMS OF COCAINE POWDER OR BASE

Cocaine can be found in two forms. Cocaine hydrochloride is a crystalline powder form. In this form the cocaine is water soluble, thus when “snorted” through the nose it is absorbed through the membranes of the nose.

Cocaine base is in the “paste,” “rock”, or “crack” form. It is not water soluble in this form. This form enables a person to smoke the cocaine. Cocaine can be smoked either by basing it or by mixing the paste into a cigarette. Base form of cocaine doesn't burn so it must be sprinkled on a cigarette or consumed in a pipe designed for this purpose. These base pipes consist of a bowl with multi-layer screens. A flame is applied to the bowl, vaporizing the drug as it melts and drips from screen to screen.

Cocaine base enters the bloodstream through the lungs the high is felt immediately, before the smoke is exhaled. The euphoria last for only a few minutes and the primary kick from the base cocaine is the instantaneous and intense rush. So strong is the brief high that repetitive and excessive usage is common. Compulsive consumption of this expensive drug is far greater than among the cocaine snorting contingent. Overdosing is a greater risk with base because of the increased purity, efficient route of administration, compulsive desire to re-experience the ultra short rush.

Making crack or rock is as easy as adding baking soda and water to cocaine HCl. The mixture is heated

(Continued on page 3)

(Continued from page 2)

Powder-Base

and cooled. If heated to liquid and super cooled, it turns to rock. If cooked and mixed with flour and yeast or Seven Up you have crack. The low price per dose attracts buyers, while giving the dealer a substantial profit.

SEIZURES AND SUDDEN DEATH

Cocaine constricts the blood vessels, including those in the heart. This makes the heart pump harder and faster to circulate blood throughout the body. This stress has caused chest pains and heart attacks for many users. Cocaine can interfere with the electrical impulses that control the heart's pumping action, resulting in irregular beating and even stoppage. The U. S. Department of Health reports: "Cocaine in all of its commonly used forms, including crack, has been associated with sudden heart attacks in people under the age of 30, some of whom who had used the drug for the first time."

INJECTING COCAINE

Some users inject the cocaine directly into their veins similar to that of injecting heroin. They claim that when injecting cocaine it is not advisable to heat the water solution since the heat and boiling tends to evaporate the cocaine. When injecting cocaine, the rush or immediate euphoria is felt within seconds and is a very intense feeling. The plasma life from injecting cocaine will last anywhere from 60 to 90 minutes. The intravenous route leads to paranoid states more often than when equivalent amounts are inhaled. Cocaine injection carries with it a stronger desire to repeat the event.



NEEDLE FOR INJECTION

ABUSE SIDE EFFECTS

Cocaine use causes a "hangover", depression, and agitation. Abusers may resort to addition of a sedative drug to alleviate these symptoms. Cocaine-heroin mixture has gained notoriety because of this issue, called "speedballing." Cocaine euphoria is of short duration. Abusers take it frequently to sustain intoxication. A toxic condition develops. Stimulating effects decrease as tolerance develops, resulting in increased doses. Overdose depresses heart function and breathing ability. Such users suffer insomnia, cramps, nausea, and even convulsions. Cerebral hemorrhage may result. Acute cocaine poisoning causes death. A crude street phrase to describe it - "the user's brain runs out of his nose."

CRACK and BASE How it Affects the Body:

- ◆ **BRAIN** - the biochemical state of the brain is altered and an addiction takes hold faster than with any other drug, including heroin. They crave more and more cocaine. To allay discomfort the user will often resort to another drug, including alcohol. This may establish a secondary addiction.
- ◆ **EYES** - pupils may dilate, causing increased sensitivity to light. Users may see "snowflights" or "halos" which appear around everything.
- ◆ **HEART** - heart rate may increase up to fifty percent and sometimes becomes irregular.
- ◆ **LUNGS** - heavy crack use can cause hoarseness, bronchitis, and other respiratory problems.
- ◆ **NERVES** - when high, the user becomes stimulated, hyperactive, and irritable.
- ◆ **WEIGHT** - users often lose interest in eating and sleeping. Many suffer drastic weight loss.



ROCK/CRACK COCAINE

ATTRACTION TO DESTRUCTION

Cocaine acts directly upon the brain where chemical centers of pleasure are located. When we are pleased, like "being praised," a signal in the brain stimulates these same nerve cells. That cue is transmitted by the neuro-transmitter dopamine, a chemical messenger that carries information from nerve cell to nerve cell. Normally, dopamine completes its service and is retrieved by the sending cell to await the next signal. Cocaine disrupts this recovery process and permits a constant release of dopamine, resulting in an over abundance of dopamine acting upon the receiving cells. Repeated assaults, or ingestion of the drug, depletes the supply of dopamine, resulting in a "crash."

COCAINE BABIES- A TRAGEDY

"Cocaine and base have increased the chances of drug damaged infants. Even if the pregnant mother uses cocaine only once, its effects on the fetus can be the same as if she used it many times, so warns the U. S. Drug Enforcement Administration (DEA). DEA further stated that "Many of these infants begin their lives in an agonizing state of withdrawal that can last as long as three weeks. There is a stiffness associated with cocaine babies, a sign of damaged nerves; irritability, difficulty in feeding, hypersensitivity to sights and sounds."

Cocaine babies tune the world out, a behavior pattern that suggests neurological and psychological damage that may not show up in its full, tragic, impact until the child reaches school age. There are more obvious disabilities such as stunted development of the liver, kidneys, lungs and the brain. Respiratory problems, severe difficulties with motor skills, physical deformities, and paralysis, often plague these infants as well.