



## Cocaine

Cocaine is a powerful drug. It makes one feel euphoric or energised and heightens the sensations of sight, sound and touch. Cocaine is so much 'fun' that people are willing to pay high prices for it. However, it is also highly addictive; once an individual has tried it, they cannot predict/control the extent to which they will continue to use it. Cocaine can be a very dangerous drug.

Cocaine in one form or another has been around for thousands of years. The ancient Peruvian people knew the stimulating qualities of the coca leaf. The *Erythroxylum coca* shrub is native to South America. It is usually grown in wet/humid regions. However, the 'best' cocaine is found in the remote western desert slopes of the Andes. Although most coca grows faster the closer it is to sea level, its cocaine content increases the higher it is and therefore, it is usually grown on steep Andean mountainsides. The leaves are plucked and processed into cocaine. Cocaine is normally sold as a fine white, crystalline powder known as "coke," "C," "snow," "flake" or "blow." It is diluted or 'cut' with such inert substances as cornstarch, talcum powder and/or sugar or with active drugs such as amphetamines.

For many years cocaine was used in medicine; its analgesic and anaesthetic properties were promoted by leading doctors. In the early 1900's it became the main stimulant drug used in most tonics and elixirs used to treat various illnesses. It was particularly useful in ophthalmic surgery.

Cocaine is a strong stimulant of the central nervous system and an appetite suppressant. It interferes with the re-uptake of dopamine, a neurotransmitter (chemical messenger) that controls the pleasure centres in the central nervous system, creating a feeling of euphoria and heightened sexuality allied with decreased anxiety and social inhibitions. However, this feeling of euphoria is short lived lasting for about 15/20 minutes before the 'crash'. The euphoria disappears; the user returns to their original mood level or even a little lower. The user then thinks that by using again, they will return to the high and so it goes on. The problem is that the level of the original high is never reached again and over time, users have to increase the amount of cocaine to obtain the same effect. 'Chasing the high' is typical of addiction and the user is trapped in a rapid downward spiral. Unfortunately, the euphoric experiences of the high are engraved on the user's memory and the basis for craving the drug is formed. Strong psychological cravings are a major feature of cocaine use. The crashes become deeper and deeper. Another key feature of long term cocaine use is the near suicidal depths of depression that many users experience. In their minds they know that 'a line' (where the powder is shaped into a long 'line' in order to be inhaled through the nose) will take them out of that depression although only temporarily.

### Effects on the Body and Brain

Cocaine is a dangerous drug despite the common misconception that the only physical long term damage through its use is damage to the septum (thin wall dividing the nose). Heart attacks, respiratory failure, increased blood pressure, gastrointestinal complications, strokes, seizures, convulsions and comas are all linked to cocaine use. As it is an appetite suppressant, regular users experience significant weight loss and malnourishment. Increased use may lead to psychoses, hallucinations and to cravings for other drugs such as alcohol. When taken together alcohol and cocaine are converted into coca ethylene, which acts for longer in the brain and is more toxic than

either drug alone. The danger each drug poses is compounded and unknowingly a complex chemical process is happening within the body. Mixing cocaine/alcohol is the most common two-drug combination that results in drug-related deaths. Use of cocaine in a binge, during which the drug is taken repeatedly and at increasingly high doses, may lead to a state of increasing irritability, restlessness and paranoia. This can result in a period of full-blown paranoid psychosis, in which the user loses touch with reality and experiences auditory hallucinations.

### Denial

There is huge denial when it comes to cocaine addiction. Unlike other substances, cocaine addiction is incredibly complicated because it involves a wide range of biological changes in brain chemistry, allied with a combination of complex family, social and environmental factors. The first step is admitting you have a problem. The following short test should help in identifying whether it is time to seek help for your drug use:

- Is your Cocaine use causing problems with your partner/family?
- Do you ever wish that you had never taken the first line?
- Do you have an anticipatory high just before you are about to use?
- Do you use alone?
- Have you ever lied or misled others about your usage?
- Have you ever tried to quit or cut down, but couldn't?
- Are you afraid that you will lose your confidence if you stop using?

Cocaine affects your body, brain, heart and soul. It is a killer but many people don't realise this until it is too late. It is common for addicts to relapse repeatedly before they achieve abstinence. Successful treatment isn't just detoxing; it's re-learning how to live.

### Crack Cocaine

Cocaine hydrochloride is the form in which cocaine is usually taken and is highly sensitive to heat. When it is burned it destabilises completely so attempting to smoke this way doesn't work. In order to smoke cocaine, it must be chemically changed into a form that vaporises rather than degrades when heated. This is done by adding a strong alkali and dissolving this in a powerful solvent such as ether which allows the cocaine to crystallise out to form a 'base'. The process is known as 'freeing the base' or 'freebasing'. However, as ether is extremely volatile, the 'freeing the base' stage is often omitted and the rock that remains contains a small amount of water. When the rock is heated the water boils producing a 'cracking' sound hence "Crack Cocaine".

*But why go to such lengths?* Crack Cocaine is not only smokeable but it is also a lot more potent and available in small relatively cheap packages. It is, therefore, available outside of the 'designer set' that Cocaine originally appealed to. The rush induced by smoking cocaine is extremely intense but is matched by the brevity of the high. It is extremely addictive and despite it's relatively cheapness leads many people into an addiction they cannot afford with the usual consequences of crime and prostitution.

### Cocaine Dependence (Addiction)

Any drug, which causes changes to the mind, can cause a dependence syndrome. This means there are symptoms and behavioural patterns which form a recognised illness:

There is a strong desire or **compulsion** to use, which overrides other everyday activities; family, friends, work and hobbies are neglected. They neglect the alternative pleasures of life as the cocaine use becomes the major focus for the individual.

There is a degree of **tolerance** requiring higher doses to have the same psychological effect. There are difficulties in controlling the amount of use so consumption escalates.

The user continues to use cocaine despite evidence of **harm** such as ill health, debts, relationship difficulties or psychological problems.

The people most at risk of cocaine dependency are those who have difficulty dealing with their emotions and who have trouble facing everyday life. Cocaine is used as an “escape mechanism” for life’s problems rather than confronting them. There is an increased risk for those who are shy, have low self-esteem and have problems with family/work. There are genetic risks for susceptibility to addiction. Research, particularly in the USA, shows that the risk for developing cocaine addiction does run in families. The genes a person inherits partially explain this pattern but lifestyle and psychological environment are also factors. However, a genetic predisposition to cocaine addiction does not mean it is inevitable; just because addiction tends to run in families, it does not mean that a child of an addict parent will automatically become an addict too. Some people develop an addiction even though no one in their family has a using problem.

Recent studies have shown that, during periods of abstinence from cocaine use, the memory of the euphoria associated with cocaine use or mere exposure to cues associated with drug use, can trigger tremendous craving and relapse to drug use, even after long periods of abstinence.

### Treatment of Cocaine Dependence

Treatment of cocaine addiction is complex and must address a variety of problems. For those with dependence there is usually a repeated pattern of failed attempts to give up without seeking help. They need to be admitted into a treatment centre in order to address the underlying personal issues which have promoted the dependency and to counteract the effects of the illness itself. Invariably once this stage of dependency is reached, the user will never be able to control cocaine use again and abstinence is the only way forward. A return to using will cause a return to the original patterns of use and the vicious circle continues. In-patient treatment looks at all factors hidden behind the dependency, such as relationship problems, previous psychological trauma or self-esteem issues.

Some dependency is in conjunction with other psychiatric disorder such as depression. Often the user does not recognise the harm that cocaine is doing to themselves or others (denial) or the social isolation that it is causing. The illness is accompanied by guilt/shame so there is a reluctance to accept help. The therapeutic environment enables the return to previous attributes and the ability to ask for help when there is trouble so that they can view the future with confidence without returning to mind-altering substances. Family relationships, which are also damaged by the illness, can be repaired with the help of treatment.