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## Cocaine

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### Summary

- Cocaine is an illegal stimulant that speeds up the workings of the brain.
  - The person using it feels euphoric because cocaine taps into the brain's chemical reward system.
  - Long-term cocaine use can lead to depression, psychosis and heart problems.
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Cocaine is a stimulant that speeds up the workings of the brain. This illegal drug is extracted from the leaves of the coca plant and is processed with a blend of other chemicals to form a white powder known as cocaine hydrochloride. This type of cocaine, the most common in Australia, is typically inhaled or injected.

Since cocaine hydrochloride is mixed or 'cut' with other chemicals, people have no idea if the dose will be strong or weak. These other chemicals may include fillers, such as glucose or lactose, which are added purely to boost profits.

'Freebase' cocaine or 'crack' is processed differently and can be smoked. However, this type is still rarely available in Australia. Common slang terms for cocaine include 'coke', 'blow' and 'stardust'.

### How cocaine works

The brain 'rewards' us for engaging in life-enhancing behaviour, such as eating or having sex, by releasing a flood of pleasurable neurochemicals. Dopamine is one of these brain chemicals. This chemical reinforcement makes us want to engage in those behaviours again.

Cocaine works by tapping into this reward system and triggering the release of dopamine. This means that cocaine is extremely addictive, not only psychologically, but neurochemically.

### Effects of cocaine use

The effects of cocaine depend on the strength of the dose, the blend of chemicals, the physiology of the person and their state of mind at the time of taking the drug. The cocaine rush only lasts for a short time, around 15–30 minutes after inhalation.

Generally, some of the immediate effects of cocaine include:

- feelings of euphoria, exhilaration and confidence
- accelerated heart rate
- increase in body temperature
- a burst of energy
- dilated pupils
- loss of appetite
- the urge to have sex.

### Symptoms of an overdose

In high doses, cocaine can make a person feel extremely agitated, paranoid and aggressive. Unpleasant physical effects include dizziness, hallucinations, nausea and vomiting, tremors, headache and heart pain.

The consequences of overdose include seizures, brain haemorrhage, kidney failure, heart attack or stroke.

### Dependence, tolerance and withdrawal from cocaine

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Like many other drugs, it is possible to build up a tolerance to cocaine, which means people need to take larger and larger doses to achieve the same high. Some people may actually experience the opposite effect – a sensitivity to cocaine – where even tiny amounts are enough to prompt a rush.

Psychological withdrawal symptoms can last for weeks and may include intense cravings, depression, anxiety and angry outbursts. Physical withdrawal symptoms include nausea, tremors, sleeping problems and muscle pain.

The interference with the brain's chemical reward system means that, when withdrawing, a person may not be able to feel any pleasurable sensations without the trigger of cocaine to release dopamine. This means people may experience intense cravings for months or even years after giving up cocaine. Relapses are common.

### **Damage caused by long-term use of cocaine**

If cocaine is regularly inhaled or snorted, it can damage the lining of the nose and the structure separating the nostrils. If injecting cocaine, there is a risk of blood poisoning, blood-borne viruses (such as HIV or hepatitis) from shared equipment, damaged blood vessels and skin abscesses.

Heart problems are another side effect of long-term cocaine use. Some people experience mental health problems, such as severe depression. A condition known as 'cocaine psychosis' includes symptoms such as aggression and disturbing hallucinations, often of insects under the skin.

### **Synthetic cocaine**

In recent years, a wide range of synthetic products, claiming to have similar effects to cocaine, have also been available in Australia. The active ingredient in these products can potentially be a number of chemicals, such as methylenedioxypyrovalerone (MDPV), but it is difficult to know what exactly they contain. As a result, they can have more unpredictable effects and are potentially more harmful than cocaine.

### **Treatment for drug dependence**

Treatment options for drug dependence include detoxification, individual counselling and group therapy. See your doctor for information and referral, or contact an alcohol and other drug service in your area.

### **Where to get help**

- If an overdose is suspected, call triple zero (000) for an ambulance immediately
- Your doctor
- Alcohol and other drug service
- **DrugInfo**. Tel. 1300 85 85 84 – for information (9 am – 5 pm, Monday to Friday)
- **DirectLine**. Tel. 1800 888 236 – for 24-hour confidential drug and alcohol telephone counselling, information and referral
- **Family Drug Help** – for information and support for people concerned about a relative or friend using drugs  
Tel. 1300 660 068

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