



Caffeine facts

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What is caffeine?

Caffeine is the most popular and widely used drug in the world. It is a substance found in the leaves, seeds or fruit of a number of plant species, such as coffee and tea plants.

Caffeine is a stimulant which acts on the central nervous system to speed up the messages to and from the brain.

What are the plants and where do they grow?

Coffee

Coffee beans are the seeds of the coffee plants *Coffea arabica*, *Coffea canephora* and *Coffea liberica*. After oil, coffee is the world's second most traded product, with the two largest export growers being Brazil and Colombia.

Tea

Tea is usually the leaves and buds of the tea plant (*Camelia sinensis*). The biggest producers of tea for the world market are India, China, Kenya and Sri Lanka.

Kola nut

The seed of the kola nut (*Cola acuminata* and *Cola nitida*) is consumed as a nut or as a tea, and is grown in West Africa.

Cacao pod

The seed of the cacao pod (*Theobroma cacao*) is used to make cocoa and chocolate products. It grows in Brazil and West Africa.

Guarana paste

The seed of the guarana plant (*Paulinia cupana*), which is grown in Brazil, is used in snack bars and beverages.

Drink/product	Size/amount	Caffeine content
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Tea (medium strength)	250 ml	65–105mg
Cocoa	250 ml	30–60 mg
Coffee		
• Instant	250 ml	80–120 mg
• Drip/percolated	250 ml	150–240 mg
• Espresso	250 ml	105–110 mg
• Decaffeinated	250 ml	2–6 mg
Cola soft drink	375 ml can	40–50 mg
Chocolate milk drink	250 ml	2–7 mg
Energy drink	250 ml	50–80 mg
Milk chocolate bar	55 g	3–20 mg
Dark chocolate bar	55 g	40–50 mg

The amount of caffeine in tea and coffee can vary considerably and depends on the brand, the way that it is made, and the size of the cup or mug.

Effects of caffeine

The effects of any drug (including caffeine) vary from person to person. How caffeine affects a person depends on many things including their size, weight and health and also whether the person is used to taking it, and the amount they have taken.

Regular caffeine users may have different experiences from people who consume caffeine products only occasionally.

There is no safe level of drug use. Use of any drug always carries some risk—even medications can produce unwanted side effects. It is important to be careful when taking any type of drug.

Short-term effects

Caffeine takes 5–30 minutes to circulate in the body after it has been consumed. Its effects will continue as long as it is in the blood, which is usually around 12 hours. Some short-term effects of caffeine are:

- feeling more alert and active
- need to urinate more frequently
- rise in body temperature
- increased heart rate
- stimulation of the brain and nervous system.

This level of consumption usually does not cause any lasting damage.

Taking caffeine to stay awake

Some people consume drinks containing caffeine so that they can continue working or studying at night. However, the after-effect is that they will feel tired and lethargic the next day.

Use of caffeine can have a number of disturbing physical effects on some people, such as:

- anxiety
- irritability
- increased breathing and heart rates
- restlessness, excitability, dizziness
- headaches and lack of concentration
- gastrointestinal pains
- dehydration.

Children and young people who consume energy drinks containing caffeine may suffer from sleep problems, bed-wetting and anxiety.

Higher doses

Serious injury or death from caffeine overdose can occur, but it is extremely rare. A person would have to consume 5–10 grams of caffeine (or 80 cups of strong coffee, one after the other) to suffer an overdose. Some effects of caffeine overdose include:

- involuntary shaking (tremors)
- nausea and vomiting
- irregular or rapid heart rate
- panic attack and confusion
- seizure.

In small children, caffeine poisoning can be seen with much smaller doses, such as up to 1 gram of caffeine (equal to around 12 energy drinks).

Long-term effects

Moderate consumption (for example, up to 4 cups of coffee a day) of caffeine is unlikely to cause any long-term damage. However, heavier use of caffeine can have some serious effects including:

- osteoporosis
- high blood pressure and heart disease
- heartburn
- ulcers
- severe insomnia
- infertility
- anxiety
- depression.

Pregnant women who consume high amounts of caffeine have increased risk of miscarriage, difficult birth and delivery of low-weight babies.

Other effects of using caffeine

Taking caffeine with other drugs

Combining stimulant drugs (like caffeine) with [alcohol](#) places the body under great stress and can mask some of the effects of alcohol. For example, if a person combines caffeinated energy drinks with alcohol they will still be affected by the alcohol but may not feel as relaxed or sleepy. They may feel more confident, take more risks and increase the chances of experiencing alcohol-related harm such as drinking too much or being injured in a fight or accident.

Pregnancy and breastfeeding

[Read about the effects of taking drugs during pregnancy or breastfeeding.](#)

Tolerance and dependence

With regular use, over time a person's body can become used to functioning with caffeine present. They may become physically or psychologically dependent, or both, on caffeine.

A person who uses caffeine in small to moderate doses will experience little or no harm. However, experts say that as little as 350 milligrams of caffeine a day (equal to about 4 energy drinks or 4 cups of medium to strong coffee) is enough to cause dependence.

A person who is dependent on caffeine is likely to suffer withdrawal symptoms if they try to stop using it.

Withdrawal

A person who is dependent on caffeine is likely to suffer withdrawal symptoms within 24 hours of their last dose. Heavier users who consume more than 600 milligrams of caffeine a day may experience these symptoms within 6 hours.

Headache is the most common caffeine withdrawal symptom, but others include fatigue, sweating and muscle pains. Some users experience anxiety and tension when they give up caffeine. Withdrawal symptoms typically last around 36 hours, but very heavy caffeine users can experience withdrawal symptoms for longer.

Australia's national drug policy

Australia's national drug policy is based on harm minimisation. Strategies to minimise harm include encouraging people to avoid using a drug, through to helping people to reduce the risk of harm if they do use a drug. It aims to reduce all types of drug-related harm to both the individual and the community.

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