

Is caffeine addictive?

Regular use of caffeine can make you physically dependent on caffeine. That means that if you abruptly stop using caffeine-containing products, you may feel edgy and tired and have a bad headache. These symptoms usually appear 18 to 24 hours after the last use of caffeine, and gradually fade over the following week.

What are the long-term effects of taking caffeine?

Healthy adults do not appear to suffer any long-term effects from consuming moderate doses of caffeine daily. Larger daily doses (in some individuals as little as 250 mg, or three cups of coffee a day) may produce restlessness, nervousness, insomnia, flushed face, increased urination, muscle twitching, stomach upset and agitation.

Caffeine use appears to be associated with irregular heartbeat and may raise cholesterol levels, but there is no firm evidence that caffeine causes heart disease. Although caffeine is suspected to be a cause of cancer, the evidence is contradictory and does not allow a clear conclusion. Some studies indicate that caffeine can cause changes in the cells of the body and in the way these cells reproduce themselves.

Lifelong use of coffee and other forms of caffeine may be associated with loss of bone density in women, increasing the risk of osteoporosis.

One in a series...

Alcohol	Hallucinogens
Alcohol, Other Drugs and Driving	Heroin
Amphetamines	Inhalants
Anabolic Steroids	Ketamine
Benzodiazepines	LSD
Caffeine	Methadone
Cannabis	Methamphetamine
Cocaine	Opioids
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Do You Know...

What is it?

Caffeine is a stimulant that speeds up your central nervous system, and is the world's most popular drug. Caffeine occurs naturally in products such as coffee, tea, chocolate and cola soft drinks and is added to a variety of prescription and over-the-counter medications, including cough, cold and pain remedies.

The following are typical amounts of caffeine in products you may use regularly. (A cup refers to an average serving — about 200 mL.)

- cup of brewed/percolated coffee: 100 mg
- cup of instant coffee: 65 mg
- cup of decaffeinated coffee: about 1 mg
- cup of tea: 30 mg
- soft drink containing caffeine (280 mL): 35 mg (Some soft drinks are now available that contain twice this amount of caffeine.)
- chocolate bar (50 g): 20 mg
- cup of hot cocoa: 50 mg
- stay-awake pills: 100 mg



To find out the amount of caffeine in headache and cold medicines, check the label of over-the-counter medication, or ask your pharmacist about caffeine in prescription drugs.

Where does caffeine come from?

Both words, caffeine and coffee, are derived from the Arabic word *qahweh* (pronounced “kahveh” in Turkish). The origins of the words reflect the spread of coffee into Europe via Arabia and Turkey from northeast Africa, where coffee trees were cultivated in the 6th century. Coffee began to be popular in Europe in the 17th century. By the 18th century, plantations had been established in Indonesia and the West Indies, and by the 20th century, coffee had become the biggest cash crop on earth.

Caffeine was first isolated from coffee in 1819. It is also found in tea; in cacao pods, and hence in cocoa and chocolate products; in kola nuts, used in the preparation of cola drinks; in the ilex plant, from whose leaves the popular South American beverage *yerba mate* is prepared; and in guarana seeds, an ingredient in some soft drinks.

The caffeine content of coffee beans varies according to the species of the coffee plant. Beans from *Coffea arabica*, grown mostly in Central and South America, contain about 1.1 per cent caffeine. Beans from *Coffea robusta*, grown mostly in Indonesia and Africa, contain about 2.2 per cent caffeine.

What does caffeine look like?

In its pure form, caffeine is a white, bitter-tasting powder.

Who uses caffeine?

Caffeine is the most widely used psychoactive substance in the world. In North America, more than 80 per cent of adults regularly consume caffeine. Worldwide per-capita caffeine consumption (including that of children) is estimated to be 70 mg per day, equivalent to approximately one cup of coffee.

In Canada, coffee consumption increased from 96 litres per person in 1990 to 101 litres per person in 2000. Consumption of tea has also increased, up from 42 litres per person in 1990 to 70 litres per person in 2000.

How does caffeine make you feel?

Caffeine stimulates the brain, elevates the mood and postpones fatigue. It also enhances performance at simple intellectual tasks, and at physical work that involves endurance, but not fine motor co-ordination. (Caffeine-caused tremor can reduce hand steadiness.) If you consume caffeine before bedtime, you will likely take longer to get to sleep, sleep for a shorter time and sleep less deeply.

Contrary to popular belief, drinking coffee will not help you to “sober up” if you’ve had too much alcohol. The caffeine will make you more alert, but your co-ordination and concentration will still be impaired.

Too much caffeine can give you a headache, upset your stomach, make you nervous and jittery and leave you unable to sleep. Some people feel these effects even with a very small amount. Larger doses of caffeine, especially when consumed by people who don’t usually take caffeine, can cause rapid heartbeat, convulsions and even delirium.

How long does the feeling last?

When taken in beverage form, caffeine begins to take effect within five minutes, and reaches its peak effect in about 30 minutes. It takes about four hours for half of a given dose of caffeine to be metabolized by the body. Normally, almost all ingested caffeine is metabolized, and there is no day-to-day accumulation of the drug in the body.

Is caffeine dangerous?

Moderate amounts of caffeine — up to about 300 mg a day (e.g., three to four average cups of coffee) — will rarely harm an otherwise healthy adult.

But if you regularly drink more than six to eight cups of coffee — or your daily dose of caffeine, from various caffeine-containing products, is higher than 600 mg — you may have trouble sleeping, feel anxious, restless and depressed and develop stomach ulcers. Higher amounts can cause extreme agitation, tremors and a very rapid and irregular heartbeat.

Small amounts of caffeine have a greater effect on children because of their smaller body size. It is wise to be aware of how much caffeine your children consume in chocolate products, soft drinks and medications. Although caffeine has not been proven to cause birth defects, pregnant women are advised to take as little of it as possible to reduce possible risks to their baby’s health. Nursing mothers should be aware that caffeine is excreted in breast milk.

An adult can die from orally consuming more than 5,000 mg — the equivalent of 40 strong cups of coffee — over a very short time.