



# Caffeine: friend or foe?

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## **Caffeine is thought to have**

been consumed by people going back to the Stone Age.

And today, it is likely the

most widely used psychoactive substance in the world. Caffeine is found in coffee beans in Arabia, tea leaves in China, kola nut in West Africa and the cocoa bean in Mexico. Today, most of our caffeine is consumed via coffee, tea, colas and “energy” drinks.

But what does caffeine do to us? Is it healthy, or harmful?

Caffeine is readily absorbed into the body and acts on the brain in many ways. It increases alertness and energy and postpones sleep. These effects come from the interaction between caffeine and two systems that transmit nerve impulses: adenosine and dopamine.

Adenosine is responsible for slowing down the brain and causing drowsiness. Caffeine inhibits the effectiveness of adenosine, reducing its effects on the brain. On the other hand, the effects of dopamine are enhanced by caffeine.

Dopamine, of course, is at the centre of reward and pleasure in the brain; caffeine makes us feel good because of it.

Identifying specific levels of consumption of caffeine with specific health effects is nearly impossible because individual tolerance to caffeine varies widely. For healthy adults, a small amount of caffeine may have positive effects such as increased alertness or ability to concentrate. For someone sensitive to caffeine, a small amount could just as easily cause insomnia, headaches, irritability and nervousness.

The amount of caffeine consumed varies depending on the source. An eight-ounce cup of drip coffee contains about 230 mg; a 16 ounce Starbucks grande, about 330 mg. A cola drink contributes about 35 mg

and a three-minute tea up to 45 mg. The “energy” drinks can contain as much as 350 mg in a 74 ml serving (one particular brand).

Most research suggests that a healthy adult can consume moderate amounts of caffeine (about 300 mg) without causing health problems. However, caffeine overdose can occur, resulting in agitation, seizures, abnormal heart rhythm, nausea, vomiting and difficulty breathing. This situation may arise if a person exceeds 15-30 mg of caffeine per kilo of body weight. In other words, more than 6-8 cups of coffee in a 75 kg adult.

One might think that a substance with the characteristics of caffeine might cause problems with blood pressure, or hypertension. Not really. For regular users of caffeine, little change in blood pressure is found.

For non-users, caffeine has been seen to raise blood pressure by up to 10mm Hg, but this increase is temporary. No link has been made between high levels of caffeine (up to six cups a day) and the risk of hypertension.

Nor is caffeine likely to lead to cardiovascular disease, cancer or higher

cholesterol. Its effects on pregnancy are widely debated, but again, moderate use is unlikely to cause problems. However, high amounts of caffeine have been connected with delays in getting pregnant and may increase the risk of miscarriage and low birth weight

What we can conclude from the research is that caffeine taken in moderate amounts, has few or no serious effects on our health. For those who need that morning fix, this is good news.

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