

The Health Effects of Coffee

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Americans love coffee. About sixty percent of us drink it every day. We like the taste, the energizing effect, and the social custom. Many people feel that coffee is essential for getting their day started and keeping alert. A cup of coffee can facilitate a friendly meeting, a casual date, or a late night conversation. Some folks use it to treat headaches, hangovers, and fluid retention.

Is coffee bad for people? We know it makes our hearts race and our hands tremble. It stains our teeth, makes us irritable, and keeps us awake at night. But researchers have shown that coffee also has some beneficial effects, and may even help to prevent some diseases.

The primary active ingredient in coffee is caffeine, which is well known for its stimulating effects. Coffee also contains anti-oxidants and phytoestrogens. These substances assist our systems in neutralizing toxins associated with many diseases, and have beneficial effects on metabolism. Another significant ingredient in coffee is a group of compounds called diterpenes. These are oily molecules that seem to affect cholesterol metabolism.

Caffeine is a central nervous system stimulant. It promotes the release of adrenaline, increases heart rate, blood pressure, and gastric acid secretion. It stimulates blood flow to the brain and kidneys, and allows breathing passages to open. Caffeine has effects on sugar metabolism and the muscles that control the function of the digestive system. It promotes intestinal and gall bladder motility.

A six-ounce cup of coffee contains 100-150 mg of caffeine. Habitual coffee drinking can lead to psychological dependence, and sudden discontinuation can bring withdrawal symptoms. While it is theoretically possible to fatally overdose on caffeine, it would require drinking 150 or more cups of strong coffee within about six hours. Caffeine is an ingredient in many medicines used to relieve headache and menstrual symptoms. It is also found in some non-prescription diet drugs, because it is an appetite suppressant.

Chlorogenic acid is an antioxidant that is especially prevalent in coffee. This substance may be responsible for some of the beneficial effects of coffee. Recent research has shown that coffee may help reduce the incidence of gallstones, Parkinson's disease, type 2 diabetes, and colorectal cancer. Phytoestrogens, which are plant substances that resemble human hormones, are also found in coffee. These compounds have been linked to a decreased incidence of lung cancer in men.

Diterpenes (also called Terpenes), are probably responsible for coffee's effect on cholesterol levels. A study done in Norway in the 1980s showed that people who drank nine or more cups of coffee a day had cholesterol levels that were 10% higher than non-coffee drinkers. Traditional Scandinavian coffee is brewed like American "cowboy coffee." The participants in this study boiled their coffee grounds with water, and did not use a filter. More recent research, using coffee made with paper filters, showed no increase in cholesterol levels.

Paper filters remove diterpenes, which are the most likely culprit in the Norwegian study. Percolated coffee is also low in diterpenes. Decaffeinated coffee,

however, is often made with a species of coffee that is naturally higher in diterpenes; so decaf can increase cholesterol levels more than regular coffee.

Go ahead and enjoy your coffee, but keep your consumption moderate. Three cups a day is probably a safe amount for most people. If you are pregnant or nursing, discuss this with your health care provider; coffee consumption is usually all right, but high doses of caffeine increase risk of prematurity, and can make a nursing infant irritable. If you have problems with cholesterol, stick with coffee that is filtered, percolated, or instant. If you have heart disease, or any problems with your heart rhythm, the stimulating effects of caffeine can be risky for you. Caffeine also has significant interactions with some medications, so check with your prescribing physician or pharmacist.