

COFFEE AND HEALTH



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Coffee

- Coffee is one of the most commonly consumed beverages in the world.
- Coffee plants are cultivated in over 70 countries, primarily in the equatorial regions of the Americas, southeast Asia, India and Africa.

Coffee...

- The primary psychoactive chemical in coffee is caffeine, an adenosine antagonist that is known for its stimulant effects. Coffee also contains the monoamine oxidase inhibitors beta-carboline and harmaline, which may contribute to its psychoactivity.

Coffee...

- In liver, caffeine is mostly broken down by the hepatic microsomal enzymatic system. The excreted metabolites are mostly paraxanthines—theobromine and theophylline—and a small amount of unchanged caffeine.

COFFEE.....

- Around 180 million people start their day with a cup of coffee.
- Coffee is served in different ways like black coffee with or without sugar; with cream or not; with some additive flavor or not.
- It may be served in a 8 ounce cup containing 100 mg caffeine or a large 16 ounce cup containing 330 mg of caffeine.
- It has a strong addictive effect.

CONTROVERSIES

- Coffee has a long history of being blamed for many of the ills.
- It has been claimed responsible for stunting growth to increase the risk of cardiovascular disease and cancer.
- It has been listed in the risk factors of metabolic syndrome along with smoking and heavy alcohol drinking.

Recent studies

- In previous studies, other risk factors of cardiovascular diseases like smoking or physical inactivity were not considered separately.
- In a large study conducted by Harvard School of Public Health, namely ***Nurses' Health Study*** and ***Health professionals Follow-up Study***; they included around 130,000 healthy men and women. Who were followed up for 18 to 24 years to track their lifestyle habits along with their habit of coffee consumption.

Coffee and cardiovascular risk: beneficial and detrimental effects

The health benefits of coffee consumption regarding cardiovascular system and metabolism mostly depend on its antioxidant compounds. Caffeine may produce harmful effects by raising lipid fraction and affecting endothelial function, respectively. A recent study shows moderate coffee consumption was associated with a lower prevalence of subclinical coronary atherosclerosis.

Blood pressure in relation to coffee and caffeine consumption.

The relationship between blood pressure (BP) and coffee is of major interest given its widespread consumption and the public health burden of high BP. Yet, there is no specific recommendation regarding coffee intake in existing hypertension guidelines.

Coffee and type 2 diabetes

Type 2 DM is associated with high rates of morbidity and premature mortality. Various potential health effects of coffee have been extensively studied, but data on habitual coffee consumption and the risk of type 2 diabetes mellitus have only recently been published. Long-term coffee consumption is associated with a statistically significantly lower risk for type 2 diabetes .

Coffee and liver health

Coffee consumption has been inversely associated with the activity of liver enzymes in subjects at risk, including heavy drinkers. Coffee favours an improvement in hepatic steatosis and fibrosis, and a reduction in cirrhosis and the risk of hepatocellular carcinoma.

Coffee and liver health...



The mechanisms of action through which it exerts its beneficial effects are not fully understood. Experimental studies show that coffee consumption reduces fat accumulation and collagen deposition in the liver and promotes antioxidant capacity through an increase in glutathione as well as modulation of the gene and protein expression of several inflammatory mediators.

Coffee consumption and nonalcoholic fatty liver onset

No association was demonstrated between coffee consumption and the new onset of nonalcoholic fatty liver, but coffee intake may exert beneficial effects on fibrosis progression.

Caffeine and the risk of hip fracture

Caffeine increases urinary calcium output and has been implicated as a risk factor for osteoporosis. Hip fracture risk was modestly increased with heavy caffeine use, but not for intake equivalent to one cup of coffee per day.

Coffee and risk of incident gout



long-term coffee consumption is associated with a lower risk of incident gout in women.

Coffee and risk of rheumatoid arthritis.

- A large, prospective study, was done to find evidence of an association between coffee, decaffeinated coffee, or tea consumption and the risk of RA among women but there was little evidence.

Coffee and cancer

- Daily coffee consumption may reduce the risk of gastric cancer in high-risk populations, especially among women.
- Coffee might be weakly associated with breast cancer risk for postmenopausal women.
- On other hand, clinical and experimental findings demonstrate various anticancer properties of caffeine and caffeic acid against both ER⁺ and ER⁻ breast cancer that may sensitize tumor cells to tamoxifen and reduce breast cancer growth.

Coffee and cancer...

- Coffee consumption increases the risk of colon cancer for men.
- Coffee consumption may decrease the risk of prostate cancer.
- Higher coffee intake was associated with a modest decrease in risk of melanoma.

Coffee as therapeutics against Alzheimer's disease.

Recent epidemiologic studies suggest that caffeine may be protective against Alzheimer's disease.

Caffeine appears to provide its disease-modifying effects through multiple mechanisms, including a direct reduction of Amyloid beta production through suppression of both beta- and gamma-secretase levels.

Risks of coffee during pregnancy

- For pregnant women, there has been quite a bit of controversy over whether high intake of coffee may increase the risk of miscarriage. Caffeine goes through the placenta and reaches the fetus, and that the fetus is very sensitive to caffeine; it metabolizes it very slowly. So for pregnant women it seems prudent to reduce coffee consumption to a low level, for example one cup a day.

Summary

- The calorie content of a cup of coffee may be as high as 500 calories.
- The metabolic effect of coffee depends on the ingredients and the way it is served.

Summary

- Drinking up to six cups a day of coffee is not associated with increased risk of death from any cause, or death from cancer or cardiovascular disease.
- It's best to brew coffee with a paper filter, to remove a substance that causes increases in LDL cholesterol.
- Coffee may have potential health benefits, but more research needs to be done.

THANK YOU AND HAVE SOME GOOD
QUALITY COFFE.

