

Tea for Your Health

Tea - A Healthy Beverage Choice

The scientific evidence continues to mount about the numerous health benefits of drinking tea. Hundreds of recent scientific research studies have found many potential health attributes associated with tea.

Over the past 15 years, research has found that drinking black, green or oolong tea may offer some protection from cardiovascular disease and cancer, lead to reduced risk of kidney stones, and strengthen bones, teeth and the immune system.

“There is unequivocal evidence that tea as a lifestyle factor can impact health,” said Dr. Carol Greenwood, Professor of Nutritional Sciences at the University of Toronto. “Drinking tea should be considered part of a healthy lifestyle.”

Tea was identified as one of the most healthy beverage choices in recently published guidelines for healthy beverage consumption. Developed by a panel of American nutrition experts and published in the March 2006 issue of the *Journal of American Clinical Nutrition*, the guidelines determined that tea is second only to water as the healthiest beverage choice. The guidelines, created to help consumers make smart beverage consumption decisions, was based on a detailed analysis of the health and nutritional benefits and the risks of various types of beverages.

The Power of Tea Flavonoids

In addition to containing no calories, salt, or fat and being free of preservatives and additives, tea is rich in flavonoids. Greenwood said that the many positive health impacts of tea are attributed to the naturally occurring flavonoids in tea which act as antioxidants. Antioxidants are compounds that neutralize the body's naturally occurring but cell-damaging free radical molecules. Damage by free radicals over time is believed to contribute to the development of many chronic disease including cancer and cardiovascular disease.

“Tea is one of the highest sources of antioxidants in the diet,” added Greenwood.

While tea cannot replace fruits and vegetables in the diet, science has shown that tea leaves contain more of the compound than most antioxidant-rich produce. The antioxidant activity in two cups of tea is equal to seven glasses of orange juice, five medium-sized onions or four medium-sized apples.

Cardiovascular Health

One of the many areas where researchers have discovered compelling evidence that tea's antioxidant activity can have a positive impact is cardiovascular health. Studies have found that people who regularly consume three or more cups of black tea daily have a reduced risk of heart disease and stroke. Scientific research suggests that drinking black tea can improve cholesterol levels and blood vessel function and reduce oxidative damage, all of which are risk factors for cardiovascular disease.

Much of the strongest research support for tea's potential to contribute to heart health has focused on black tea. However, a major study published in the September 2006 issue of the *Journal of the American Medical Association* found that consuming five or more cups a day of green tea was associated with a 26 percent lower risk of death due to cardiovascular disease.

Cancer

Tea is also showing great promise as a potential agent in the fight against some types of cancer including skin, oral, lung and ovarian cancer, as well as cancers of the digestive system. Preliminary research results suggest that the flavonoids in tea act as potent antioxidants that can combat free radical damage, inhibit uncontrolled cell growth, and promote programmed cell death or apoptosis, which could play a role in staving off cancer.

Greenwood said the research to date is encouraging, however most of it has been in animal and laboratory studies. She added that due to cancer's long manifestation period, definitive research takes many years. Numerous major human population studies and randomized clinical trials are currently underway.

Immune System

Tea and the flavonoids it contains may help strengthen the body's immune system. Published studies by researchers from Harvard University and Brigham and Women's Hospital found that tea contains theanine, a unique amino acid that primes the immune system in fighting infection, bacteria, viruses and fungi. In human clinical trials, the researchers found that after drinking five cups of black tea daily for two to four weeks, participants' immune cells produced two to four times more interferon than at baseline. Interferon is a protein that helps strengthen or improve the body's immune response. The scientists said their findings suggest that drinking black tea provides the body's immune system with natural resistance to viral and bacterial infections.

Bones and Teeth

Studies have found that tea may help strengthen teeth and bones. Tea is a natural source of fluoride, which can help protect tooth enamel, and the flavonoids in tea are believed to inhibit the plaque-forming ability of oral bacteria. In a 2003 published study,

researchers at the New York University Dental Center found that hamsters given black tea extract with their food developed 63.7 percent fewer cavities than hamsters fed water with their food.

Although high caffeine consumption has been suggested as a risk factor for reduced bone mineral density (BMD), studies have found that drinking tea does not negatively affect BMD. In fact, research suggests that tea may contribute to maintaining bone health. One study recently published in the *American Journal of Clinical Nutrition* found that BMD was higher in older women who drank three or more cups of tea per day versus those who did not drink tea. Another recently published study found that habitual tea consumption, especially for more than 10 years, had a significant beneficial effect on the BMD of adults 30 years of age and older.

Kidney Stones

Science has found that drinking tea can help reduce the risk of kidney stone development. A recently published study that followed 81,093 older women for eight years found that for each eight-ounce cup of tea participants with no history of kidney stones drank daily their risk of developing stones decreased by eight percent. A previous published study of 45,289 men found a similar relationship between daily tea consumption and reduced risk. Only in that study, for each eight-ounce servings of tea consumed daily there was a 14 percent decrease in kidney stone development.

Caffeine

Caffeine is a natural component of tea and is considered safe when consumed in moderation. According to Health Canada, a balanced diet can include a moderate intake of caffeine with daily recommended consumption limits of between 400 to 450 mg. This is equivalent to 10-12 cups of tea per day. Actual caffeine levels in tea are dependent upon the specific blends and strength of the tea brew, but most servings contain only 25 to 34 mg. Tea contains one third to one half less caffeine than coffee.

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