

Tea and Health: Importance and implications

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Tea is the agricultural product of the leaves, leaf buds, and internodes of the *Camellia sinensis* plant, processed and cured using various methods. After water, tea is the most widely consumed beverage in the world



Black Tea

It is a more commonly consumed form of tea in India. It is tea which is wilted, sometimes crushed and fully oxidized. Black tea is stronger in flavor and contains more caffeine than the less oxidized teas.

Green Tea

Green tea is made solely with the leaves that have undergone minimal oxidation during processing. Green tea originates from China. Flavonoids are a group of phytochemicals in most plant products that are responsible for such health effects as anti-oxidative and



anticarcinogenic functions and the mean content of flavonoids in a cup of green tea is higher than same volume of fresh fruits, vegetable juices or wine.

Health effects

1. Anti Ageing: Tea contains polyphenols as catechins, carotenoids, tocopherols, vitamin C, minerals such as manganese, selenium which have antiageing effect.

2. Prevents atherosclerosis: Green tea consumption is associated with reduced heart disease in epidemiological studies. A randomized clinical trial found that green tea extract with added theaflavin from black tea reduced cholesterol.

3. Anti Carcinogenic: Green tea polyphenols help in reducing the incidence of cancerous tumours. In a case-control study of eating habits of 2,018 women, consumption of mushrooms and green tea was linked to a 90% lower occurrence of breast cancer.

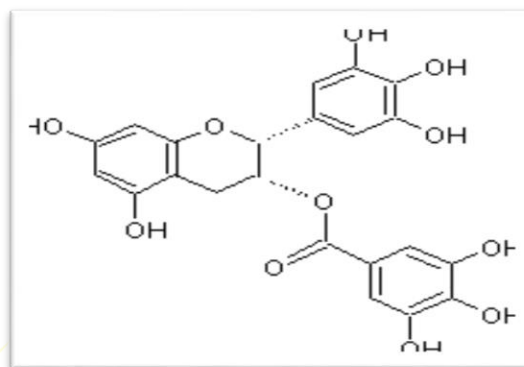
4. Anti-stress effects: Tea catechins are known to reduce stress.

5. Weight Loss: Daily consumption of tea for 12 week reduced body fat, which suggests that the ingestion of catechins might be useful in the prevention and improvement of lifestyle-related diseases, mainly obesity”.

Harmful Effects:

The major effects due to overuse of tea are due to the caffeine content, as- Nausea, sleep deprivation, anxiety, increased urination.

The median lethal dose (LD₅₀) of caffeine in humans is dependent on weight and individual sensitivity and estimated to be about 150 to 200 milligrams per kilogram of body mass, roughly 80 to 100 cups of coffee for an average adult. Though achieving lethal dose with caffeine would be exceptionally difficult with regular tea or coffee, there have been reported deaths from overdosing on caffeine pills. The amount of leaf per cup and time for which leaves are steeped determine the amount of caffeine and tannins in tea.



Tea With Milk & Sugar

Along with sweeteners, milk and cream are the most common additives to tea. Milk was first added to tea both to reduce the acidity and to neutralize the leaf tannins. Some studies found that milk does not impair the bioavailability of tea catechins. The increase in the antioxidant potential of plasma observed when milk was added to the beverage was not significantly different from the response following the consumption of black tea. It is also found that drinking tea with milk or sugar is helpful to those prone to stomach upset.



Milk reduces the bitterness of tea, but also reduces the central health benefit of the tea leaf called flavonoids. Consumption of black tea has been found to be associated with a reduced risk of coronary heart disease in Netherlands and United States, but not in the United Kingdom, where milk is customarily taken with tea. Animal milk contains proteins called casein, which bind to the catechins, reducing their effectiveness by formation of complexes with tea catechins. Addition of skimmed milk decreased the total antioxidant capacity of black tea much more than whole or semi-skimmed milk. Soya milk contains lecithin that has a different molecular structure to casein, and so is unlikely to bind to tea catechin the way casein does.

Conclusion

Black tea is the more commonly consumed form of tea it contains several compounds like antioxidants, polyphenols, catechins, and caffeine. Being rich in caffeine, it can cause sleep and anxiety disorders in the people consuming more amounts of it daily. Even the addition of milk to this tea, which is more common practice than for green tea, decreases the absorption of catechins from the tea. Thus, green tea is a healthier form of tea. The addition of milk to tea is debatable but the maximum benefits can be reaped by drinking tea without milk with added lemon or if needed soya milk can be used instead of milk to gain maximum flavonoids from the cup of tea.

