



Medicinal and health related benefits of Green Tea for human intake

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Abstract: Green tea is originated from China and India and is potentially recommended by the clinicians for its potential health benefits to human beings. Since ancient times, tea stands amongst the most popular beverage globally. An estimate shows that nearly 78% of the tea consumed worldwide is black and only about 20% is green. Except the herbal tea, all other types of tea are brewed from the dried leaves of *Camellia sinensis* bush. The type of tea is determined by the level of oxidation of the leaves. Green tea is prepared from the unoxidized leaves which determine its health promoting effects. It contains the major portion of polyphenols and antioxidants. Christopher Ochner, PhD, a research scientist in nutrition at the Icahn School of Medicine at Mount Sinai Hospital has performed meticulous researches on this fact. Green tea contains natural chemicals called polyphenols which are believed to be potential anti-carcinogenic and anti-inflammatory factors.

Key words: Antioxidants; Green tea; Health; Polyphenols

Introduction

Green tea is also used in traditional Chinese and Indian alternative medicinal therapy for controlling wound bleeding, proper regulation of digestion, improvement of mental and cardiac health and also in ailments of liver, type 2 diabetes and in Alzheimer's disease. It gives radical results for weight loss too in obese patients.^[1-3, 9-10, 12]

Proven and possible health benefits of green tea

Cancer: As per the reports of National Cancer Institute, green tea consumption regulates and prevents benign tumor growths for the presence of enormous quantity of polyphenols in it. It also decreases the risks of pancreatic cancer and gastric cancer. Green tea consumption boosts the overall health of breast, bladder, ovaries, colorectum, esophagus, lungs, prostate and skin. Researches have proved that the polyphenols act against the oncogenic cells. FDA has approved green tea extract ointments for topical application on genital warts for its treatment.^[4-8]

Heart Disease: American Medical Association has proved that green tea consumption on regular basis reduces mortality among human beings due to cardiovascular failures. Researchers have proved that green tea contains catechins and polyphenolic compounds that are thought to exert numerous protective effects, particularly on the cardiovascular system. The catechins are antioxidants possibly help with fighting and preventing cell damage.

Lowers cholesterol: Regular intake of green tea acts significantly against the rise in the concentration of LDL or bad cholesterol in circulating blood.^[11]

Stroke: Regular green tea consumption decreases the incidences of stroke according to a research published by the lead author Yoshihiro Kokubo, M.D., Ph.D in the journal *Stroke: Journal of the American Heart Association*.

Calorie: In general, green tea contains a relatively small amount of caffeine (approximately 20-45 mg), compared with black tea which contains about 50 mg and coffee with 95 mg per cup.

Brewed green tea without the addition of sugar acts as a zero calorie beverage. The caffeine present in green tea depends upon the infusing time period and the quantity of tea infused in a particular time.

Polyphenols: Epigallocatechin-3-gallate (EGCG) is the extensively investigated bioactive polyphenol in green tea which is the most effective free radical eliminator.

Green tea is approximately 20% to 45% polyphenols by weight, of which 60% to 80% are catechins such as EGCG.^[1]

Forms of green tea:

Commercially green tea is made available in various servings like bottled and sweetened with sugar or with artificial flavoring agents in single tea bags, as loose-leaf

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and as instant-powder. Green tea supplements are also manufactured as capsules or liquid extracts.

Precautions and risks associated with green tea:

As green tea has many advantages, but it has some contraindications too for adults who suffer from insomnia, anxiety, irritability, nausea or gastric upset stomach.

Patients who are on anticoagulant drugs such as Coumadin or warfarin should have green tea with caution due to its vitamin K content. Green tea intake with stimulating drugs increases heart rate and blood pressure.

Conclusion

In particular, pregnant or breastfeeding women having cardiac ailments or high blood pressure, stomach ulcers, or anxiety disorders with kidney or liver problems are suggested not to consume green tea supplements or extracts in any form.

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