Green Tea





Discussion

The health benefits of the tea leaf *Camellia sinensis* are derived from a group of phytochemicals known as polyphenols. Polyphenols in fresh green tea leaves are present as a series of chemicals called catechins. The dominant and most biologically active among the catechins, (-)-epigallocatechin-3-gallate (EGCG), has been shown to induce expression of glutathione S-transferase, glutathione peroxidase, glutamate cysteine ligase, heme oxygenase-1, and other enzymes that protect a variety of cells, including cultured neurons, against oxidative stress-induced cell death. EGCG modulates the redox-sensitive transcription factor Nrf2, which plays a key role in activating detoxifying enzyme HO-1, as well as other phase II enzymes.

Green Tea Leaf Extract Green tea polyphenols protect erythrocytes (red blood cells) from oxidative stress. ^[9] In research studies, EGCG supported healthy insulin activity,^[10] protected the pancreatic cells by reducing undesirable cytokines (e.g., interleukin-1 beta), and reduced interferon-gamma–induced nitric oxide production—an excess of which may cause free radical damage. Furthermore, it was found that the polyphenols triggered genes that inhibit activation of NF-kappaB^[11] and reduced the level of messenger RNA for the hepatic gluconeogenic enzymes, which convert non-carbohydrate sources into glucose.^[12] EGCG has been shown to support healthy immune function,^[2,3] support the endocrine system,^[5] and promote fat oxidation beyond what would be explained by its caffeine content.^[4]

Many of the wide range of health benefits derived from green tea are dose-dependent, and most Americans are not willing to consume the necessary 5-10 cups of tea a day to gain its advantages. Careful processing of the tea into an extract highly concentrates the key beneficial constituents. Each highly concentrated 600 mg capsule of green tea contains 60% polyphenols, 30% catechins, and 18% EGCG. This is the equivalent of about 10 cups of green tea. Each capsule contains about 36 mgs of caffeine, roughly the equivalent of a can of cola and less than the 60-120 mgs of caffeine in an 8-oz cup of brewed coffee. Naturally occurring caffeine in green tea is believed to act synergistically with the polyphenols.^[14]

In summary, green tea's benefits are based upon four actions: 1) it is a powerful antioxidant that protects against DNA damage; 2) it induces detoxifying enzymes; 3) it effects gene signaling which regulates cellular growth, development, and apoptosis; and 4) it selectively improves the function of the intestinal bacterial flora.^[1]



Supplement Facts

Serving Size: 1 Capsule Servings Per Container: 60

Amount Per Serving %Daily Value

Green Tea Aqueous Extract (*Camellia sinensis*) 600 mg ** (leaf)(80% polyphenols, 60% catechins, 30% EGCG, 6% caffeine)

** Daily Value not established.

Other Ingredients: HPMC (capsule), stearic acid, magnesium stearate, and silica.

Directions

Take one capsule daily, or as directed by your healthcare practitioner.

References

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Cautions

Consult your healthcare practitioner before use. Keep out of reach of children.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

