

Peterson Chiropractic & Wellness

Health and Wellness Newsletter

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As I learn more about the compounds and mechanisms of green tea and try to keep up with much of the research in natural medicines, it becomes increasingly apparent that green tea has diverse uses in the prevention and treatment of conditions pertinent to women. These conditions include breast cancer, ovarian cancer, and weight management.

Derived from the tea plant *Camellia sinensis*, green tea is very high in polyphenols, which have potent antioxidant and anti-tumor properties. The major polyphenols in green tea are flavonoids, including catechins and Epigallocatechin gallate (EGCG). EGCG is thought to be the most significant active component of green tea. Other compounds in green tea include vitamin C, and a very small amount of caffeine that works synergistically with the amino acid theanine to enhance cognition and mood.



With these active components, there are mechanisms of action of green tea that are compelling: Green tea may protect against some kinds of cancers by preventing blood vessel growth in tumors, inducing apoptosis (cell death), reducing oxidative DNA damage, inhibiting tumor promoters, inhibiting hormones and growth factors with the receptor sites; Reduce damaging free radical generation, and inhibiting important enzyme systems necessary for cancer promotion and proliferation.

Studies

There have been numerous in vitro and animal studies showing the effects of green tea on reducing, as well as preventing, breast tumors and inhibiting various enzymes and cell signaling systems. EGCG has demonstrated the ability to inhibit the growth of human breast and prostate tumors transplanted into mice. Green tea extracts given to female rats significantly decreased invasive tumors and significantly delayed the onset of a first tumor. Several in vitro studies have found green tea catechins reduced the rate of proliferation of breast cancer cells.

In 1998, a study found that the more green tea pre-menopausal women with stage I and stage II breast cancer consumed, the fewer metastasized lymph nodes they developed. Additionally, postmenopausal women who consumed green tea experienced an increased progesterone and estrogen status--a finding usually associated with less aggressive forms of breast cancer. No benefit was seen in stage III breast cancer patients. In stage I and II patients, there was a 16.7% recurrence rate for those consuming five cups or more of green tea (with an average of eight cups) per day. For those who consumed four or fewer cups per day (with an average of two), there was a 24.3% recurrence rate. Disease-free survival was also significantly improved in stage I and stage II breast cancer patients who had a greater consumption of green tea, compared to those who consumed less green tea.

In addition to these encouraging studies, green tea may also play a role in weight management. An increase in fat and calorie metabolism may be caused by the caffeine, catechin, and theanine constituents. They appear to stimulate thermogenesis as a means of increasing fat burning and inhibiting fat absorption.