

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Wayne Terai

The Latest Research on Green Tea

The secrets to optimal health and long life may be found not in a bottle of pills, but in a teacup — if that cup is full of green tea, that is. The health benefits of green tea have been widely publicized for years, but researchers are still uncovering additional advantages of this ancient elixir. Dr. Terai invites patients to pour a cup, sit back, and read the latest research about this antioxidant powerhouse.

A Powerful Leaf

By some archeological estimates, the practice of steeping tea leaves in water to create a nourishing drink dates back 500,000 years. Green tea, like black and oolong tea, comes from the leaves of *Camellia sinensis*, a plant originally cultivated in India and China — and now grown throughout Asia and parts of the Middle East and Africa.

Because it is not fermented, green tea is the least processed form of *Camellia sinensis*. This preserves a high concentration of polyphenols. Polyphenols are antioxidants, cell-protecting chemicals present in a variety of the whole foods that Dr. Terai recommends patients consume for optimal health.

Much of the latest research on green tea's health benefits focuses on a polyphenol called epigallocatechin gallate (EGCG).

Fight Cancer

One of the most widely touted benefits of the EGCG found in green tea is its potential to prevent or halt the progression of several types of cancer. Cancer results from damage to DNA. Destructive compounds called free radicals are one cause of this damage.

Antioxidants protect cells by neutralizing free radicals. The EGCG in green tea is a particularly powerful antioxidant and the focus of many

promising studies. For example, researchers recently found that green tea drinkers have lower rates of liver and endometrial cancers (*Cancer Causes Control* 2009;Epub; *Am J Obstet Gynecol* 2009;Epub).

Many cancer patients turn to green tea in their quest to heal, and research supports this practice. In one study, men with prostate cancer underwent a regimen of green tea extract supplements. The biomarkers for cancer decreased for all of the patients, some by as much as 30 percent (*Cancer Prevention Research* 2009;2:673-82).

Another trial by Mayo Clinic researchers used green tea extract to successfully reverse the progression of chronic lymphocytic leukemia (*J Clin Oncol* 2009;27:3808-14).



Safeguard Heart Health

Cardiovascular disease is the number one cause of death and disability in the United States. Dr. Terai wants patients to know that regular consumption of green tea may help maintain a healthy heart. The EGCG in green tea promotes efficient blood vessel function, lower blood pressure, and reduced risk of cardiovascular disease (*Br J Nutr* 2009;15:1-13). This potent antioxidant may also lower LDL, the notorious “bad cholesterol” that causes arterial plaque buildup (*Curr Atheroscler Rep* 2009;11:470).

*Find Out More About Nutrition and Wellness Research
From Dr. Wayne Terai*

If you are interested in nutrition and wellness research, you have come to the right place! Dr. Terai is committed to providing patients with the latest cutting-edge research.

We are focused on teaching our patients and community about this vital health information, which will jump-start them on the road to wellness. To this end, each week we present one hot-off-the-presses *Optimal Health University*® topic. To find out more about this revolutionary approach to patient education, or to suggest future topics, please call our office today!

**Dr. Wayne Terai, Burtch Chiropractic (250) 860-4518
229-1634 Harvey Avenue, Kelowna, BC V1Y 6G2 www.burtchchiropractic.com**

Enhance Weight Loss

In a marketplace rife with diet pills that promise instant results but often have questionable safety records, the doctor recommends that patients commit to adopting a wellness-oriented lifestyle, pass up the “miracle drugs” and reach for a box of green tea. Numerous studies reveal green tea’s promise as a natural support to weight loss. Scientists believe that components of the drink enhance metabolism and fat loss (*Int J Vitam Nutr Res* 2008;78:275-8).



Ease Stress

Like excess weight, excess stress may trigger a myriad of physical ailments — as well as psychological issues like anxiety and depression. Many people grab a cup of coffee, a beer, or a cigarette to cope with stress. However, green tea is a safer and more effective antidote. A recent Japanese study of over 40,000 participants found that individuals who drink several cups of green tea per day suffer less psychological stress than those who consume the beverage infrequently or not at all (*Am J Clin Nutr* 2009;90:1390-6).

Keep Bones Strong

Osteoporosis, a disease in which bones weaken and are at an increased risk of fracture, is a too-common condition in older women and men. Fortu-

nately, osteoporosis may be prevented by lifestyle changes, including consumption of green tea. In two recent studies, EGCG and other bioactive compounds found in green tea boosted bone mineral density while simultaneously suppressing osteoclasts, the cells that break down bones (*Nutr Res* 2009;29:437-56; *J Agric Food Chem* 2009;57:7293-97).

A Perfect Cup

Perhaps the best news about green tea is how easy and inexpensive it is to add to your daily routine. Green tea is widely available loose or in tea bags. To avoid exposure to pesticides and bioengineered plants, choose organically grown brands.

Green tea should generally be brewed in hot — but not boiling — water for two to three minutes. Check the package for variations. Brewed green tea may be served hot or cold over ice. Organic, locally grown honey is the perfect health-boosting sweetener for the emerald elixir.

Ready-to-drink green tea is also available in bottles and cans, but scrutinize the ingredients prior to purchase: Many varieties contain large amounts of high fructose corn syrup, refined sugar, or artificial sweeteners.

Green tea extract is available in capsule or liquid form. Typical dose recommendations include two to three cups of green tea or 100-750 mg of standardized green tea extract daily.

Guidelines for Safe Use

As a natural product with a long history of use, green tea is generally safe, but the doctor reminds patients of a



few important precautions. First of all, always check with the doctor or another health-care provider before beginning any nutritional supplementation, including green tea.

While green tea contains less than one-half the caffeine of coffee, caffeine can cause anxiety, insomnia, upset stomach, and other side effects. If you are sensitive to caffeine, or if you are pregnant, decaffeinated tea and extracts are available.

Like any supplement, green tea may cause adverse interactions with certain drugs, including coagulants. People who take concentrated green tea extract sometimes report liver problems. These can be mediated by taking the extract with food. Seek medical attention for any signs of liver trouble such as abdominal pain, dark urine, or jaundice.

Finally, no research has been conducted on the effects of green tea on children, so it is not recommended for children.

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