The Extraordinary Health Benefits of Green Tea

Green tea is a common Asian drink that has picked up popularity throughout North America. Many are choosing green tea as a healthy alternative to coffee and other warm drinks. Research has shown that green tea is rich in polyphenol anti-oxidants that have extraordinary health benefits.

Green, black, and oolong tea are all part of the same species called Camellia sinensis. Local growing conditions create variability and a multitude of distinctive leaves. The processing of the leaves plays the biggest role in the creation of the three types of teas. The length of time they are processed dictates the color, taste, and nutrient content of the different varieties of tea.

Green Tea is Highest in Anti-Oxidants

Green tea is the least processed of the three and contains the highest ORAC (Oxygen Radical Absorbency Capacity) of the three teas. Green tea is rich in the polyphenol anti-oxidant catechin called epigallocatechin-3-gallate (EGCG). This anti-oxidant is thought by most to be responsible for the health benefits linked to green tea consumption.

ECGC is considered to be one hundred times more potent than vitamin C and twenty-four times stronger than vitamin E. The powerful ability to scavenge free radicals makes green tea one of the best anti-aging herbs. ECGC is one of a handful of unique anti-oxidants that has shown an ability to influence mutant DNA formations to reverse chronic disease states.

Green Tea Lowers Mortality Risk

A September 2006 study in the Journal of American Medical

Association showed that drinking green tea lowers the risk of mortality from all causes including cardiovascular disease. This was an eleven year study following 40,530 adults ranging in age from 40-79 in the northeastern region of Japan. Eighty percent of this population drinks green tea and over half consume at least three cups per day.

Those who drank five or more cups a day had a significantly lower risk of death from all causes than those who drank less than one cup of green tea daily. Men had a 12% lower risk of mortality, 22% lower risk of dying from cardiovascular disease, and 42% lower risk of dying from stroke. Women had a 23% lower mortality rate and 31% lower risk of dying from cardiovascular disease and 62% lower risk of dying from stroke.

Green Tea and Cancer

A metanalysis of thirteen studies that was published in *Carcinogenesis* July 2006 demonstrated that women who drink green tea have a 22% lower risk of developing breast cancer than women who do not drink green tea.

A study published in December 2004 in *Cancer Research* discussed how ECGC in green tea was able to decrease insulin-like growth factor-1 (IGF-1) while increasing levels of IGF binding protein-3, which binds IGF-1. This reduces the risk of breast, colon, prostate and lung cancer. It also inhibits key cancer survival proteins and reduces the expression of compounds associated with cancer metastasis.

A study published in Cancer Research in March 2005 showed that ECGC inhibits the enzyme dihydrofolate reductase (DHFR), which cancer cells need in order to grow. In fact, DHFR is a common target of many expensive and toxic cancer drugs such as methotrexate. ECGC does not bind as strongly and is not as powerful as methotrexate , but it does not have the negative effects on normal cells found with methotrexate use.

Green Tea Boosts Immunity and Prevents the Flu

A November 2005 issue of Antiviral Research demonstrated how EGCG inhibits the flu virus from replicating in a cell culture. Scientists found that it blocks the hemagglutinin enzyme in the virus which inhibits its ability to infect other cells. It also suppresses viral RNA synthesis by altering key properties of the viral cell membrane.

ECGC has been shown to suppress the pathogenic viruses such as Epstein Barr, herpes simplex, HIV-1 and the influenza virus. Green tea contains high levels of L-theanine which has been shown to activate human gamma-delta T lymphocytes to proliferate and make interferone gamma If-G. If-G is a potent antimicrobial cytokine that is the first line of defense in the blood stream against infection.

Green tea also contains small amounts of alkylamines which are also present in pathogenic organisms. When we drink green tea, the alkylamines present act as relatively weak antigens that don't fully activate the immune system but get it in a ready state. This primes the immune system against bacterial and viral invaders.

Green Tea as a Th2 Immune System Stimulator

Some natural health practitioners have labeled green tea as a Th2 stimulating agent. Although this hasn't yet been proven through research, there are various case studies indicating that green tea may have this effect. This herb would be particularly effective for individuals with a Th1 dominance as it will help balance out the immune system.

It is advisable for individuals with Th2 dominant conditions to do a supplement challenge where they intentionally see how their body responds to green tea or another Th2 stimulating compound before they begin indiscriminately using it . If it

is shown through a cytokine blood test or through an herbal or supplemental challenge that the individual has a Th2 dominance, then it is best to avoid green tea.

Green Tea Caffeine Content and ContraIndications

Green tea contains caffeine, but it is less than half of that found in coffee. The amount of caffeine found in green tea varies depending upon the amount of tea used, the brand, and the quality. The first infusion of green tea leaves is the highest quality and has the most amount of caffeine.

It is extremely important to get organic green tea since the conventional tea may be highly sprayed with toxic pesticides and herbicides. Many coffee shops and big companies carry green tea that is commercially produced and contains an abundance of environmental toxins. This is not healthy and should be avoided.

Pregnant women and newborns shouldn't drink large amounts of green tea as its ability to bind to DHFR may increase the risk of folate deficiencies in the newborn and increase the risk of spina bifida or other neural tube disorders.

Sources For This Article Include:

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