

SPRING 2002 EDITION – DR. DOI'S TALKING STORY

GREEN TEA HALTS GROWTH OF ORAL CANCER CELLS

If tea is one of your beverages of choice, I hope you are a consumer of green tea. Based on what I have read recently, it has amazing health benefits. Green tea does indeed halt the growth of new oral cancer cells and breaks down and kills existing oral cancer cells; according to a new study in *General Dentistry*, the clinical, peer-reviewed journal of the Academy of General Dentistry.

Oral cancer can be particularly dangerous, for the cancers are aggressive. Annually, more than 30,000 patients will be diagnosed with oral cancer with an estimated 7,800 deaths. The mouth's oxygen-rich environment connects too many blood vessels that provide a perfect habitat for housing cancer cells and promoting their rapid growth. Some of the signs may be white-colored tissue, very red-colored tissue, lumps, or an ulcer that does not disappear in a few weeks. Habits such as smoking or chewing tobacco may increase your chance of contracting oral cancer.

Ingesting or swishing with green tea introduces polyphenols to the oral cancer cells that may be present in the mouth. The polyphenols are antioxidants that work to remove the free radicals (oxidants) that cause gene mutations, which may lead to cancerous growth. In addition, green tea polyphenols are able to cause cell death in cancerous cells without harming the normal cells. They can also inhibit the growth and spread of cancerous cells.

The *in vitro* study revealed that the green tea polyphenols induce apoptosis, or destruction of cells, in many types of tumor cells, including oral cancer cells. While green tea polyphenols induce programmed cell death in tumor cells, they also trigger a survival mechanism in normal cells.

For patients, this means that in order to reap green tea's anticancer benefits, the mouth's mucous lining must be exposed to four to six cups of green tea a day, explains Dr. Stephen Hsu, the lead researcher of the study conducted at the Medical College of Georgia School of Dentistry. The tea does not need to be ingested; a person can choose to rinse and swish the mouth with it.

There are a number of studies that suggest that green tea may also provide benefits by systemic absorption. In epidemiological studies, green tea consumption appears to lower the risk of gastro-intestinal cancer and esophageal cancer and decreases lymph node metastasis of breast cancer. In animal studies, green tea and its compounds were found to possess preventative or therapeutic effects on lung cancer, prostate cancer, and urinary bladder cancer.

INTERESTING FACTS

- Each year, more than 2.5 million tons of tea is produced, but only 20 percent is green tea. Tea is more than 5,000 years old
- It has been the beverage of choice in China since the 10th century B.C. After water, tea is the most consumed beverage worldwide
- Half the world population drinks tea
- Green tea leaves are not fermented and contain the highest level of poly-phenols

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TESTIMONIALS

Whenever a discussion arises on the importance of probiotics, the science of maintaining one's natural flora in the digestive system in order to maintain good health, Dr. Doi shares with me his personal story of food poisoning. After hours of diarrhea, he took one capsule of Culturelle, a very high quality and well-researched probiotic. The diarrhea and stomach discomfort disappeared for good within an hour.

Recently, I, too, suffered from food poisoning and began to throw up. I felt weak and light-headed and had stomach distress. Dr. Doi recommended taking two Culturelle capsules, a non-prescription product. Within an hour, all my symptoms disappeared, never to return. I feel compelled to tell my story in the hopes that it will help many other people.

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