Tea and Cancer

Cancer is the leading cause of premature death in Canada. This year, cancer will claim the lives of an estimated 70,400 Canadians and an estimated 153,100 new cases of cancer will occur, according to the Canadian Cancer Society. Based on current incidence rates, about 38 percent of Canadian women and 44 percent of Canadian men will develop cancer during their lifetime.

An incredibly complex disease, cancer is a term that covers a range of malignant conditions that can affect almost any organ or tissue in the body.

While there are a multitude of causes and risk factors for cancer, lifestyle is a key contributor and more and more research is finding that diet plays a crucial role in the prevention of cancer. Among the research are a growing number of studies that suggest tea could play a role in reducing the risk of some types of cancer.

Preliminary research, largely studies in animals, has found evidence that the flavonoids in tea act as potent antioxidants and may help prevent or delay the formation of tumours. Most consistently, tea and tea polyphenols were found to offer chemoprotection in animal models of skin, lung, and liver cancer, and also in cancers of the gastrointestinal tract including the colon. Animal studies of breast cancer have show some promise that tea may provide some protection, but results have been mixed.

Scientists are still working to explain conclusively the mechanisms by which tea may prevent or delay cancer. Studies to date suggest that tea appears to do this by preventing damage to cells caused by cancer-causing chemicals and by slowing down the growth rate of precancerous cells, as well as by enhancing the body’s ability to naturally kill precancerous and cancerous cells.

Research has found that the flavonoids in tea protect cells from damage caused by free radicals and other carcinogens by acting as antioxidants and helping the body rid itself of carcinogens. Studies have shown that flavonoids also help maintain normal cell growth rates and increase the natural turnover of precancerous and cancerous cells and that may help control the progression of cancer.

While the scientific evidence for tea’s potential as a cancer preventing lifestyle choice is mounting, it is not yet definitive. Results from a number of human population studies have suggested that drinking tea is associated with a decreased risk of cancer, while other studies have had mixed results or been inconclusive. Tea’s role in cancer
prevention is an area of active scientific interest and numerous studies are currently taking place around the world.

Some of the many epidemiological studies that have found a link between drinking tea and reduced risk of cancer include:

- A Swedish study of 61,057 women, published in 2005 in the *Archives of Internal Medicine*, found that women who drank tea had a lower risk of ovarian cancer. During the 15 years of follow up, researchers found that women who drank two or more cups of tea per day had a 46 percent lower risk of ovarian cancer than non-tea drinkers. As well, each additional cup of tea was associated with an 18 percent decreased risk.

- Research published in the *International Journal of Cancer* in 2003 found that women who drank green tea had a significantly reduced risk of breast cancer than non-tea drinkers. The study of Asian American women found that the risk decreased with the amount of green tea consumed. However, researchers found that black tea consumption did not offer a reduced risk.

- Green tea consumption was associated with a reduced risk of lung cancer in a population-based case-controlled study of more than 1,300 women in China. Published in the journal *Epidemiology* in 2001, the study also found that the risk for lung cancer decreased with increasing tea consumption. The decreased risk was only evident in non-smokers.

- Results of a study of men in China in 2001-2002 suggest that drinking green tea provides protection against prostate cancer. Researchers found that prostate cancer risk declined with increasing frequency, duration and quantity of green tea consumption. The case-control study was published in 2003 in the *International Journal of Cancer*.

- An American study published in *Public Health Nutrition* in 2002 found that participants who drank one to two cups of tea each day had a 42 percent reduced risk of colon cancer compared to non-tea drinkers. Researchers also found that men who drank more than one and half cups of tea per day had a 70 percent lower risk of colon cancer.

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