

Strawberries: An Integral Superfruit in Cancer Prevention

By David Grotto, RD, LDN

Author of *101 Foods That Could Save Your Life* and *101 Optimal Life Foods (January 2010)*

October is Breast Cancer Awareness Month. Did you know that apart from non-melanoma cancer of the skin, breast cancer is the second most common type of cancer to occur in women? According to the Centers for Disease Control (CDC), both breast cancer occurrence and death rates have decreased in recent years, which is true of many other types of cancer. This is welcome news and may be due in part to early detection efforts and improved treatment options. But even in light of this advancement, each year breast cancer continues to claim the lives of over 40,000 women and more than 560,000 men and women die from all types of cancer, according to the American Cancer Society.

I lost a great-grandmother, grandmother and mother to breast cancer. It was this loss that led me to work in the field of integrative oncology and to see if nutrition could not only affect the risk of cancer but perhaps improve both the quality and quantity of life of those diagnosed with the disease. While working with patients, I discovered the encouraging news that over half of all types of cancers in developed countries are linked to modifiable risk (aka “life style”) factors, i.e. things we have control over. Unfavorable lifestyle factors such as smoking, heavy alcohol intake, obesity, inactivity, and consuming a diet high in saturated and trans fat while low in whole grains, vegetables and fruit, may trigger or “wake up” dormant genes to express certain types of cancer. Besides sharing genes, I realized that my mother, grandmother and great grandmother may have also shared many of these “unfavorable” lifestyle traits. Though we may not have much control over the genes we inherit, we may be able to control the expression of those genes by making wiser lifestyle choices.

Manage Your Weight

Obesity may increase the risk of certain types of cancer. Carrying around extra body fat can stimulate the production of estrogen, which is concerning for estrogen-driven cancers, like breast cancer. Being overweight has also been found to lower the chance of survival from breast cancer, especially in post-menopausal women.

The best way to manage your weight is to increase physical activity while eating a diet that is both low in calories but rich in nutrients. Increasing servings of vegetables and fruits is a great way to satisfy your appetite while keeping calorie intake low. In fact, a cup of California strawberries has only 50 calories and is loaded with both flavor and nutrients.

Increase Fiber

A recent National Institutes of Health-AARP Diet and Health Study evaluated over 185,000 post - menopausal women and found an inverse relationship between fiber and breast cancer. Fiber has also been found to reduce the risk of many other cancers especially those of the lung and digestive tract. Another recent study of over 1900 participants found that those who more closely followed a diet that was low in fat, high in fruits, vegetables and fiber, had a 35 percent reduction in colon cancer rates. Whole grains, vegetables and fruits provide the main source of fiber in the diet. A good goal to strive for is 25 to 35 grams of fiber a day. California strawberries are considered a good source of fiber and contain 3 grams per cup.

Increase Plant Nutrients

Besides fiber, there are vitamins, minerals and other substances called phytonutrients found in whole grains, vegetables and fruit that may affect the life of a cancer cell. Compared to healthy cells, cancer cells are unique in that they do not possess an internal clock that tells them that it is time to die. A study from the *Journal of Agriculture and Food Chemistry* showed that foods like strawberries, that are rich in the plant chemical quercetin, can encourage apoptosis (programmed cell death) in cancer cells. Strawberries are also rich in a plant nutrient called ellagic acid which may act as a hormone blocker in estrogen-driven breast cancer. Several cell studies have shown effectiveness of ellagic acid, and other polyphenolic antioxidants found in strawberries, in reducing the growth and spread of prostate, lung, colon, cervical, esophageal and pancreatic cancer.

Other plant nutrients, such as folate, have been associated with a protective effect against female reproductive cancers such as cervical, breast and colon cancer. A cup of strawberries supplies 35 micrograms of folate or nearly nine percent of the daily requirement.

Promising research conducted specifically with strawberry extracts demonstrated effectiveness in reducing the growth of oral, prostate, colon and other types of cancer cells in both human cell and animal laboratory studies. The positive anti-cancer benefits of strawberries may be due to a variety of naturally occurring plant nutrients and chemicals, however, more research in humans is needed to clearly understand the role of strawberries in fighting cancer.

Enjoy life!

Be sure to get regular physical exams and cancer screenings, reduce tobacco and alcohol consumption, and manage your weight through increased physical activity and by consuming a diet that contains plenty of whole grains, vegetables and fruits. All of these are within *your* control and can help make a meaningful dent in cancer statistics. Start today by simply adding a cup of delicious California strawberries into your diet as an integral part of your overall cancer battle plan.

Yours in good health,
David Grotto, RD, LDN

California strawberries are grown and available year-round in supermarkets across the country. As America's favorite fruit, they are an easy addition to a diet that promotes brain health.

Connect with us to learn more about strawberry nutrition and recipes:

- Visit the [California Strawberry Commission](http://www.californiastrawberry.com) to get unique recipes from top chefs.
- Become a fan at: <http://www.facebook.com/castrawberries>
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