Integrative Approach to Cancer Prevention

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Let me begin by presenting two questions patients often ask me concerning cancer prevention. One, are there alternative medicine interventions that can prevent cancer? Two, which nutritional approaches are helpful for cancer prevention?

Before I respond to these questions, let me begin with the basics first. Cancer is caused by genetic and environmental factors. Genetic factors cannot be changed. However, environmental and lifestyle factors such as poor nutrition, lack of physical activity and smoking are amenable to individual control and can be changed. There is a great deal of potential for prevention of colon, lung, prostate and breast cancers, in particular, through manipulation of environmental and lifestyle factors.

Regular physical activity, balanced nutrition and stress management are the foundation of health maintenance and promotion. These lifestyle interventions are associated with low risk of cancer. Smoking cessation and alcohol abstention also reduce cancer risk. Additionally, periodic screening examinations, such as mammography for breast cancer and colonoscopy for colon cancer, are essential in identifying cancer at an early stage. Early detection of cancer allows the disease to be treated effectively, resulting in high rates of cure.

It is beyond the scope of this article to discuss in detail all alternative and preventive medicine approaches for cancer prevention. My focus will be on a few of the approaches that have attracted significant public attention in recent years.

Dietary Factors
Many interventions for cancer prevention relate to consumption of plant derived compounds. Several studies have shown that the consumption of *Allium* vegetables such as garlic and onions are cancer protective. Results from these studies are encouraging but not fully convincing. A sufficient dietary intake of these vegetables constitutes reasonable advice for those with an interest in nutrition and cancer prevention.
Studies have also shown that those who subsist on vegetarian diets have lower risk of cancer. But strict vegetarianism, without the use of dairy products, carries the risk of micronutrient deficiency (iron, calcium, vitamins B and 12) and malnutrition. Reasonable advice, therefore, would be to reduce or moderate the consumption of red meat if it is excessive, while preserving the quality of balanced nutrition and the use of dairy products such as yogurt, milk and eggs.

Research has also confirmed that diets high in fruits and vegetables are correlated with lowered risk of common cancers. Fiber, anti-oxidants such as vitamins E and C, and other nutrients such as soy protein, lycopene (present in tomatoes), selenium and folic acid appear to have protective mechanisms. The National Cancer Institute recommends five to nine servings of fruits and vegetables daily.

Here is an interesting point about green tea. There is plenty of indirect evidence that the polyphenolic compounds present in green tea demonstrate protective effects against cancer. There are no safety concerns with green tea. Its use in moderation (approximately four to six cups a day) might be beneficial.

**Nutritional and Vitamin Supplements**

For both the general public and health care workers including scientists, the issue of vitamin and antioxidant supplements and their relationship to cancer prevention remains controversial. Some scientists and health care professionals recommend supplements of certain vitamins and antioxidants (Vitamin A, C and E, beta-carotene, Vitamins C and E) routinely for apparently healthy people. This is done with the view that supplementing diet with certain vitamins reduces cancer risk. On the other hand there are those who feel that there is no scientific basis to making such a recommendation.

Based on numerous studies, it has become clear that there is insufficient evidence about the effectiveness of supplemental vitamin A, Vitamin E and beta-carotene in reducing the cancer risk. The beneficial effects of supplements, if any, are probably limited to those individuals and populations deficient in vitamins and antioxidants. Those with erratic and poor eating behaviors may benefit from one daily multivitamin tablet (containing recommended daily allowances of various antioxidants such as folic acid, vitamins C, E, A, selenium and lycopene). Vitamins and nutritional supplements consumed in excessive doses do not prevent cancer and, in fact, may lead to serious side effects.

Many health care practitioners recommend herbs such as ginseng and botanicals such as Maitake mushrooms. Their cancer protective effect has been demonstrated in animal
studies, but it hasn’t been verified by studies in humans. (See the box, below, for general nutrition guidelines.)

**Mind/Body Interventions**
Mind/body interventions such as yoga, meditation and relaxation reduce stress and anxiety. Their use improves quality of life for most people. There is some theoretical evidence that these interventions could potentially reduce cancer risk.

One other important point. Other alternative therapies such as ozone therapy, infusion of large doses of vitamins and macrobiotics neither prevent nor cure cancer.

A lifestyle with a balanced diet with adequate fruits and vegetables, a well-structured regimen of physical activity, routine use of stress reducing methods, abstinence from smoking and routine screening examinations should be the mainstay of any cancer preventive strategy.

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<tr>
<th>General nutrition guidelines for cancer prevention</th>
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<tr>
<td>• Avoid polyunsaturated vegetable oils, margarine, vegetable shortening, all partially hydrogenated oils, and all deep-fried foods.</td>
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<tr>
<td>• Increase omega-3 fatty acids (fish). Olive oil, a rich source of monounsaturated fat, and food sources of omega-3 fat like fish have both been shown to be protective.</td>
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<td>• Reduce animal foods and saturated fats. Excessive consumption of saturated fats increase risk of cancer.</td>
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<td>• Eat plenty of fresh fruits and vegetables. Vegetables and fruit are the richest sources of nutrients and phytochemicals that act as antioxidants and have other cancer–protective properties.</td>
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<td>• Eat soy foods regularly. Soybeans and foods made from soy have many different compounds that seem to protect against cancer.</td>
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<td>• Drink green tea regularly.</td>
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<td>• Alcohol is linked with breast cancer, but also seems to affect risk of other cancers as well.</td>
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