

INTEGRATIVE NUTRITION

Eating food is necessary for survival and when shared with others, provides not only physical nourishment, but also (for some) a deepened sense community. We must eat to live and some would argue locally that we live to eat. Whether healthy or sick, it is important to maintain good nutrition practices. As with most chronic diseases, nutrition plays an important role, though this importance often becomes heightened with the diagnosis of cancer. Questions like “What foods should I eat to help me gain weight?” or “What vitamins should I take during cancer treatment?” or “What foods should I eat to reduce cancer reoccurrence?” are just some of the questions that have been posed. In this booklet, we, the clinical nutritionists of Touro Infirmary, have provided a snapshot of hot topics in an attempt to address some of the nutrition questions that have been circulating in our oncology community. We are not necessarily recommending all of these foods or supplements, but understand that some of you may find them attractive or beneficial. It is important that you tell your oncologist and nutritionist about any “cancer fighting” foods, supplements, or practices that you have espoused, *especially* if you are in a clinical trial.

A set of established guidelines is often helpful when trying to improve one’s overall nutrition. The American Institute for Cancer Research (AICR) has provided the public with a list of ten recommendations as it pertains to cancer prevention. Listed below are the recommendations – feel free to visit the website (www.aicr.org/) as each recommendation links to a more detailed discussion.

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 minutes every day.
3. Avoid sugary drinks. Limit consumption of energy-dense foods (particularly processed foods high in added sugar or low in fiber, or high in fat).
4. Eat more of a variety of vegetables, fruits, whole grains and legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women a day.
7. Limit consumption of salty foods and processed foods with salt (sodium).
8. Don’t use supplements to protect against cancer.
9. It is best for mothers to breastfeed exclusively for up to 6 months and then add other liquids and foods.
10. After treatment, cancer survivors should follow the recommendations for cancer prevention.

Superfoods

Foods that contain antioxidants are considered “superfoods.” By definition, antioxidants are substances that prevent or slow oxidative damage. Our bodies use oxygen and naturally produce free radicals, which can cause damage. Antioxidants work to prevent the damage caused by these free radicals and are typically referred to as “free radical scavengers.” Most of us know that fruits and vegetables provide us with a powerful source of antioxidants. Those vegetables with the highest antioxidant capacity include: (in order of appearance)

- kale
- beets
- red peppers
- broccoli
- spinach
- potato
- corn

Fruits with the highest antioxidant capacity include:

- blueberries
- strawberries

Should I buy organic? Yes, buying organic fruits and vegetables is recommended as pesticides do have harmful effects. However, the benefits of a diet rich in fruits and vegetables with pesticides far outweighs their elimination. The Environmental Working Group (EWA) has published a list of the 12 most contaminated fruits and vegetables, which include:

- peaches
- apples
- sweet bell peppers
- celery
- nectarines
- strawberries
- cherries
- lettuce
- imported grapes
- pears
- spinach
- potatoes

If the organic version of these 12 most contaminated fruits and vegetables is not a financial option, the EWA has also provided consumers with a “least contaminated” list. The 12 cleanest fruits and vegetables include:

- onions
- avocado
- frozen sweet corn
- pineapples
- mango

- frozen sweet peas
- asparagus
- kiwi
- banana
- cabbage
- broccoli
- eggplant

Acai Berry/Mangosteen Fruit

Both acai berry and mangosteen fruit are marketed as “cancer fighters.” While neither fruit has been shown to fulfill this lofty health claim, both fruits are replete with vitamins, minerals, and phytochemicals. Consumers can purchase these products as a fruit, in the form of a processed juice or as a supplement in capsule form. If undergoing cancer treatment (i.e. chemotherapy or radiation), it is recommended to avoid the dietary supplements that contain these plant compounds as high-antioxidant supplements have the capacity to interfere with treatment.

Lycopene

There is strong evidence to suggest a link between lycopene and prostate cancer prevention. Lycopene is an antioxidant found in tomatoes, with absorption being more pronounced in processed tomatoes, i.e. tomato paste. Eating tomato rich products increases the blood level of lycopene, which is associated with low prostate specific antigen (PSA) levels. A high PSA is often suggestive of prostate cancer.

Green Tea

Green tea, a staple in many Asian countries, comes from the same plant as black tea, but differs in its preparation. Green tea has received a lot of attention among the cancer community, likely stemming from the fact that it contains polyphenols, which act as antioxidants in the body. The current body of literature does not suggest that green tea is definitively preventative with regard to cancer. If, however, you are undergoing treatment, it is prudent to limit tea consumption to approximately 2-3 cups per day as it should not serve as a meal replacement for more nutrient dense foods and supplements when weight loss or loss of appetite has ensued.

Soy

As a plant protein, soy is available in many forms, including but not limited to tofu, tempeh, soy milk, edamame, soy nuts, and whole soybeans. The benefits of soy have received a lot of attention over the past several years, especially as it concerns cardiovascular health. When

added to diet, soy protein can help lower total cholesterol and the more “atherogenic” low density lipoprotein (LDL) cholesterol.

Isoflavones, a component of soy, may have estrogen-like effects in the body. As such, those individuals with hormone-sensitive cancers (i.e. breast, ovarian, or uterine), may be slow to incorporate soy in the diet. At present, there is not enough evidence based research to suggest that women with estrogen-sensitive breast cancer should avoid soy products. Certainly, if you are undergoing a treatment protocol such as a clinical trial that bans soy consumption, you must maintain compliance.

Alcohol

According to the American Dietary Guidelines for Americans, drinking in moderation is defined as one drink per day for women and 2 drinks per day for men, respectively. One drink is equivalent to one 12 ounce beer, 4 ounces of wine, 1.5 ounces of 80-proof spirits, or 1 ounce of 100-proof spirits. If you usually consume alcohol, consider that alcohol can irritate your mouth and throat and may exacerbate treatment related side effects. Be sure to discuss your choice with your medical oncologist.

The association between heavy alcoholic drinking and increased risk of certain cancers, namely liver, head and neck, and esophageal, comes as no surprise. However, now researchers have learned that moderate alcoholic drinking (defined as approximately 2-4 drinks per day in studies) may increase breast cancer risk in women - more specifically, women who developed breast tumors that were estrogen-receptor and progesterone-receptor positive. To learn more about the studies that were conducted, refer to the American Institute for Cancer Research website www.aicr.org/ or the National Cancer Institute website www.cancer.gov.

Vitamins

As nutritionists, we are often asked if it is acceptable or beneficial to take a multivitamin. A multivitamin is not meant to be a substitution for a balanced diet. Rather, a multivitamin should serve as nutritional lagniappe – a little something extra as day to day intake is not always optimal. Patients are encouraged to eat a variety of foods in an attempt to not only meet the basic energy needs of the body, but also to minimize newfound fatigue, often a treatment associated side effect. If your nutritional intake is inadequate (often secondary to a loss of appetite or taste changes), be sure to select a one-a-day type of supplement providing 100 percent of the RDAs of vitamins and minerals.

Before selecting a multivitamin, vitamin, or mineral at the store, we recommend reviewing the USP website (www.usp.org/aboutUSP/) for a list of standardized products. All products that are USP certified contain a USP notation on the label. In addition to checking for a USP notation, be sure to check the expiration date before purchase and ingestion. Also, do not forget to take the vitamin or mineral supplement with food as this can help with absorption.

With a cancer diagnosis, it is easy to become overwhelmed. It is true that your cancer diagnosis and treatment should take precedence, but you do not want to forget about your other medical history such as diabetes or heart disease and associated medications. For example, if you are taking an anticoagulant such as warfarin (Coumadin®), you do not want to take supplements that contain vitamin K. Vitamin K plays a role in blood clotting and decreases the efficacy of the drug. With progressive renal disease, you may also want to take special precautions when taking supplements as kidney patients are often prescribed a special “renal” vitamin.

Vitamin D

Dietary sources of vitamin D include fish, eggs, fortified milk, and cod liver oil, to name a few. In addition to dietary sources, regular sun exposure also provides us with a source of vitamin D. There is new research which suggests that vitamin D supplementation may prove beneficial as deficiency is common. Supplementation with vitamin D₃ analogs may deserve consideration as dietary sources provide only small amounts of the recommended 1000 International Units (IU) and long-term sun exposure presents an additional challenge with increased skin cancer risk.

Dietary Supplements

Before taking any dietary supplements (especially during the treatment phase), it is important to research the supplement thoroughly. Share your decision to take a particular supplement(s) with your medical or radiation oncologist and nutritionist as many pitfalls can be avoided. These lists by no means are exhaustive.

If undergoing chemotherapy or radiation, these dietary supplements may interfere with the efficacy of the treatment:

- Coenzyme Q10
- Ginkgo Biloba
- St. John’s Wort
- Acai Berry supplements/Mangosteen Fruit supplements

If you are taking an anticoagulant drug (i.e. Coumadin®, heparin), aspirin, NSAIDS (i.e. Advil®, Motrin®, Ibuprofen®), or have low blood counts secondary to chemotherapy, these supplements are not recommended:

- Vitamin C
- Vitamin E
- Selenium
- Coenzyme Q
- Garlic supplements
- Ginkgo Biloba
- Ginseng
- St. John’s Wort
- Fish oil (omega-3 fatty acids)

- Ginger supplement

Causes estrogenic effects in women and should be avoided in women with breast cancer:

- Ginseng

Recommended Cookbooks

What to Eat During Cancer Treatment

American Cancer Society's Healthy Eating Cookbook

The Great American Eat-Right Cookbook

Celebrate! Healthy Entertaining for Any Occasion

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