

Enhancing Survivorship

There are many factors that have to do with the development of cancer. Genetics, lifestyle, toxic exposures and a number of unknown factors all contribute to any one individual's developing cancer. Lifestyle is perhaps the one area that we have the most control over. By optimizing a healthy lifestyle, you can positively affect your overall health both while undergoing cancer treatment and in terms of enhancing survivorship. "Tumors are... a manifestation of a broader condition, and painful experience has shown that far too often they reappear...if the systemic condition that nurtured them is not treated." [Life Over Cancer, Keith Block, MD, p19] An article published in the *Journal of Internal Medicine* in 2010 stated that our own actions may be more important in determining how long we live than inherited factors.

You CAN influence your internal physiological environment which in turn is how you can change the conditions within that may have been factors in getting cancer. The four main areas to focus on in order to achieve this are: 1) diet and weight management; 2) fitness; 3) stress management; and 4) rest and sleep.

Diet and Weight Management

There are two very important factors to keep in mind in terms of diet: reducing inflammation and controlling insulin output.

Chronic inflammation appears to be a common component of many diseases, such as heart disease and cancer. We mean here chronic, prolonged inflammation, not the acute inflammation that occurs, for example, with a tendonitis or joint sprain. Cancer itself and some of the therapies used to treat it can also promote inflammation. Diet is one way we can control chronic inflammation within our bodies. We encourage a high intake of vegetables and fruits, and other foods we will mention below, because these will help decrease inflammation.

Fatty acids

Essential fatty acids are important for brain health, joint health and other important processes within the human body, and can be a good source of natural anti-inflammatories. The quantities and balance of omega-3 and omega-6 fatty acids are important for decreasing inflammation. Too many omega-6's will trigger inflammatory mediators, body chemicals which may increase inflammation, while boosting omega-3 fatty acids instead decreases inflammation. To decrease omega-6's, reduce or eliminate fatty beef, pork and poultry, milk and hard cheeses, egg yolks, and most vegetable oils such as corn, safflower and sunflower oils. To increase omega-3's, eat wild salmon, mackerel, herring and sardines, in other words oily fish, plenty of green leafy vegetables, and use olive, walnut, and flaxseed oils. Nuts such as almonds and walnuts also contain omega-3 oils. Grass fed beef and lamb is leaner, with a more favorable omega-3 to omega-6 ratio, than grain fed meat. In addition, grass fed meats have higher levels of vitamin A and E precursors, as well as higher amounts of certain antioxidants beneficial against cancer. [*Nutrition Journal*, 2010; Mar 10; 9: 10.]

Carbohydrates

Carbohydrates are the fuel source for the body. We can classify carbs into two categories: complex and simple or refined. Complex carbohydrates include vegetables and whole grains. Refined carbohydrates include sugar, honey, white flour, white bread. Processed refined flours are used in most

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baked goods and pasta, although these are available in whole grain and lower carb forms. Refined carbohydrates can raise your insulin levels because it is very 'simple' for the body to quickly absorb them into the blood, raising the blood sugar. This can then set up a cascade of events including inflammation. The consequences may be that your body will then be an environment that supports cancer growth, since some research appears to show that insulin is pro growth for cancer cells.

We advise a diet which instead uses whole grain foods, legumes like beans and peas, vegetables and fruits. Eating a variety of colors of vegetables is helpful, such as artichokes, spinach, sweet potatoes, tomatoes, onions, etc. In addition brightly colored fruits such as berries like cherries and blueberries have been shown to reduce inflammation. Many types of edible mushrooms, such as shiitakes, dried or fresh, have immune enhancing properties and can be a delicious addition to meals.

If possible eat organic foods when available and affordable. This will reduce exposure to pesticide residues which may be harmful. Some though not all studies have found higher nutrient levels in organically grown foods.

In addition to a poor diet, smoking, excessive alcohol consumption, charcoal grilled and deep fried foods are all pro-inflammatory. Lack of sleep can also promote inflammation in the body.

Some doctors may assess their patients' levels of inflammation with blood tests such as C-reactive protein or sedimentation rate. These may then be rechecked to see if one's dietary changes have affected these markers for inflammation or whether perhaps additional supplemental modifiers of inflammation should be used.

Vitamin supplements are not a substitute for a healthy diet. Many vitamin supplements contain too much iron, copper, manganese, and vitamin B1 and B12, which may stimulate cancer growth. You may want to consult with someone particularly knowledgeable about supplementing a healthy diet, but the diet should be the foundation to build upon.

Higher intakes of meat, refined grains, fats and sweets have been found in some studies to be associated with poorer outcomes in people with cancer. It appears that reducing consumption of these foods after diagnosis can reduce recurrence rates and lengthen life. [J Natl Cancer Inst. 2006; 98(24):1767-76. JAMA. 2007 Aug 15;298(7):754-64.]

It is most important to remember that food and eating are a part of our lives, and can be enjoyable as well as important social and family times. Finding a healthy way of eating that you can live with for the long term is the best way to go.

Vitamin D

An important nutrient in our diets is vitamin D. Low levels of this vitamin, which has numerous functions in the human body, have been found in patients with a number of different cancers. While it is difficult to know from research so far whether increasing vitamin D consumption will help treat cancer or prevent recurrence, we recommend finding out your vitamin D level with a blood test, and supplementing with vitamin D if necessary to bring it up to a normal level. This is important because vitamin D appears to help optimize one's health in general, and we believe that improving one's overall health is important in promoting cancer survivorship.

Weight Management

Weight management in cancer patients during and after treatment is important. During treatment it is critical to counteract uncontrolled weight loss. Malnutrition has been associated with

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high levels of pro-inflammatory cytokines. Dietary intervention for weight loss can be helped with high intakes of omega-3 fatty acids. This type of added fat along with nutrient dense foods can help stave off the unwanted loss of appetite. Eating small, nutritious meals often throughout the day can help you to get the calories you need. When you have a decreased appetite it is important to attempt to give your body the nutrition it needs. Your doctor may also recommend a medication to increase your appetite. The American Cancer Society recommends an intake of healthy foods. Eating well during cancer treatments can help lessen fatigue and other side effects of treatment.

For patients who are carrying extra weight it is important to look at the studies that suggest that achieving an optimal BMI (body mass index) may be a strategy to reduce recurrence or mortality risks in certain cancers. Proper choices of food along with an exercise program can help a person achieve the results that may enable them to maintain a healthy BMI. While it may be recommended to you to just eat whatever you can during treatment, we believe it is better to maintain a healthy, cancer preventive diet if possible, during and after treatment, being sure to be taking in adequate nutrients and calories. There are a number of good sources for recommendations regarding optimizing one's diet, and we list some in the Resources section of this handout.

Fitness

The American Cancer Society recommends that adults get at least 30 minutes of moderate physical activity 5 days a week. Further evidence shows that vigorous physical activity 5 days a week may reduce the risk of breast and colon cancer. Some studies suggest that individuals who maintain a good activity level while undergoing treatments for cancer may have fewer side effects during treatment.

There are some cautions when considering starting an exercise program if you do not have a regular routine already. It is recommended that no vigorous exercise be done within 24 hours of intravenous chemotherapy or after a severe reaction to radiation therapy. Medical supervision is recommended for patients receiving treatments that affect the lungs and heart. Of course any injury or pain that does not allow full range of motion or that causes extreme weakness should lead to caution regarding an exercise program.

Group exercise activities or classes can help keep you motivated and engaged. Start off at a pace that is comfortable for you but remember this is supposed to be exercise, so you do have to exert yourself. At the same time, overdoing it with exercise, so that you become exhausted, is not helpful. There are now videos and books, such as those available at the library, that you could use at home.

Some exercises that can be helpful to achieve both flexibility and relaxation are yoga, tai chi chuan and qi gong. Walking is an excellent exercise that everyone knows how to do! And it can be adjusted to fit one's energy level.

There are numerous studies which show that exercise is associated with improved survival from a number of different cancers. It appears exercise helps to create a more healthy internal environment in our bodies to combat cancer.

The bottom line is that it is important to find an exercise that you enjoy and that makes you feel good while doing it, and *then do it!*

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Stress Management

There has been a tremendous amount of research done about the relationship between stress and health. Stress can negatively affect every aspect of our health. A diagnosis of cancer is stressful by itself, of course. Treatments administered for cancer can often be stressful on the body, on the mind and for you and your family.

Learning to manage stress and developing stress relieving techniques can be an important component in survivorship. For many people, exercise is a good stress reducer. Stress reduction practices range from yoga, tai chi and qi gong and biofeedback to various forms of prayer and meditation. The ability to relax is something that anyone can learn, and then use to their advantage when dealing with difficulties in life. Many stress reduction techniques utilize relaxed breathing as part of the practice. While we all breathe, learning true diaphragmatic or abdominal breathing can be a profound change for those who have not learned it before. These breathing techniques tend to lead to enhanced circulation and lower blood pressure among other healthy effects.

A support team made up of family, friends and colleagues can ease your way. Sometimes just having someone to talk to about the feelings of concern for oneself and one's family can take a load off of you. Many times loved ones want to help your process and need a little guidance from you. Arranging meals, helping with childcare, grocery shopping, helping with household chores or even giving you rides to and from treatments can be a way for a loved one to help you and to ease your stress. Often it may be difficult for someone who has always done FOR others to accept this kind of help FROM others. Just ask yourself whether you would want them to accept your help? Can you accept it now in return?

Rest and Sleep

Lack of sleep is a tremendous stressor on the body and negatively effects the immune system. Often, increasing exercise will lead to better sleep. Stress reduction may do so as well. Allowing oneself the time and giving oneself permission to rest during the day may be helpful. Sleep is the time during which our immune system is most active and when our bodies conduct numerous important restorative activities. Fighting fatigue is best done with a good nap or a good night's sleep. The supplement melatonin may be useful for those with sleeping difficulties. It is safe for most people and research has shown it to have anti cancer effects, including improving survival rates when given along with chemotherapy in some studies. [*Pathol Biol*(Paris) 2007 Apr-May;55(3-4):201-4. Epub 2007 Apr 18; *Journal of Pineal Research*, 2011, April; 50(3): 345-55.] If you find your sleep to be more difficult, discuss this with your physician in case a medication would be appropriate. Other aspects of what are called sleep hygiene are important: trying to go to bed on the same schedule nightly; allowing enough time before you need to get up for an adequate amount of sleep; creating a restful environment where you sleep.

We hope you will consider these ideas and this information. Evolving a lifestyle that can incorporate those things that work best for you can lead you towards enhanced health and survivorship.

Best in Health, Enloe Integrative Services, 2011

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RESOURCES

Books

1. Eating Well Through Cancer, Holly Clegg and Gerald Miletello, MD [2006]
2. From Cancer Patient to Cancer Survivor, Institute of Medicine and National Research Council
3. Life Over Cancer, Keith I Block, MD [Bantam Books, 2009]
4. Integrative Oncology, Donald Abrams, MD and Andrew Weil, MD, editors
[Oxford University Press, 2009]
5. How to Reduce Your Risk of Breast Cancer, Jon Michnovicz, MD and Diane Klein
[Warner Books, 1996]

Excellent local resources are the Enloe Regional Cancer Center Library and Enloe Health Library.

Websites

1. www.cancer.org
2. www.mskcc.org
3. mypyramid.gov
4. drweil.com
5. webmd.com/cancer/nutrition

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