BREAST CANCER PREVENTION: THE TOP 10 LIST OF NUTRITION AND LIFESTYLE STEPS ALL WOMEN SHOULD KNOW

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In 1996, Dr Walter Willett of Harvard University authored a report in the Journal of The National Cancer Institute stating that, after reviewing the world-wide evidence, approximately 50% of breast cancer cases could be avoided if women in North America engaged in more prudent nutrition and lifestyle practices. It has been shown consistently that having a full-term pregnancy and breast feeding before age 30 reduces a woman's lifetime risk of breast cancer by 25-30%, and that another 20-25% of breast cancer cases are linked to a strong family history (genetic risk factors). However, the remaining 50% of breast cancer cases are strongly linked to faulty nutrition patterns, excess body fat and insufficient exercise, according to numerous investigative studies on this subject. **(1,2)**

During the past ten to twelve years compelling evidence has emerged from research investigations, which identify the most important dietary and lifestyle strategies women should consider to reduce their risk of breast cancer. According to the available research, the following represents the 10 most important steps women should consider in this regard:

1. **Don't eat high fat animal foods (except fish)** – Eating less red meat, pork, milk and yogurt products higher than 1% milk fat, cheeses above 3% milk fat, whole milk, butter, ice cream, cream, whipped cream and the like, is the first vital step in reducing breast cancer risk. These foods are not only high in saturated fat, which can over stimulate production of estrogen, but they also contain a polyunsaturated fat known as AA (arachidonic acid). Breast tissue converts AA into local mini hormones (eicosanoids) that increase cell replication rate of breast cells. When breast cells divide too quickly they are inclined to make genetic errors that lead to breast cancer development. This is how hormone replacement therapy increases risk of breast cancer (by speeding up the cell replication rate). Follow-up studies on humans and numerous animal studies show that higher breast tissue concentrations of AA increase the risk of future onset of breast cancer. Overall, the goal is to slow down the rate of breast cell replication. When you do that, cancer is less likely to develop. Eating less high animal fat foods is an important first step, as is remaining at your ideal weight and exercising, as we shall touch on next. Thus, if becoming a vegetarian is out of the question (vegetarians have low rates of breast cancer) it is best to derive your protein from chicken and turkey breast (skinless), Cornish hen, fish, soy products, peas and beans, egg whites, non fat yogurt and milk (or 1%) and cheese that is less than 4% milk fat. **(3,4,5,6)**
2. **Stay Lean** – It is a medical fact that women who are over weight after menopause have a three times greater incidence of breast cancer than women who are at their ideal weight. Studies, such as the New York University Women's Health Study, indicate that as women become fatter they increase production of estrone hormone in their fat tissues (estrone is potent form of estrogen). The higher circulating levels of estrone in the body of an over weight woman, in turn, over-stimulate breast cells, leading to more rapid cell replication. As we said, faster cell replication rates increase risk of breast cancer development. Not only that, but should breast cancer develop, breast cancer cells convert estrone hormone into an even more potent estrogen, known as estradiol, which bolsters the ability of breast cancer cells to form masses and more readily metastasize to other areas of the body. The message is clear and simple – attain and maintain your

ideal body weight. Very conveniently, giving up foods high in animal fat will help you get leaner, as will performing 30-minutes of endurance exercise, 5 times per week, which we will examine next. **(7,8,9)**

3. **Perform A Minimum Of 30 Minutes Of Endurance Exercise, Five Times Per Week –** Numerous studies indicate that women who are more active have a lower incidence of breast cancer. Endurance exercise is extremely useful because it burns fat, making fat cells smaller. When fat cells are smaller they make less estrone hormone, and thus, are less likely to over-stimulate breast cells. This effect slows down the rate of replication of breast cells, which translates into a lower risk for breast cancer. As well, jogging, power walking, cycling, and all other aerobic exercises speed up circulation of blood through the liver, enabling detoxification enzymes (which reside in the liver) to neutralize and remove excess estrogen from the circulation. In turn, this helps to keep female hormones in balance, which ultimately helps regulate the breast cell replication rate. **(10,11)**

4. **Take A High Potency Multiple Vitamin Containing Vitamin E Succinate and Vitamin D –** Investigative studies show that vitamin E succinate has important anti-cancer properties in regards to breast cancer. Vitamin E succinate has been shown to encourage certain types of human breast cancer cells to commit suicide by stimulating action of the cell's death receptors (fas-receptors). Vitamin E succinate also disrupts other signals within breast cancer cells, which inhibit cell replication and inhibit breast cancer cells from forming blood vessels to feed themselves. All of these effects are associated with decreased risk of breast cancer development. Overall, in all experimental and animal studies performed to date, only vitamin E in the form of vitamin E "Succinate" has demonstrated these powerful inhibitory effects against breast cancer (and other cancers).

   As for vitamin D, human observation studies indicate that women with vitamin D blood levels above 85 nmol/L have a lower risk of developing breast cancer. We know that breast cells extract vitamin D from the bloodstream, which in turn, slows down the rate of cell replication of breast cells. Vitamin D also encourages breast cells to fully mature as they divide from one generation to the next. Fully mature cells are less prone to becoming cancer cells than are less mature-looking cells. As such, vitamin D is now regarded as a very important anti-cancer vitamin, in addition to its role in preventing osteoporosis. Most women do not achieve the vitamin D intake levels required each day to protect themselves from breast cancer and osteoporosis. Therefore, it is very prudent to take a high potency multiple vitamin and mineral supplement each day that provides 400 IU of vitamin D along with 400 IU of Vitamin E Succinate. **(12-20)**

5. **Drink Less Alcohol And Get A B-50 Complex, As Part Of Your High Potency Multiple Vitamin and Mineral Supplement –** The Nurses' Health Study, along with other compelling evidence, indicates that women who consume more than one alcoholic drink each day, on average, double their risk of breast cancer (and colon cancer). Alcohol is known to generate free radicals that can lead to genetic mutations, which trigger cancer development. The body appears to have a capacity to handle only one alcoholic drink in any 24-hour period before risk begins for cancer and other problems. As such, after cigarette smoking, the National Cancer Institute states that alcohol consumption is the second most important environmental cause of cancer in our society. Alcohol also depletes the body of folic acid, which is a B-vitamin required for our DNA to replace itself when cells are undergoing replication. In a state of sub-optimal folic acid status, our DNA tends to be fragile and cancer cells form more easily when cells replace themselves from one generation to the next. Even the Nurses' Health Study showed that

higher intakes of folic acid could reduce, to some degree, the cancer-causing effects of alcohol, in women who took a B vitamin supplement each day. As many of the B-vitamins work together in the body, it is wise to take a B-50 complex, as part of your daily multiple vitamin and mineral supplement. This advice, along with consuming no more that one alcoholic drink within any 24-hour period are also important preventive measures against breast cancer. **(21-24)**

6. **Take A Supplement Containing Fish Oil, Flaxseed Oil and Borage Seed Oil <u>and</u> Eat Fish Twice Per Week –** Fish and fish oil supplements contain an omega-3 fat that breast cells convert into a mini-hormone that slows down the rate of cell replication. Women with higher levels of this omega-3 fat in their breast cells (as well as the omega-3 fat that is richly supplied by flaxseed oil – alpha-linolenic acid) have been shown to have a significantly lower risk for future development of breast cancer, compared to women with lower breast levels of these omega-3 fats. Studies also show that the higher your ingestion of omega-3 fats, the higher will be your breast tissue levels of these fats, as well as the health-promoting mini hormones your breast cells make from these fats. Borage seed oil contains a unique omega-6 fat that helps the body block the formation of mini-hormones made from AA (as discussed above). Thus, higher breast cell levels of fish oil, flaxseed oil and borage oil, help to counter the adverse effects of the AA (arachidonic acid) derived from high fat animal foods. The ultimate strategy in this regard is eat less high-fat animal foods, while consuming two to three servings of fish each week, and to take a supplement each day that contains 400 mg each of fish oil, flaxseed oil and borage seed oil (take 2-3 capsules per day for optimal effects). **(5,25,26,27)**

7. **Consume Cruciferous Vegetables and Indole-3-Carbinols Daily –** Human studies demonstrate that women, who consume cruciferous vegetables (broccoli, Brussels sprouts, cabbage, cauliflower, bok choy) on a regular basis, have a lower incidence of breast cancer. Cruciferous vegetables contain a unique molecule called the indole-3-carbinol, which enhances the ability of the body to detoxify cancer-causing agents. Indole-3-carbinol also stimulates enzymes that convert estrogen into a safer form of estrogen (more 2-hydroxy estrone and less 16-hydroxy estrone) that is associated with a lower risk of breast cancer. As such, it is prudent to consume at least one serving per day of a cruciferous vegetable. Some women take it one step further and consume a supplement each day that contains Indole-3-Carbinol, along with Milk Thistle (milk thistle also enhances detoxification enzyme activity and supports liver function) and immune boosting agents (reishi mushroom extract and astragalus). **(28-32)**

8. **Consider Supplementation With Curcumin and Other Natural Anti-Inflammatory Agents –** In recent years we have recognized that as much as 40% of breast cancer occurs in women who, for genetic reasons) express an abnormally high number of receptors on the surface of their breast cells known as Epidermal Growth Factor Receptors. There are four types of receptors in the family of Epidermal Growth Factor Receptors and women who are genetically prone to breast cancer tend to over express the Type-2 Epidermal Growth Factor Receptor, usually referred to as ErbB2. This receptor (ErbB2) sends continuous messages to the interior of the breast cell, instructing the cell to replicate on an on-going basis, speeding up cell replication and increasing risk of cancer. As such, medical science has been looking for a drug or chemical agent that could inhibit the firing of the ErbB2 receptor, and thus slow down breast cell replication rate. In recent years medical science has produced a drug (a monoclonal antibody) called Herpecetin, that does exactly that, which is now used in some cases of breast cancer treatment. However, the drug has unpleasant side effects and can not be used on a preventive basis. Interestingly, the natural agent called curcumin (derived from the

spice turmeric) has been shown to silence the ErbB2 receptor without causing side effects. A recent study with human colon cancer patients showed that curcumin supplementation reduced the recurrence of colon cancer in this high-risk population. In this type of colon cancer Epidermal Growth Factor Receptors are also over-expressed and contribute to constant signaling that leads to rapid cell replication and cancer development. Experimental studies suggest that curcumin may help to silence ErbB2 breast receptors as well. In addition, supplementation with the natural anti-inflammatories, white willow bark extract, boswellia and ginger help the body block the conversion of AA (arachidonic acid) into mini-hormones that cause rapid cell replication. This is how aspirin is related to lower risk of breast, colon and prostate cancers. However, aspirin causes intestinal tract bleeding and ulcers and thus, can not be recommended as a cancer preventive strategy for these reasons. Many holistic doctors recommend, as an alternative, supplementation with a combination product containing curcumin, white willow extract, boswellia and ginger. These four natural agents work synergistically to help regulate Epidermal Growth Factor Receptors and block the production of mini-hormones involved in rapid cell division at the tissue level. **(33-49)**

9. **Take Two Heaping Tablespoons of Ground Flaxseed Each Day –** Ground flaxseeds contain 800 times more of the raw material from which the body makes two important phytoestrogens (Enterolactone and Enterodiol) than any other food source. Enterolactone (ENL) and enterodiol (EDL) have been shown to slow down the rate of breast cell replication by competing with the body's potent estrogens for entry into breast cells, by inhibiting enzymes that produce highly potent estrogens and by inhibiting enzymes directly involved in cell replication. Human studies demonstrate that 50 gm of ground flaxseed per day can reverse fibrocystic breast disease and tone down the firing of the ErbB2 receptor that is associated with breast cancer development and progression. All indicators suggest that two heaping tablespoons of ground flaxseed per day (e.g. sprinkled onto cereal, mixed into yogurt, or mixed into juice or a protein shake) is an exceptional way to help control regulatory mechanisms at the cell level that are associated with reducing breast cancer risk.**(50-59)**

10. **Eat At Least One Serving Of A Soy Food Each Day -** Although there is controversy about soy and breast cancer, the evidence is quite convincing that consuming soy foods provides significant protection against reproductive organ cancers in women and men. To start with, breast cancer rates are 75% lower in countries where soy foods are a main staple of the daily diet. Experimental evidence indicates that soy isoflavones (phytoestrogens) exhibit a number of anti-cancer properties, some of which include, toning down the effects of more potent estrogens, inhibiting enzymes that are directly related to rapid cell division, and enhancing the conversion of potent estrogens to less potent estrogens, all of which slow down the rate of breast cell replication – a major factor in reducing breast cancer development. Most recently, a study involving breast cancer patients showed that providing them with 200 mg per day of soy isoflavones (as a supplement) helped to shrink the tumors (increased the apoptosis to mitosis ratio) while the patients were awaiting surgery. In my view, women should consume at least one generous serving per day of a soy food (soy milk, tofu, soy nuts, etc.) as a means to derive the health-promoting benefits of soy isoflavones and other constituents found exclusively in soy foods. **(60-67)**

My suggestion is that you speak to your health practitioner about that appropriateness of these strategies in your individual case and seek their guidance as to how to access supplements that meet the requirements outlined in this review.

For more information on this or other related topics, visit Dr. Meschino's website at: http://www.renaisante.com/

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