



# The McDougall Newsletter

THE NEWSLETTER WITH JOHN & MARY McDOUGALL



MARY & JOHN McDOUGALL

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## 10 Changes to Prevent Breast Cancer

At the turn of this century, Rolo Russell maintained death from cancer is highest "in countries that eat more flesh". Nearly a century later the American Cancer Society on September 16, 1996 recommended curtailing all red meat because of the close link to the cause of colon and prostate cancer. They found further ties between meat, and other high fat foods, and rectal, endometrial (uterus), kidney, and breast cancer. Many other scientists agree that we can "win the war on cancer" through prevention by making changes. The Harvard School of Public Health concluded on Nov. 19, 1996, after distilling virtually the entire body of research into cancer's causes, nearly 70 percent of cancer can be attributed to smoking, eating, and drinking habits and a sedentary lifestyle. Only 2 percent are traceable to environmental pollution and 10 percent to genetics. This report is an antidote to the fatalistic feeling people have that "everything causes cancer." Because there are no drawbacks or side effects from improving your diet and lifestyle, these changes should be made immediately, and to the greatest degree.

Breast cancer serves as an enlightening example of how, with the right information, we can change our future health. The risk of breast cancer varies worldwide among populations of people who live and eat differently—this clearly implies an environmental connection. The strongest contact we have with our environment is our food—we take in one to five pounds of it a day for breakfast, lunch and dinner. Women living in Japan, eating a diet based on rice, have one-sixth the risk of cancer as women in the US. Women who

change their diet to rich foods while living in Japan, or move to the US and make that change, increase their risk of breast cancer dramatically. In the US the highest rates of breast cancer are among affluent women, with a life time risk of one in seven.

### The Diet/Lifestyle Cancer Link

Our diet and habits play a pivotal role in all phases of cancer. Cancer starts with damage to our intracellular genetic material, DNA, by chemicals, radiation, and viruses found in our environment. Unhealthy foods, pollution, smoking, and certain medications are com-

mon sources of cell damaging chemicals. Once started, we have a second chance to stop the cancer with cancer cell destroying activities of our immune systems. Good nutrition with fruits and vegetables enhances our immune system. The activity of "natural killer cells," which seek out and destroy cancer cells, has been found to be 100% higher in vegetarians compared to meat eaters (*Nutr Cancer* 12:271, 1989).

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Once started, the growth rate of breast cancer is influenced by sex hormones. Scientists recognize this cancer as a hormone-dependent cancer because it is 100 times more common in women than men, women who lose their ovaries early in life have a much reduced risk of getting breast cancer, and women who take estrogen pills after menopause have more breast cancer. Women consuming the rich western diet have higher levels of hormones in their bodies. For example, British women, 55-64 years old, are found to have 171% higher levels of the powerful female hormone, estradiol, compared to Chinese women (*Br J*

*Cancer* 62:631, 1990). The British diet is 43% fat compared to the 15% fat Chinese diet. Furthermore, a reduction in fat intake will decrease the levels of hormone in a woman's body. In one study, estradiol levels were cut in half (18.1 to 9.4 pg/ml) when postmenopausal women were changed to a diet with less than 10% of the calories as fat (*Nutrition* 7:137, 1991).

Not only are the hormone levels higher, but they are also higher for more years of a woman's life. The rich western diet causes early onset of maturity and late menopause. British girls, on the average, start their first period at age 13, while Chinese girls start at age 17. Menopause occurs 1.8 years earlier in Chinese women than British women (48.1 vs 49.9). This prolonged, as well as elevated stimulation, promotes disease of the breast tissue, including breast cancer (*JNCI* 50:21, 1973).

Another hormone, called prolactin, is made in the pituitary gland of the brain. Prolactin normally stimulates the breasts to prepare them for milk production. Dietary fat increases the amount of prolactin, and some studies show higher levels of prolactin in women with breast cancer (*Am J Clin Nutr* 56:943, 1992).

### Breast Cancer Prevention— More Than A Low-Fat Diet

Recently, scientists have questioned the once widely held theory that fat causes breast cancer. Two large studies from Harvard found no relationship with fat and breast cancer in women who all ate a version of the western diet (*JAMA* 268:2037, 1992); (*New Eng J Med* 334:356, 1996). News of these findings spread rapidly across the country, reinforcing those people who like to hear "good news about their bad habits"—now they don't have to avoid fatty foods; and taking hope away from women who had thought they could do something to reduce their risk of cancer. The truth is fat is only a part of the problem with the rich American diet. Many Americans eat low-fat foods, and still eat an unhealthy diet; devoid of cancer fighting fruits and vegetables.

Change  
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### Eliminate the Bad Parts

There are many qualities of the American diet that encourage cancer to start and then promote its growth:

**Calories:** Too many calories can be the result of just overeating, however in almost every case it is from overeating fat and oils, sugar, and highly refined grains. Most animal studies show a diet high in calories, independent of the amount of fat, promotes cancer growth. *To win your battle against cancer realize it is virtually impossible to eat too many calories from a diet based on whole starches with a plentiful supply of green and yellow vegetables, and some fresh fruit.*

**Fat:** Studies on experimental animals started in the 1940s show high fat diets encourage the growth of cancer. International data shows a strong positive correlation between both animal and vegetable fat consumption, and breast cancer mortality rates. Rather than causing

cancer, fat seems to promote its growth by increasing the sex hormone levels in a woman's body by several different mechanisms.

A high fat diet raises a woman's estrogen

### Low-Fat Cancer Promoting Diet

**Breakfast:** egg white omelet  
sugar-coated cereal  
skim milk

**Lunch:** white bread & jelly  
turkey sandwich on white bread  
scoop of low-fat cottage cheese  
Jello

**Dinner:** skim milk  
quesadilla made with white flour tortilla, low-fat cheese  
charcoal-broiled sword fish  
rice cooked in chicken broth  
cola drink  
angel food cake with low-fat frosting

**Snacks:** SnackWell cookies  
licorice  
soda crackers  
Entenmann's cake  
low-fat potato chips  
hard candies

*In this example, many of the "bad parts" like fat & cholesterol are removed, but the "good parts" like fiber & phytochemicals are missing.*

levels through resulting obesity, and by recirculation of a woman's own estrogens. Estrogens, made in the ovaries and the adrenal glands, are secreted into the blood stream, then removed by the liver and excreted into the intestine. To prevent re-absorption by the intestine, these estrogens are combined in the liver with a non-absorbable substance. A high fat diet, especially one high in meat fats, encourages growth of the bacteria in the colon that produce enzymes that uncouple those non-absorbable estrogen complexes. Then the uncoupled "free" estrogen is absorbed back into the blood stream, resulting in higher total levels of estrogen in the woman's body.

Vegetable fats influence immune responses, cell proliferation, tissue invasiveness, and spread of the cancer (metastatic spread). In experimental animals cancer-promoting activity varies with the kind of fat. Polyunsaturated vegetable fats, high in linoleic acid (n-6), like corn, sunflower, and safflower oil, increase the incidence of breast cancer in animals. Whereas, polyunsaturated oils high in linolenic acid

(n-3), such as canola and linseed oil, seem to inhibit cancer growth (*Adv Exp Med Biol* 322:185, 1992). (Soybeans are high in both types of polyunsaturated fat). Omega-3, fish, oil also inhibits cancer growth. The effects of saturated (meats, eggs, and dairy products) and monounsaturated fats (olive oil) are less clear-cut.

All vegetable oils tend to form free radicals that can damage DNA, and thereby initiate cancer (*Science* 277:375, 1985). The effects of enhanced free radical formation are seen by rapid utilization of antioxidants. After feeding 12 subjects canola oil, the essential fat content (a-linolenic acid) of their red blood cells increased, while the serum levels of the antioxidants, beta carotene and vitamin E, plummeted markedly (*J Am Coll Nutr* 10:577, 1991).

*To win your battle against cancer realize in their natural state in a fruit or vegetable these fats and oils are protected by a balanced milieu of antioxidants, dietary fibers, vitamins, phytochemicals, and other anticancer properties. After processing into free fats these vegetable oils can have serious adverse effects on your body. Animals fats are cancer promoting in their natural states as meat, eggs, and dairy products.*

**Cholesterol:** Chemical substances derived from cholesterol, called cholesterol epoxides, are found in breast fluids. These epoxides are carcinogenic in animals. The higher the blood cholesterol, the higher the levels of epoxides in the breast fluid (*Cancer Res* 41:2563, 1981). Furthermore, cancer cells seem to require a high concentration of cholesterol to grow. A cholesterol lowering diet and drugs have been used to inhibit the growth of tumors in experimental animals (*Lancet* 339:1154, 1992). *To win your battle against cancer realize plant foods have no cholesterol and act to lower the body's load of cholesterol. Cholesterol is only found in animal products.*

**Iron:** Excess iron stimulates growth and proliferation of cancer cells. Iron activates the production of free-radicals that damage DNA, initiating the changes from a normal to a cancer cell. Furthermore, the rapid growth of cancer cells requires extra iron. *To win your battle against cancer realize red meat contains the most readily absorbed form of iron (Lancet 338:186, 1991). Plant foods contain substances, like phytates, that avidly bind iron in the body preventing it from acting as a free-radical producer. (Carcinogenesis 12:2041, 1991).*

**Cooked Meat:** At least 10 cancer-causing substances are known to be released when meat is grilled or fried. Heterocyclic amines are a group of these chemicals that are also found in cigarette smoke. The proteins in all kinds of

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meat—beef, poultry, and fish—are converted into these cancer-causing chemicals. Grilling and frying are worse than stewing and roasting. The longer and the higher the temperature the meat is cooked, the more cancer-causing substances produced. (*Cancer* 74:1063, 1994; & 74:1070, 1994). To win your battle against cancer realize plant foods do not produce these cancer causing substances when cooked. Plants also contain many phytochemicals that deactivate heterocyclic amines.

**Chemical Toxins:** The primary source of cancer causing chemicals in the US general population is the intake of high-fat foods, especially fish, meat, eggs, fats and oils, and dairy products. These chemicals are attracted to and concentrated in fat—the fat in our foods and the fat in our bodies, including the fatty tissues of the breasts. Many chemicals are associated with breast cancer including pesticides, herbicides, the plastic ingredient bisphenol-A, and some polychlorinated biphenyls (PCBs).

Widespread use of DDT began in the US in 1946 and ended in 1972. Still, US imports from other countries have pesticide residues 5000% higher than current US standards of DDT (*JAMA* 271:1160, 1994). Some studies show as much as a fourfold increase in relative risk of breast cancer with high DDT exposure. Women with breast cancer have been found to have a 50% to 60% higher concentration of the main metabolite of DDT (DDE) in breast specimens compared to matched women without cancer (*Arch Environ Health* 47:143, 1992).

DDT chemically mimics estrogens. When studied singly these chemicals may have only a weak estrogenic effect. However, when the chemicals were tested in combination, estrogenic activity shot up 160- to 1600-fold (*Science* 272:1489, 1996).

The exact mechanism by which these compounds might cause cancer are unknown and their relative importance is debated. The National Research Council, an arm of the National Academy of Sciences, on February 16, 1996, confirmed there are many natural and synthetic chemicals that cause cancer, but their importance was minimal compared to the effects of over consumption of calories and fats. To win your battle against cancer realize you should avoid chemicals whenever possible by eating low on the food chain—plant foods—and by buying organic produce and drinking clean water.

Change  
2:

### Add the Good Parts

Just as important as removing the unhealthy parts of the American diet is to make sure all the good things are present to help you fight off cancer. It is no coincidence that the meats, dairy, and egg products, and highly processed foods—the ones that have the bad things we just talked about—are also missing the good things. Fortunately, by the divine plan of mother nature, plant foods have all the good things, leaving out the bad.

**Dietary Fiber:** Meat, eggs and dairy products contain no fiber and are generally high in fat; making it difficult to isolate the cancer preventing benefits of high fiber from low fat. An exception is the Finnish diet which is high in both fat and fiber. The breast cancer death rate in Finland is lower than in the US (20.2 vs 27.4/100,000 for 1984-1986) where the diet is high-fat/low-fiber.

One way dietary fiber reduces the risk of breast cancer is by reducing estrogen. Estrogen produced in a woman's ovaries and body fat is normally removed by her liver and excreted into her intestine. In the intestine, dietary fiber binds with estrogen, increasing the loss into the feces. On a low-fiber diet more of this estrogen is reabsorbed by the intestine back into her body (*N Engl J Med* 307:1542, 1982). In one experiment controlling for the amount of fat in the diet, and only adding wheat fiber to the diet, resulted in a significant reduction of estrogen in a woman's blood (*Am J Clin Nutr* 54:520, 1991). To win your battle against cancer realize only plants contain dietary fiber.

**Phytochemicals:** Plants make many chemical compounds that have anticancer effects. For example, phytoestrogens (phyto = plants) are weak estrogens that compete with a woman's own stronger estrogens for receptor sites in the cells of her breast, uterus, ovary, and other tissues. By occupying the estrogen receptor site, these phytoestrogens decrease hormone stimulation that promotes cancer growth. A plant based diet results in a very large intake of phytoestrogens. In Japanese women these substances, excreted in the urine, are found to be 100-fold to 1000-fold higher than estrogens made by the woman herself (*Lancet* 339:1233, 1992). Soybeans are considered an excellent source of phytoestrogens. (But not the only source as some people might be led to believe because of the recent hype on the benefits of soybeans). They are also plentiful in most other unrefined plant foods, including whole grains, seeds, berries, and nuts.

Plants make many other chemicals with anticancer properties that include deactivation of cancer-causing chemicals, blocking of estrogen effects, suppressing cancer cell growth, and enhancing the production of cancer fighting proteins (*JNCI* 86:1758, 1994). Many more years of research will be required to discover thousands of other properties of plants that help us prevent and fight cancer. But for now to win your battle against cancer realize plants are a cornucopia of cancer fighting chemicals.

**Antioxidants:** Of the three most powerful antioxidants, beta-carotene and vitamin C are only found in plants, and most of our vitamin E also comes from plants. Antioxidants remove highly reactive substances, called free-radicals from our bodies. Free radicals damage our DNA, altering our genetic code, thereby initiating the change from a normal cell to a

cancer cell. It is important we obtain these cancer fighters in their natural packages—plants—where they metabolically act in combination with other natural chemicals.

When given in pharmacological doses, as supplements of a single nutrient, they may cause imbalances. For example, pharmacological doses of beta carotene can result in competition with the other 50 naturally occurring dietary carotenoids, inhibiting their protective effect against cancer. Two recent studies have shown an increase in the risk of developing lung cancer when smokers were given supplemental beta carotene (*N Engl J Med* 334:1145 & 1150, 1996, & 330:1029, 1994). To win your battle against cancer realize a balanced mixture of antioxidants, as found in fruits and vegetables, provides the best cancer protection and an excess of a single antioxidant may impair that protection (*N Engl J Med* 335:1065, 1996).

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### Lose Weight

Obese premenopausal and postmenopausal women produce more estrogen than lean women. In postmenopausal women the primary source of estrogen is from the conversion of male hormone (androstenedione) made in the adrenals into female hormone (estrone) by the fatty tissues. A 30 year old woman who is 10 pounds overweight faces a 23% higher risk of developing breast cancer and at 20 extra pounds the risk increases to 52% (*Cancer* 76:243, 1995). To win your battle against cancer realize losing weight to reduce the risk of breast cancer is best accomplished by increasing the vegetable content of the diet. Exercise is an important aid to weight loss.

Not only is body weight associated with more breast cancer, but so is increasing height. Although you can do nothing to change your height now, you may be able to help your children. Adult height is related to the abundance of food during the growing years (*Cancer* 74:288, 1994). Unfortunately, in America that food is from the high-fat, high-calorie diet that also increases their risk of breast cancer. Feeding an abundance of plants foods during adolescence will result in excellent height, as well as excellent health. The rich American diet can actually stunt growth by causing the growth plates of the bones to close prematurely due to the earlier, and higher, levels of sex hormones.

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### Exercise

Independent of the positive effects of weight loss, exercise lowers estrogen and progesterone levels, and thereby reduces the risk of breast cancer. Voluntary exercise in rats resulted in a reduc-

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tion in their risk of breast cancer. However, forced exercise of rats fed a high fat diet resulted in an increase in cancer. The cancer enhancing effect was directly related to the intensity of exercise. One mechanism may be that stress, including exercise, can increase the secretion of a breast stimulating hormone, prolactin (*Cancer* 74:1055, 1994). Excess exercise also suppresses the immune system (*Med Sci Sports Exerc* 26:128, 1994). *To win your battle against cancer realize your daily exercise should be enjoyable, not forced, so as to produce stress.*

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### Stop Alcohol

Moderate alcohol intake increases breast cancer risk. Even two drinks a day will increase the risk by 25%, regardless of the type of beverage (*Cancer* 74:1101, 1994). Alcohol raises levels of cancer-promoting estrogen in a woman's body. Alcohol may also damage the liver and interfere with its ability to detoxify cancer causing substances. The function of the immune system, as well as the ability of the body to repair its DNA, also seems to be impaired by alcohol. Many health professionals argue moderate alcohol is good for you because it reduces your risk of heart disease. However, *to win your battle against cancer realize you may pay a price for including alcohol in your life, and overall there are good reasons alcohol is called a "bad habit."*

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### Stop Smoking

A study conducted in Switzerland and reported in the May 5, 1996 issue of *American Journal of Epidemiology* found the more a woman smoked the greater her risk of breast cancer. For women who smoked less than half a pack a day the risk was doubled; for those who smoke more than a pack a day the risk was 4.6 times greater than for women who didn't smoke. The study also found a three-fold increase among nonsmoking women regularly exposed to tobacco smoke at home or at work. The effect of smoking is only seen in postmenopausal breast cancer.

Cancer causing substances from cigarette smoke are found in the breast fluids, where they may have a direct carcinogenic effect (*JNCI* 76:833, 1986). Because of genetic make-up, approximately 60% of women slowly detoxify these chemicals found in cigarette smoke (*JAMA* 276:1497, 1996). As a result, for these women higher levels of potentially cancer causing substances accumulate in the body. The risk of cancer is more strongly associated with the intensity (number of cigarettes per day) of smoking, rather than the duration (years smoked). Smoking at a young age increases risk. *To win your battle against cancer realize byproducts of tobacco consumption will do more than damage your lungs.*

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### Eliminate Medications

Among the chemicals considered to cause cancer, nearly one-half are medications. Women exposed to DES (diethylstilbestrol, once used in hopes of preventing miscarriages) have a 35% higher risk of breast cancer (*JAMA* 269:2096, 1993). A 50% increase in the risk of breast cancer is associated with the current use of hormone replacement therapy to prevent osteoporosis for more than 5 years (*BMJ* 311:699, 1995). Both estrogen and synthetic progestins appear to promote cancer. Birth control pills are associated with 2.2 times greater risk for breast cancer for those women who use the pill for 4 or more years before the age of 36 (*Lancet* 344:844, 1994). However, there is no evidence of increased risk 10 years after cessation of therapy.

Drugs that suppress the immune system for transplant patients (prednisone and azathioprine), and cancer chemotherapy drugs (alkylating agents) cause breast cancer. Many other commonly prescribed drugs, including blood pressure (calcium channel blockers increase breast cancer risk by 65%), and cholesterol lowering medications, are suspected of increasing cancer risk (See Mar/Apr 1996 and Sept/Oct 1996 *McDougall Newsletter*). *To win your battle against cancer realize all medications have, along with their desired effects, adverse effects, and breast cancer maybe an important one.*

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### Avoid Radiation

Cancer risk tends to increase in proportion to radiation dose in a linear fashion in breast cancer, and damage is cumulative with repeated exposures. Radiation acts by damaging the DNA, turning a normal cell into a cancer cell. High dose ionizing radiation exposure to the chest, seen with strong x-ray examinations (fluoroscopy for TB victims) and radiotherapy to the chest is known to cause breast cancer. Even high dose radiation from the sun in an unnatural setting may be important. A study of 1577 female flight attendants followed for 13.9 years found an excess of breast cancer that may be related to the large amount of solar radiation they are exposed to while flying at high altitudes (*BMJ* 311: 649, 1995).

Exposure to electromagnetic radiation from video monitors, electric blankets, and power lines may also cause breast cancer. Women whose primary lifetime occupation exposed them to high levels of magnetic fields had a 43% increase in risk of breast cancer. An interesting proposed mechanism is radiation exposure during the day may reduce melatonin (a pituitary hormone with anticancer effects) secretion at night, allowing tumors to progress. Use of electric blankets has been tied to a small increase in breast cancer (*Am J Epidemiol* 140:974, 1994). The importance of relatively low intensity radiation exposure is far from settled; a recent study of 383,700 peo-

ple in Finland found no association between electromagnetic radiation and breast cancer (*BMJ* 313:1047, 1996). *To win your battle against cancer realize all radiation causes damage to cells, and there is no safe threshold below which an increase in cancer risk does not occur. Avoid exposure whenever possible.*

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### Have Babies and Breast Feed

The long-term effect of full-term pregnancy is a reduction in breast cancer (*Epidemiol Rev* 15:36, 1993). However, there may be a small increase in risk of breast cancer with pregnancy termination (*JAMA* 275:287, 1996). Possible mechanisms for such an effect are difficult to explain, but changes in hormones caused by interruption of pregnancy may be involved. With pregnancy the breast develops to produce milk and completion of pregnancy results in full maturation of the breast. With termination of pregnancy many of the maturing cells are left in transition and possibly more susceptible to the environmental factors that cause breast cancer.

The possibility of the relationship of breast cancer and breast feeding was raised 70 years ago when the inability to lactate was commonly reported in women with breast cancer. Women with breast cancer give a history of low secretion of milk from the same breast, and women who breast feed from only one breast have an increased risk of breast cancer from the unsuckled breast (*Lancet* 247:431, 1996). Breast feeding reduces the number of ovulations, and therefore, the overall surges of estrogen and progesterone produced by the ovary (*Cancer* 56:1206, 1985). Breast feeding may also be a way of eliminating carcinogens through breast milk secretion (*Am J Epidemiol* 124:353, 1986). Worldwide, in countries where breast feeding is popular, people also consume a plant-based diet. As people become more affluent they give up a healthy diet for themselves, as well as their newborns. *To win your battle against cancer realize excellent health of the breasts requires complete development through a full-term pregnancy and breast feeding.*

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### Control Stress

An association between adverse life events and the development of breast cancer has been reported (*BMJ* 311:1527, 1995). Adverse life events could depress the immune system by production of adrenal hormones (glucocorticoids). Weekly supportive group therapy with self hypnosis for pain for 50 late stage breast cancer victims resulted in twice the survival compared to a control group (37 vs 19 months) (*Lancet* 2:888, 1989). However, studies looking at two of

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life's most traumatic events—divorce and widowhood—found no relation to the onset or outcome of breast cancer (*BMJ* 289:461, 1984; *Br J Cancer* 53:701, 1986; *Eur J Cancer* 30A:473, 1994). To win your battle against cancer realize no harm is done by removing the unpleasantness of life, and a reduced risk of breast cancer may be an added benefit.

### *Ignore Those Things You Can't Change:*

There is too much talk about the risks of breast cancer you cannot control; like your age and genetics. Breast cancer risk increases with age, with about 80% of cases occurring in the postmenopausal years. Breast cancer also runs in families; breast cancer is two to three times higher for women with a first-degree relative (sister, mother, daughter) with breast cancer. Early age of onset is the strongest indicator of genetic susceptibility (*JAMA* 270:1563,1993).

A susceptibility gene for breast cancer, BRCA1, is carried by 1 in 300 women and is implicated in about 4 % of cancers in all age groups, but close to 25% of those diagnosed before age 40. Women carrying BRCA1 have a 85% chance of developing breast cancer by the age of 80 and half of the cases will have occurred before age 50 (*JAMA* 269:1975, 1993). Testing is not readily available and is expensive. To win your battle against cancer realize there are risks that deserve your attention, and those unchangeable ones that must be ignored. However, there is a large part of the cancer risk you inherit that is potentially under your control—the risk passed on to you from your parents by learning what foods to like and lifestyle habits—these you can change.

Some people say we don't know enough to recommend changing our diets and lifestyles to prevent cancer. Thirty-five years ago some scientists argued that lung cancer could not possibly be caused by smoking, because no mechanism could be found, while others argued that the rising rates of lung cancer were due simply to improved reporting (*Lancet* 340:904, 1992). All the details concerning the mechanisms of breast cancer do not have to be known before we take action. Rather than waiting for everyone to agree, get a jump-start by incorporating into your life any, or all of these 10 important changes.

## RESEARCH

### DIET PILL DANGERS

**Appetite Suppressant Drugs and the Risk of Primary Pulmonary Hypertension** by L. Abenham in the August 29, 1996 issue of the *New England Journal of Medicine* found the use of derivatives of fenfluramine to cause potentially fatal, elevated blood pressure in the lungs (335:609). The main drug involved is dexfenfluramine, called Redux, a popular weight loss drug sold in programs advertised as FEN/PHEN, REDUX™. Use for more than 3 months was associated with a 30 times higher

risk for developing pulmonary hypertension. This drug was recently approved by the FDA for long term treatment of obesity. Other weight loss drugs may also cause pulmonary hypertension.

**COMMENT:** Pulmonary hypertension is characterized by an increase in the pressure in the arteries of the lungs. It occurs mostly in women in their 40's. Shortness of breath is the primary symptom and it can be fatal in about 2 to 3 years. Unfortunately, symptoms develop late in the disease, when little can be done to help the patient. There are many other side effects from this drug, including dry mouth, diarrhea, and sleepiness.

Some doctors believe the benefits from weight loss outweigh the risk of pulmonary hypertension (*Manson J. N Engl J Med* 335:659, 1996). However, the benefits of these pills are a few pounds of lost fat (and muscle) and very little reduction in disease risk—because people still keep eating the same high fat foods—just smaller portions. The alternative is to change to a starch-based diet and exercise to effortlessly lose weight and never be hungry—and at the same time reduce the risk of present and future disease.

## DHEA—HORMONE SUPPLEMENTATION

**Hormone Replacement for Men—Not Enough Evidence to Recommend Routine Treatment with Dehydroepiandrosterone** by M. Weksler in the April 6, 1996 issue of the *British Medical Journal* concluded there is not enough evidence for doctors to be prescribing DHEA. The review however, cited much evidence in support of its use. Low DHEA levels are associated with more heart attacks and breast cancer in premenopausal women. Low levels are associated with increasing frequency of disability and disease. Experiments in animals show treatment with DHEA reduces severity of disease. In one study men and women were treated with 50 mg of DHEA for three months compared with placebo; the serum concentration of DHEA rose three- to five-fold. On DHEA 82% of women and 67% of men reported an improved sense of well-being with improved quality of sleep, greater energy, and an increased ability to handle stress (only 10% of placebo reported improvement). DHEA (50 mg) has improved the activity of the immune system (increased activity of natural killer cells). In another study subjects given 100 mg of DHEA or placebo for six months found an increase in lean body mass in both men and women and increase in strength in men with DHEA.

**COMMENT:** Very little research on the benefits and risks of DHEA will be done because the drug cannot be patented, therefore little profit can be made. DHEA is the major male hormone (androgen) produced by the adrenal gland. From 15 to 30 mg is produced daily. It

is converted into testosterone and estradiol. In men two-thirds of the testosterone comes from the adrenal gland and in women most is produced by the adrenals. Levels can be measured in the blood (normal male 7-31 ug/L) and in the saliva (female 40-150 pg/ml; male 70-280 pg/ml). From age 20 to age 70 the hormone levels fall: in women from 48 pg/ml to 23 pg/ml and in men from 128 pg/ml to 39 pg/ml.

Because this is a precursor to testosterone and estradiol, there may be side effects commonly seen with excesses of both of these reproductive hormones. Breast and prostate cancer are promoted by these hormones. Breast tenderness maybe seen in women, and at higher doses there is the possibility of masculinizing effects in women. Prostate enlargement, leading to benign prostatic hyperplasia, and male pattern baldness may also be encouraged with DHEA in men.

DHEA acts like an estrogen or has an antiestrogen effect depending upon the hormonal status of the person. In postmenopausal women higher levels of DHEA are associated with more heart disease and in men the opposite is seen. In women DHEA increases testosterone levels which lowers HDL-cholesterol levels. In premenopausal women DHEA inhibits breast cancer growth by an antiestrogenic effect and in postmenopausal women it acts like estrogen, increasing tumor growth. (*Lancet* 343:1479, 1994). Like any effective medication there will be both positive and negative effects. More research is necessary before I know who should be taking DHEA as a supplement.

## REMOVING BEE STINGS:

**Removing Bee Stings** by P. Visscher in the August 3, 1996 issue of the *Lancet* evaluated the wisdom of the recommendation that "the sting should be scraped off, never pinched." The researchers measured the area of the weal raised after bee stings with different methods and times of removal. The weal size increased with time from stinging to removal, even within a few seconds. But, there was no difference in response between stings scraped and pinched off after 2 seconds.

The detached stinger pumps the venom into the skin. Even short delays of removal allow more venom to be pumped. The method of removal does not affect the amount of venom received. External compression by pinching the sac does not squeeze in more venom. Therefore, the correct advice is to remove the stinger "as quickly as possible regardless of the method." It is also important to find safety from the nest of bees, because the base of the honey bees sting releases an "alarm pheromone" that makes other bees more likely to sting—especially Africanized bees.

**COMMENT:** I'm happy to hear my natural response to get that stinger out ASAP is the right one.

*Recipe Contribution of the Month*  
Contributed by Jean Hines of Chiloquin, OR.

## THAI TOFU WITH CASHEWS

Servings: 2  
Preparation Time: 10 minutes  
Cooking Time: 10 minutes

5 tablespoons soy sauce  
5 tablespoons dry sherry  
5 tablespoons water  
1½ teaspoons minced fresh garlic  
1 teaspoon minced fresh gingerroot  
1 teaspoon crushed red pepper  
2 tablespoons cornstarch  
1 bunch green onions, chopped  
1 10.5 ounce package firm lite silken tofu, cubed  
⅓ cup cashew pieces

Combine soy sauce, sherry, water, garlic, ginger and red pepper. Mix well. Pour about ⅓ of the liquid into a non-stick frying pan, reserving the rest. Add the cornstarch to the reserved liquid and set aside.

Add the green onions, tofu and cashews to the frying pan. Cook, stirring frequently until mixture is bubbling, about 8 minutes. Stir in cornstarch mixture and continue to cook and stir until thickened. Serve over rice.

Hint: Add some cubes of lightly cooked zucchini to the mixture after it has thickened. This is a rich recipe.

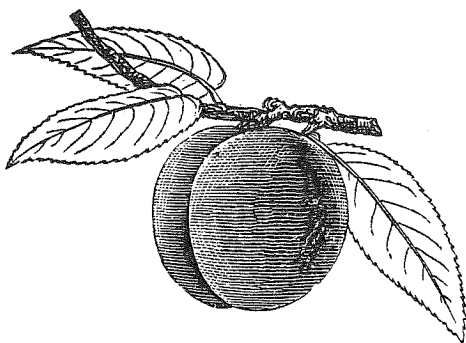
## SPICY ARROZ VERDE

Servings: 4  
Preparation Time: 10 minutes  
Cooking Time: 25 minutes

2 ½ cups vegetable broth  
1 cup chopped green onions  
½ cup chopped green bell pepper  
½ teaspoon minced fresh garlic  
1 cup uncooked brown Jasmine rice  
2 tablespoons canned chopped green chilies  
½ teaspoon ground cumin  
½ teaspoon chili powder  
fresh ground pepper to taste  
several dashes Tabasco sauce  
2 cups chopped fresh spinach  
¼ cup chopped cilantro or parsley

Place ½ cup of the vegetable broth into a saucepan. Add the green onions, bell pepper and garlic. Cook, stirring occasionally for 5 minutes. Add the remaining vegetable broth, the rice, green

# Recipes



chilies, cumin, chili powder, pepper and Tabasco sauce. Bring to a boil, reduce heat, cover and simmer for 15 minutes. Stir in spinach, cover and continue to cook for 5 more minutes, until liquid is absorbed. Remove from heat and stir in cilantro or parsley. Serve at once.

## APRICOT BARS

Servings: makes 18 bars  
Preparation Time: 15 minutes  
Cooking Time: 25 minutes

1 cup unbleached white flour  
½ cup packed brown sugar  
½ teaspoon baking powder  
¼ teaspoon baking soda  
⅛ teaspoon ground cloves  
½ cup apricot nectar  
⅓ cup Just Like Shortenin',  
Wonderslim, or Lighter Bake  
1 teaspoon Egg Replacer mixed in 2  
tablespoons water  
½ cup finely chopped dried apricots

Preheat oven to 350 degrees. Combine dry ingredients in a large bowl. Set aside. Place the nectar and Just Like Shortenin' in another bowl. Beat the Egg Replacer and water until it is very frothy, then add to other wet ingredients and mix well. Add to dry ingredients, stirring until just combined. Stir in dried apricots. Spread batter in a non-stick 11 x 7 inch baking pan. Bake for 25 minutes or until toothpick inserted in center comes out clean. Cool and cut into bars.

## BANANA FRENCH TOAST

Servings: 6  
Preparation Time: 5 minutes  
Cooking Time: 10 minutes

1 banana, broken into large pieces  
½ cup soymilk  
1 teaspoon vanilla  
¾ teaspoon cinnamon  
6 slices bread

Place banana, soymilk, vanilla and cinnamon in blender jar. Process until smooth. Transfer to shallow bowl. Dip bread in the batter and cook on a non-stick griddle.

Hint: Make sure the griddle is hot before adding the bread to it. Cook about 2 minutes on each side. For best results, use an Italian style bread rather than a dense bread to allow the batter to soak into the bread slightly.

## CREAMY SPINACH PESTO PASTA

Servings: 4  
Preparation Time: 15 minutes  
Cooking Time: 10 minutes

10 ounces dried spinach fettuccine  
1 6 ounce bag triple washed baby spinach leaves  
1 cup fresh basil leaves  
½ teaspoon fresh minced garlic  
1 cup soft lite silken tofu  
dash salt  
⅓ cup vegetable broth  
1½ cups halved cherry tomatoes  
fresh ground pepper to taste

Put a large pot of water on to boil. Drop the pasta into the water and cook according to package directions. Just before turning off heat, add the spinach and cook until wilted, about 30-45 seconds.

Meanwhile, place the basil and garlic in a food processor and process until chopped. Add the tofu and the salt. Process until smooth. Place in a pan with the vegetable broth and heat gently, do not boil.

Drain fettuccine and spinach. Place in a bowl, pour the tofu mixture over the pasta and toss well to mix. Spoon the cherry tomatoes over the pasta and season with fresh ground pepper.

Recipe Hint: To make this a little spicier, add a dash or two of Tabasco sauce to the tofu mixture. If you are a real spinach lover, use 2 bags of the baby spinach leaves instead of one.

# BULLETIN BOARD

## Women's Health

A new book presently titled the **McDougall Program for Healthy Women** is now being written, and I need your help. Please share with me any experiences you have had with a healthier diet and lifestyle, and problems that are common (but not exclusive) to women. Many of you have lost weight, resolved intestinal problems, headaches, body aches and arthritis. PMS, heavy menstrual periods, breast tenderness, and breast lumps have also gone away. Any of you who have used my recommendations for hormone replacement therapy (estrogen/progesterone replacement), osteoporosis, heart disease, breast feeding, mammograms, PAP smears, weight loss, to avoid unnecessary surgery of the uterus, breasts, or other body part, or any other information that has helped you, please write me. If you have any story that needs to be told to other women, here is your opportunity - Send a letter with your experience to The McDougall Program for Healthy Women, P.O. Box 14039, Santa Rosa, CA 95402. Thank you.

John McDougall, M.D.

## McDougall TV Show on Primestar

"McDougall" the TV show airs across the country on 150 stations. Consult your local directory. Call (805) 373-7681, ask for Chauncy, if you need more information or know of a TV station that would like to carry us.

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We're expanding our reach to your neighborhood. Help us improve the lives of the people you love. John and Mary McDougall will deliver their life-altering half-day seminar on a weekend, day or evening. You can have a group sponsor them or help us arrange for people to sign up at the seminar by calling our 800 number. If we sponsor the seminar, we need at least 150 people to make it work. One of the best ways to help us is to arrange media contacts such as talk radio, newspapers and TV. We also need seminar rooms. Call Louise at (800) 570-1654 for information.

## '97 Cruise to Costa Rica

Cruise the Western Coast of Costa Rica with John and Mary McDougall from August 2 through August 9 aboard the *Temptress Explorer*. Last year's trip was such a success that we decided to repeat it! The food is all McDougall style. All tours, food, alcoholic and nonalcoholic drinks, and entertainment are conveniently included in the price. Call 1-800-570-1654 for information and reservations.

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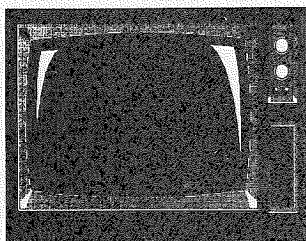
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*Cruise the Western Coast of Costa Rica with John and Mary McDougall from August 2 - August 9 aboard the Temptress Explorer. Last year's trip was such a success that we decided to repeat it! The food is all McDougall style. All tours, food, alcoholic and nonalcoholic drinks, and entertainment are conveniently included in the price.*

*Visit us on the Web at <http://www.drmcdougall.com> Our website has all the latest news on McDougall events - classes, trips, as well as McDougall educational materials. Talk to us via E-mail - we'd love to hear from you!*





# MCDUGALL TV SHOW AND COSTA RICA CRUISE

12/96  
Nov. NL

THANKS TO YOU!

WE'RE ON TV FOR ANOTHER 8 WEEKS—SATURDAY MORNINGS  
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The time is 5 AM (PST), but that's 6 AM (MST), 7 AM (CST), and 8 AM (EST). Set your video recorder if that sounds early—it's worth the trouble. The show is also on 160 independent stations throughout the United States and Canada—usually on Sunday morning, or Saturday or Sunday evenings—consult your local guide.

Also, **please take the trouble to write** and tell them what you think of the show. We'd like to be a permanent guest on this station. Write:

Program Director KTVU  
2 Jack London Square  
Oakland, CA 94607

## CRUISE TO COSTA RICA

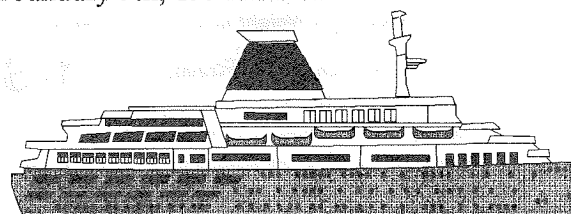
We're going to cruise the western coast of Costa Rica from August 2nd through the 9th aboard the Temptress Explorer and we'd love to have you join us. So far we have gotten a great response (160 people are interested in 90 spots) and we're about to send out the brochures. Assuming we fill the ship with all McDougall people, then we are going to have a different itinerary than we had last year—we'll go where ever we darn please—and we're open to your suggestions. We're also cruising a day longer and the price will be about \$400 less than last year. This saving is the result of us doing much of the work "in house" and the fact that we will be able to fill the ship.

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The food is all McDougall style (vegetarian). All tours, food, alcoholic and nonalcoholic drinks (including coffee), and entertainment are included in the price. Discount airfares (and vegetarian meals) are arranged by our travel agent. Mary and John McDougall be giving evening lectures, and there will be much more.

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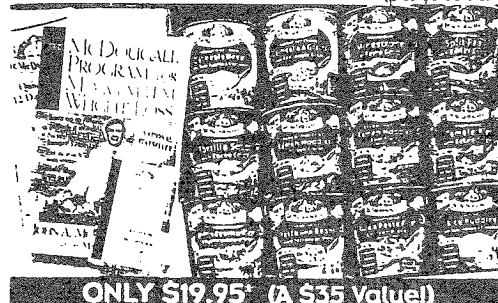
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