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# Healing Cuisine

DIET FOR PREVENTION AND RECOVERY FROM  
BREAST CANCER

-by Meredith McCarty, Holistic Nutritionist (DC, NE)

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Literally thousands of international studies have examined different aspects of food and nutrition and their relationship to breast cancer. Holistic nutritionist, Meredith McCarty, shares the latest findings in breast cancer prevention and support for recovery through lifestyle changes, especially diet.

### *HIGHLIGHTS INCLUDE:*

- An overview of the latest research including 7 risk factors and 4 protective factors
- Charts and diagrams clearly showing how creation and dissolution of breast cancer occurs
- Two sets of dietary guidelines and 13 protective foods
- Thorough bibliography of all sources referenced in the text

### *WHAT THE EXPERTS ARE SAYING:*

“The approximate amount of breast cancer cases preventable by diet are 33% to 50%.”  
—Physicians Committee for Responsible Medicine

“You can’t compromise on a healing diet when it comes to cancer, nor can you cancel out harmful dietary habits with supplements.”  
—Dr. Keith Block, Nutritional Oncologist

“The cells around cancer cells, and the general state of the body, influence their capacity to thrive.”  
—Dr. Susan Love from Breast Cancer—Beyond Convention

### *BIOGRAPHY*

Meredith McCarty is a holistic nutritionist (a certified Diet Counselor and Nutrition Educator), author and lecturer. Through her business, Healing Cuisine, she helps people come into balance in their eating habits through personal consultations, public lectures and cooking classes.



Meredith has taught and lectured internationally since 1977. She is the former associate editor of *Natural Health* magazine and director of the East West Center for Macrobiotics for 19 years. She has a Senior Certificate in The Art of Cooking from the East West Foundation in Boston, Massachusetts. She has authored 3 cookbooks (including Sweet and Natural, winner of the 1999 World Cookbook Award at Versailles) and produced a video.

Meredith lives in Mill Valley, California and may be contacted at P.O. Box 2605, Mill Valley, CA 94942, (415) 381-1735. For more information, please visit her website, [www.healingcuisine.com](http://www.healingcuisine.com).

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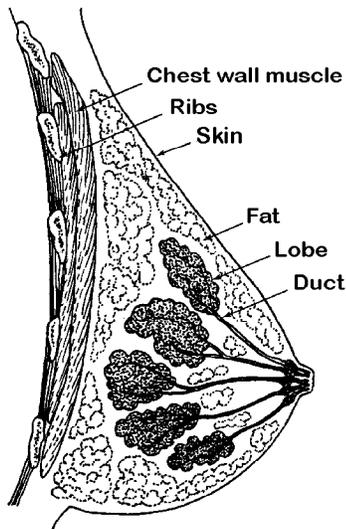
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## DIET FOR PREVENTION AND RECOVERY FROM BREAST CANCER -by Meredith McCarty, Holistic Nutritionist (DC, NE)

### INTRODUCTION



-from Breast Cancer, Beyond Convention  
by Tagliaferri, MD, L.Ac, etc.

Did you know that the original Hippocratic Oath (circa 500 BC), the oath taken by medical doctors, emphasized dietary advice and guidance? “I will apply dietetic measures for the benefit of the sick according to my ability and judgment: I will keep them from harm and injustice.” Nowadays the word “dietetic” is usually omitted, leaving a vacuum that is being filled by enlightened MDs and holistic nutritionists like myself. (Jack, from Ancient Medicine, John Hopkins University Press)

My interest in this topic comes from both personal friends and clients who either had or have breast cancer. My 30 years of experience in the natural health field began with an in-depth study of the Macrobiotic diet and lifestyle with the principal teachers, Michio and Aveline Kushi and Herman and Cornelia Aihara. In the early 70s, while working as Associate Editor of *East West Journal* (now *Natural Health* magazine), Macrobiotics became known as “The Cancer Prevention Diet.” The East West Foundation, founded by Michio Kushi as a nonprofit organization for the promotion of Macrobiotics, sponsored conferences on diet and cancer as early as 1974.

Then in 1977, Dr. Anthony Sattilaro, physician and chairman of Methodist Hospital in Philadelphia, wrote Recalled by Life about his healing journey using a Macrobiotic diet which led to his recovery from prostate cancer that had metastasized to his bones at the age of 49. Medical tests declared him free of cancer in less than a year. On the heels of Dr. Sattilaro’s book came the publication in 1983 of Michio Kushi’s book, The Cancer Prevention Diet, revised in 1994. Since that time, the American Cancer Society periodically announces that Macrobiotic diets are on its list of unproven methods of cancer management. (Tagliaferri)

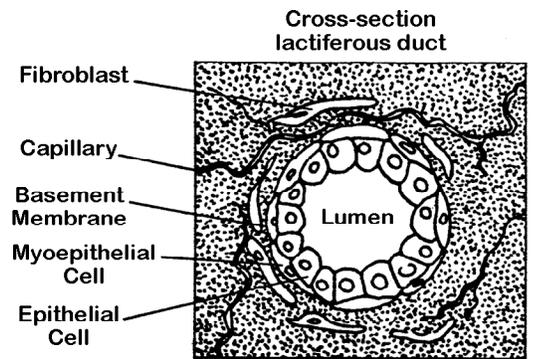
During the 19 years that I co-directed a natural health center, and now in my private consultation practice here in the San Francisco Bay Area of California, I have worked with women who have been treating their breast cancer with a combination of conventional and natural approaches including diet, sometimes along with Chinese herbs and acupuncture, the

method proven to best relieve pain and nausea. Through referrals, and because of the continued availability of my three cookbooks, I've had the pleasure of teaching women which food groups and which particular foods are most health-supportive, and how to prepare them in ways they would enjoy.

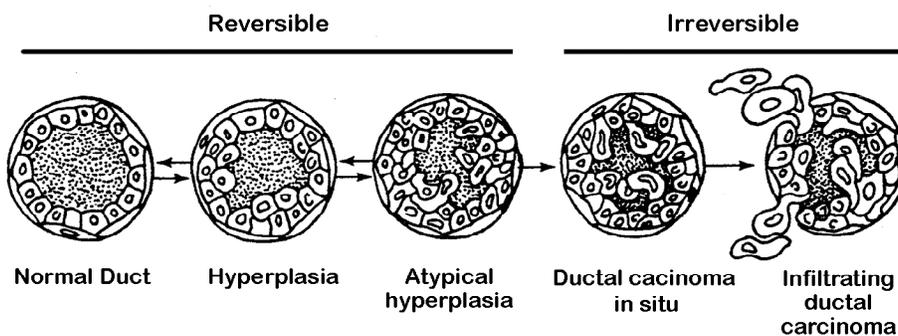
## DEFINITION

Dr. John McDougall says: "Cancer is thought to begin when the cell's command center, its genetic code or DNA, is damaged. Once injured, cells either die or are stimulated to replicate relentlessly until they engulf the human organism."

I like Dr. Susan Love's description of the current hypothesis of breast cancer progression: "First there are an increased number of cells in the lining of the milk ducts, almost like rust. This is called hyperplasia. The cells then become 'funny looking' and are then called atypical hyperplasia. After a time the cells actually resemble breast cancer cells, but they are completely contained by the ducts. This is called ductal carcinoma in situ, or DCIS. Finally the



—from Breast Cancer. Beyond Convention by Tagliaferri, MD, L.Ac, etc.



—from Breast Cancer. Beyond Convention by Tagliaferri, MD, L.Ac, etc.

cells invade outside of the ducts into the surrounding fat and become invasive ductal cancer. In fact, it is the breast cancer cells elsewhere in the body that are life threatening. If they start to grow they can interfere with vital functions in the liver, lungs, or brain and finally lead to death. The cells around cancer cells, and the general state of the body, influence their capacity to thrive." (Tagliaferri)

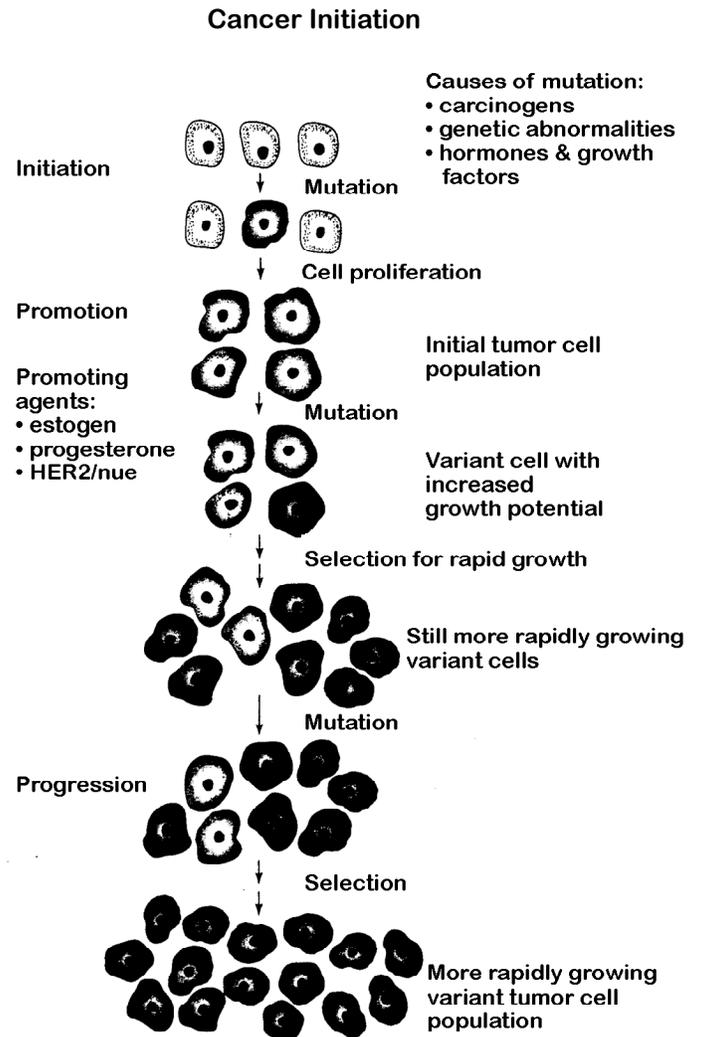
Dr. Andrew Weil states that because cancer "represents failure of the healing system, even in its early and localized stages, it is a systemic disease. Patients must work to improve general health and resistance by making changes. If the healing system is not able to eliminate cancer completely, it may be able to slow or contain malignant growth to allow a period of relatively good health. Even recurrence of cancer does not automatically condemn a patient to sickness and rapid decline."

## INCIDENCE

Through epidemiology, the study of the incidence and frequency of diseases in populations, we know that breast cancer is the most common cancer among American women (as well as among women in Western Europe, Australia and New Zealand). It's the third most common cancer around the world with rates increasing globally. (Physicians Committee for Responsible Medicine [PCRM] and Glenville) A woman's chances of contracting breast cancer in 1960 were 1 in 20. In the 1970s, they jumped to 1 in 14, and as of 1997, reports from both the National Cancer Institute (NCI) and the American Cancer Society (ACS) estimate that about 1 in 8 women in the U.S., approximately 13%, will develop breast cancer during her lifetime. About one-quarter of these women will die of the disease.

Among the racial/ethnic groups studied, white and black women have the highest levels of breast cancer risk. Asian/Pacific Islander and Hispanic women have less than two-thirds the risk of white women. The lowest levels of risk occur among Korean, Vietnamese, and Native American women. White women in the San Francisco Bay Area of California have the world's highest rate of breast cancer—double that of Europe, and five times higher than that of Japan, reports the International Agency for Research on Cancer.

Not so coincidentally, 15 years ago the San Francisco Bay Area led the world in estrogen prescriptions for women. The state of California tops the lists of America's toxic-waste sites. (Diamond) I would add that this is a very prosperous population that can afford annual mammograms (based on radiation), medications, and whatever food and beverage is desired.



—from Breast Cancer, Beyond Convention  
by Tagliaferri, MD, L.Ac, etc.

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## CONVENTIONAL RISK FACTORS & TREATMENT

According to information provided on the NCI website, an individual woman's risk depends on a variety of factors including:

1. Family history (premenopausal breast cancer in mother or sister)
2. Reproductive history (early menstruation, late menopause, first full-term pregnancy after age 30), and
3. Other factors that are not yet fully understood: obesity (the only mention of diet!), nulliparity (women who have not born children), urban residence, etc.

Treatment is local (surgery [breast-sparing lumpectomy or mastectomy] and radiation therapy) or systemic (chemotherapy and hormone therapy). As Dr. Susan Love concludes: "Our current therapies are crude ways of dealing with the disease. They are focused on killing cancer cells rather than changing their environment."

## GENETIC COMPONENT

Genes appear to play a minimal role in most cases of breast cancer. About 5% to 10% of cases can be blamed on the BRCA-1 gene (breast cancer susceptibility gene) passed from either a mother or a father to the next generation. PCRM (Physicians Committee for Responsible Medicine) adds that cancer-promoting genes still need the right environmental conditions in order to be expressed.

Japanese women on traditional diets have one of the lowest rates of breast cancer in the world (3-fold-lower rate among premenopausal women and a 9-fold-lower rate among postmenopausal women) than reported for women in the U.S., but when they move to America and eat like Americans, their breast cancer risk quickly rises to those of American women. So it is not a genetic factor particular to Japanese women, but something in their diet that distinguishes them.

This is where our clues to getting a handle on this illness begin—with environmental factors. Food, along with air and water, is our most direct link with the environment. (Glenville, Jack and PCRM)

## COMPLEMENTARY ALTERNATIVE MEDICINE (CAM)

"The doctor of the future will give no medicine but will interest his patients in the care of the human frame, in diet, and in the cause and prevention of disease."—Thomas Edison, 1847-1931

Essentially, there are two forms of treatment for breast cancer. The first is medical treatment. The second involves self-care, all the ways you can promote your overall health, immune

system and cancer-fighting defenses. (McDougall)

Recent surveys of women with breast cancer reveal that up to two-thirds use some kind of alternative product or therapy. The most common include: vitamins and minerals (50%), herbal remedies (25%), green tea (17%), special foods or diets (15%), and Essiac (15%). The herbs most recommended for use in healing are: dandelion, ginger and turmeric. Of the four herbs in Essiac, only burdock root displays the ability to prevent chemically produced chromosomal aberrations. (Tagliaferri)

## 7 LIFESTYLE RISK FACTORS: EXCESSIVE INTAKES OF THE FOLLOWING SUBSTANCES

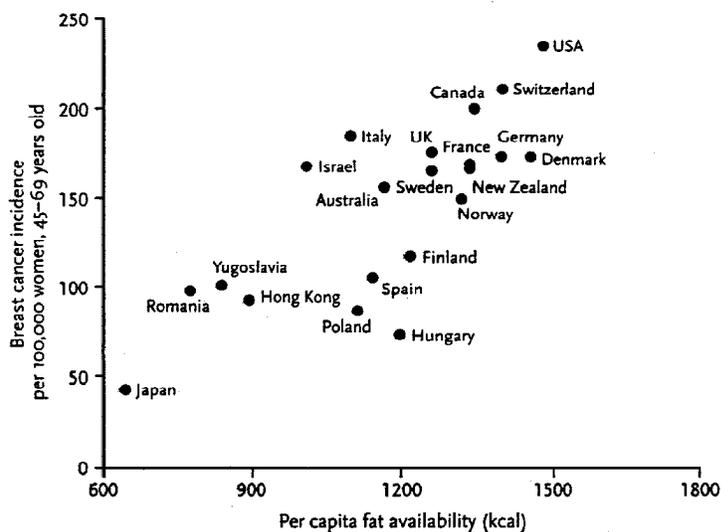
### I. FAT

Literally thousands of epidemiological studies have examined different aspects of food and nutrition and their relationship to breast cancer. The issue that has attracted the most attention over the years is dietary fat. We can trace this interest to the strong geographical association between dietary fat intake and breast cancer incidence or mortality from a 1988 analysis of good cancer registry data from 21 countries.

What is the problem with fat? Fat is a source of estrogens, oxidants, and agricultural chemicals, all of which can promote breast cancer. Oxidants are also called free radicals, highly reactive oxygen molecules that break down cells and deform DNA so that it mutates and triggers the creation of a malignant cancer cell. (McDougall)

Research shows the ideal fat content is 10% to 20% of the diet's total calories, the balance achieved in a predominantly vegan (dairy-free vegetarian) diet. (Diamond)

Swedish researchers have found that raising the fat-calorie content of the diet by just 10%, the rate of breast cancer recurrence increases 4 to 8 times. (Diamond) The strongest correlation for breast cancer has been with the intake of the trans-fatty acids that are created when vegetable oils are hydrogenated to make margarine and solid vegetable shortening. (Hass) A Canadian research study found that a higher intake of saturated fats in particular, the type found in animal products, was linked to more aggressive cancers. (PCRM)



**Rates of Breast Cancer in Different Countries Based on Fat Intake**

—from Breast Cancer, Beyond Convention  
by Tagliaferri, MD, L.Ac, etc.

A high-fat diet of animal foods can be especially troublesome because the most potent pesticides are concentrated in fat and the chemical properties of fat itself may actually increase their carcinogenicity. According to the director of the Environmental Health Center in Dallas, Texas, non-organic meats have 14 times and non-organic dairy products have 5 1/2 times as many pesticides as non-organic plant-derived foods. (Diamond)

Fried and broiled meats have far more mutagens than similarly prepared plant foods. (Diamond)

Nutritional oncologist, Dr. Keith Block, classifies fat as a food group because, in his experience, “cancer patients will allow their fat intake (both quantity and type) to get seriously out of hand.” High-fat diets not only predispose people to cancer, but people who have advanced forms of breast cancer are particularly vulnerable to the ill effects of high-fat foods. And weight gain with breast cancer, and particularly while undergoing chemotherapy, is associated with a poorer prognosis. Dr. Block’s research shows that vegans (vegetarians who consume no dairy products) have 2 1/2 times the cancer-killing potential as omnivores. A fat content of about 15% is Dr. Block’s general advice to most patients. (Diamond)

While most medical professionals advise patients to keep their weight up any way they can, Block’s experience shows that a low-fat content does not put patients at greater risk of lean tissue loss which would worsen the cancer patient’s prognosis. Instead, as noted by an independent reviewer, few of Dr. Block’s patients experience weight loss or experience hair loss during chemotherapy. (Diamond)

## II. HIGH PROTEIN FOODS

While it’s a necessary macronutrient, cutting down on protein frees up energy, spares the digestive system and especially the liver and kidneys from extra work, and protects the immune system from irritation. Dr. Andrew Weil goes so far as to say that “too much protein for the average adult is four ounces a day. If you have a protein meal once a day, a meal organized around a main course of meat, chicken, fish, eggs or tofu, that is probably enough.” (I would add to this list of protein sources beans and the other soyfood, tempeh.)

<b>Leading Controllable Factors Associated with Cancer Risk</b>	
<u>Increased Cancer Risk</u>	<u>Decreased Cancer Risk</u>
Smoking	Vegetable consumption
Alcohol use	Fruit consumption
Meat and dairy product consumption	Carotenoids (protective substances in orange, yellow, red, and green vegetables & fruits)
Animal/saturated fat	Vitamin C
Total fat	Fiber
Grilling & barbecuing (red meat, fish, chicken)	Whole grains
Salt & salting (e.g. as a food preservative)	Physical exercise
Obesity	
Inactivity	
Exposure to hazardous materials	

–from Healthy Eating for Life to Prevent and Treat Cancer  
by Physicians Committee for Responsible Medicine

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Weil suggests designing other meals around complex carbohydrates and vegetables: stir-fried vegetables with brown rice, or whole grain pasta and vegetables, or salads and whole grain bread.

Fish is a good protein source. However, farmed fish (especially salmon, trout and catfish) may not be as beneficial to health as their wild counterparts and may have residues of drugs used to control diseases in crowded conditions. Shellfish are more likely to contain toxins. (Weil) And, as toxins travel up the food chain, they become concentrated in the tissues of large, fatty predatory fish, like tuna and swordfish. (Diamond)

### III. REFINED CARBOHYDRATES

(White flour in bread, pasta and baked goods, as well as white rice and white sugar)

I'll discuss the benefits of whole grains and whole grain flours, breads and pastas later. For now, consider that when someone eats sugar, the body produces the hormone insulin, and insulin can promote breast cancer just as estrogen does. (Diamond)

Sugar is remarkably effective at lowering the immune system's ability to work properly. Eating 3 ounces (5 Tablespoons, 1/3 cup, or 100 grams) at one sitting can stunningly reduce the ability of the immune system's white blood cells to engulf and destroy bacteria. The immune-suppressive effect starts within 30 minutes after sugar ingestion and can last for up to five hours, so that the immune system is working at only half of its intended capacity, rendering the body vulnerable to infection. The average American consumes about 5 ounces (9 Tablespoons or more than 1/2 cup) of sucrose daily from granular sugar found in various processed foods. (Diamond)

### IV. TOXINS

The most common and powerful sources of cancer-causing oxidants are dietary fat; smoked or charred meat; cigarette smoke; pollutants in the air (such as industrial waste and automobile exhaust), water and soil (such as pesticides, herbicides and chemical fertilizers used in farming); radiation and radioactive particles in the environment; and the intake of certain pharmaceutical drugs (such as statins used to lower cholesterol).

Among the chemicals considered to cause breast cancer, nearly half are medications such as birth control pills and immune-suppressing drugs such as cancer chemotherapy drugs. (McDougall) Dr. Block believes that much of the side effects and lack of effectiveness of conventional treatments are due to the buildup of toxic by-products from these drug therapies. (Diamond)

More than 85,000 chemicals are in daily use in this country, most of which have never been evaluated for their effects on human health. And U.S. produce imports from other countries have pesticide residues 5,000% higher than current U.S. standards of DDT. Women with breast cancer have been found to have a 50% to 60% higher concentration of the main

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metabolite of DDT (DDE) in breast specimens. (McDougall and Krohn)

Dr. Krohn states that “detoxification can help in the treatment of cancer,” and she recommends a Macrobiotic diet as part of her detoxification program.

#### V. ESTROGEN & HORMONE REPLACEMENT THERAPY (HRT)

Because 70% of tumors in the breast have proved to be estrogen-dependent, it becomes even more clear that controlling estrogen activity can dramatically reduce the risks and recurrence of breast cancer. (Tagliaferri)

The absence of fiber in the diet promotes the growth of harmful intestinal bacteria that result in higher blood levels of estrogen. Fiber is found only in plant foods (whole grains and breads and pastas based on whole grain flours, beans, vegetables and fruits) and not in animal foods (meats, poultry, fish, eggs and dairy products). According to a report in *The New England Journal of Medicine*, vegetarian women on high-fiber diets eliminate two to three times more estrogen in their feces than non-vegetarians. (McDougall)

Researchers at NCI found that when women cut their fat intake from 40% to 20% of calories, the amount of estrogen in their blood quickly dropped by 17%. (PCRM) And, as we now know from the Women’s Health Initiative study of 16,000 women, hormone preparations (HRT) commonly given to women for menopausal symptoms clearly increase the risk of breast cancer.

#### VI. CHOLESTEROL

Another chemical substance that acts like a fuel for cancer cells is cholesterol. The same foods that promote high estrogen levels also contribute to high blood cholesterol: animal products such as meat and dairy foods. (McDougall)

#### VII. ALCOHOL

Alcohol consumption can increase the levels of estrogen in the body by interfering with the enzymes that metabolize estrogen and other cancer-causing substances in the liver. (Tagliaferri)

According to Diamond, et. al, women who consume two to three alcoholic drinks per week—not per day—have a two to three times higher risk for developing breast cancer. Each alcoholic drink is the equivalent of either 12 ounces of beer, 4 ounces of wine, or 1 1/2 ounces of whiskey. The reason is that alcohol disrupts the action of the vitamins that protect against cancer, especially folic acid. (PCRM) In addition, alcohol speeds up the progression of the disease and weakens the immune system’s ability to repair damaged DNA. (McDougall)

## NUTRITIONAL SUPPORT & THE VALUE OF PLANT FOODS

“An ounce of prevention is worth a pound of cure.”  
—Benjamin Franklin, 1706-1790

According to the Physicians Committee for Responsible Medicine (PCRM), the approximate amount of breast cancer cases preventable by diet are 33% to 50%.

Phytoestrogens are naturally occurring substances in food that have a hormone-like action. Almost all cereals, beans (legumes), vegetables and fruits contain phytoestrogens in varying strengths and composition, but it is the isoflavones (one of the classes of phytoestrogens) that are the most beneficial kind. These are found in legumes such as soy, lentils, chickpeas, etc. In the human digestive system, bacteria convert isoflavones into substances that have an estrogenic action, although they are not themselves hormones. (Glenville)

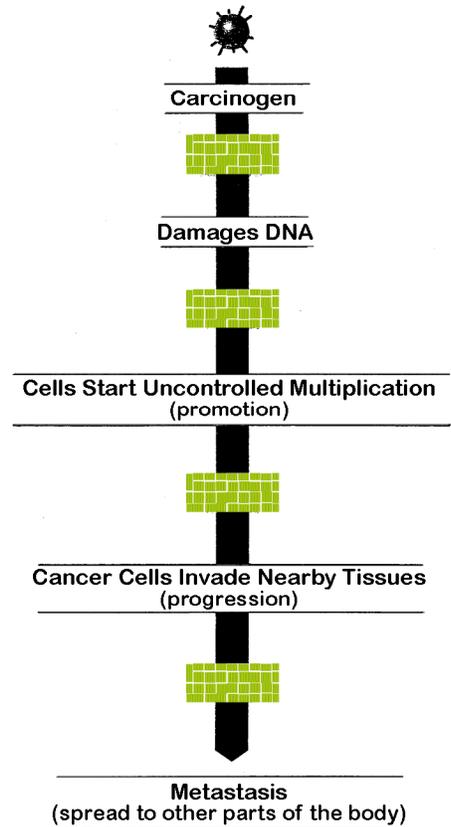
How does this process work? There are estrogen receptors in the breasts which lock on to circulating estrogen. By exerting only 1/1,000th to 1/100,000th the hormonal effect of estrogen, phytoestrogens can attach to the receptors, keeping estrogen from exerting its negative effect on cell growth and inhibiting tumor formation. (Glenville)

Evidence also shows that of the vast array of fruits and vegetables, green vegetables in particular, decrease a woman's risk for developing breast cancer, and help women beat cancer after diagnosis. One study found that those women who consumed the most fruits and vegetables before going in for breast surgery saw better results afterward. (PCRM)

## DIETARY GUIDELINES

Here are a couple of sets of dietary guidelines for preventing breast cancer, an illness that, as we have seen, is largely caused by environmental factors, many of which are under our control.

### Points Where Food Can Block Cancer's Progress



—from Healthy Eating for Life to Prevent and Treat Cancer  
by Physicians Committee for Responsible Medicine

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## I. DR. KEITH BLOCK, NUTRITIONAL ONCOLOGIST

Keith Block M.D. is the director of the Block Center for Integrative Cancer Care, a research and treatment center integrating the best of conventional medical care with scientifically sound alternative therapies. Food is the foundation of Dr. Block's cancer treatment program: "You can't compromise on a healing diet when it comes to cancer, nor can you cancel out harmful dietary habits with supplements." The Block diet is a medically sound modified Macrobiotic approach. (Diamond) Here are the macronutrients as recommended by Dr. Block:

### *FATS—10% to 20% and up to 25%*

Mostly omega-3 (polyunsaturated) and omega-9 (monounsaturated) fatty acids like those from cold-water fish, nuts (especially walnuts) and seeds (especially flax), canola oil, and extra virgin olive oil.

### *PROTEIN—15% to 20% and up to 38%*

Coming mostly from soy and other legumes, as well as fish.

### *CARBOHYDRATES—60% to 75%*

All from unrefined sources, including whole grains (50% to 60%), vegetables, and fruits. Block encourages 12-plus servings of fruits and mostly vegetables daily.

Specific recommendations include:

- 2 to 3 servings a day of cruciferous vegetables (broccoli [also broccoli rabe and sprouting broccoli], cauliflower, cabbage (round and Chinese/Nappa), Brussels sprouts, kale, mustard greens, collards, turnips, bok choy, and arugula)
- 1 to 2 servings a day of onion family vegetables (onions, garlic, leeks, shallots, green onions, and pearl onions)
- 2 to 3 servings a week of sea vegetables OR 1 to 2 kelp tablets per day (ground-up for digestibility), particularly recommended for radiation patients

Specific foods and substances to be avoided are: All red meats, dairy foods and white flour products, alcohol, caffeine, chocolate, refined sugar, additives, junk foods and almost any food that is boxed, bottled, canned or frozen.

## II. MACROBIOTIC DIETARY GUIDELINES

The most popular anticancer diet, according to the American Cancer Society, is the Macrobiotic diet. Lawrence Kushi, Sc.D., epidemiologist on the role of diet and cancer and member of the American Cancer Society's 1996 Advisory Committee to revise guidelines for nutrition and cancer prevention, is also the son of Michio and Aveline Kushi, foremost proponents of Macrobiotics. He contributed the following explanation of a healing Macrobiotic diet. (Tagliaferri)

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### *WHOLE GRAINS—50% to 60%*

Whole grains include brown rices, quinoa, whole oats, millet, whole wheat, barley, buckwheat, rye, etc. Countries with low cancer rates base their diets on staple grains such as rice or wheat noodles. Whole grains reduce risk of cancers including breast cancer 10% to 80% in a review of case-control studies in Italy involving 15,000 women between 1983 and 1996. Refined bread, pasta or rice were associated with elevated cancer risk. (Jack) A study of women who had been previously treated for breast cancer showed that a diet rich in whole grains such as breads and cereals cut recurrence risk in half. (PCRM)

### *BEANS AND TRADITIONAL SOYFOODS—5% to 10%*

Most legumes range from 17% to 25% protein, roughly double cereals' protein and also higher than that of eggs and most meats. Soybeans rate exceptionally high with 38% protein. Most beans are low in fat and are good sources of calcium, potassium, iron, zinc and several B-vitamins. And beans contain the phytochemical diosgenin which appears to inhibit cancer cells from multiplying. (Wood) Traditional soyfoods include tempeh, tofu, miso and natural soy sauce. For digestibility and the minerals they provide, beans should be cooked with kombu seaweed.

### *VEGETABLES—25% to 30%*

Vegetables that are in season and locally grown are preferable, especially dark green leafy vegetables along with small amounts of vegetable juices, sea vegetables, and raw or pickled vegetables.

### *WHITE-MEAT FISH, FRUITS, NUTS, SEEDS*

In moderation, several times a week.

More information about the relevance of a Macrobiotic diet and breast health is provided in the following article.

#### *“Macrobiotic Diet Reduces Risk of Breast Cancer” by Alex Jack*

In a random case control study involving 104 middle-aged women, Italian researchers reported this year that a macrobiotic diet could substantially reduce hormone levels associated with higher risk of breast cancer. Known as the DIANA (Diet and Androgens) Trial, the study was conducted by the National Tumor Institute in Milan, funded by Cancer Program of the European Union, the Italian Association for Research on Cancer, and the CARLIPO Foundation, and published in *Cancer Epidemiology, Biomarkers & Prevention*, a major research journal in the United States.

The post-menopausal women were selected from a pool of volunteers who were at high risk for breast cancer on the basis of their hormonal and metabolic values. Half were assigned to the control group and half to the intervention group that received intensive dietary instruction and ate together twice a week for over 4<sup>1</sup>/<sub>2</sub> months.

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The women in the study, aged 50 to 65 years, had testosterone levels that were two-thirds or more higher than average and hence put them at elevated risk for breast cancer. All had been post menopausal for at least two years, had at least one ovary, had not taken hormonal replacement therapy for at least the previous six months, and were not diabetic. None of the women was following a vegetarian, macrobiotic, or other medically prescribed diet. The 52 women in the control group were not given any information about the diet but were advised to increase their consumption of fruit and vegetables according to the cancer prevention guidelines of the European cancer program.

The 52 women in the intervention group attended macrobiotic cooking classes twice a week for 18 weeks and were encouraged to cook and eat macrobiotically at home, especially one soy product daily such as miso soup, tofu, or tempeh. Every week, the women received whole grains and other products donated by local natural foods manufacturers. During the first month, the women were advised to make dietary changes gradually, but later no advice was given to reduce total food intake or to count calories.

Prior to the trial, both groups of women received about 37% of calories from fat (mainly meat, dairy, and olive oil) and 42% from carbohydrate (bread and pasta). The intervention group shifted from animal to vegetable sources, reducing their meat consumption from daily to one to two times a week, dairy was halved, and butter virtually eliminated. Soy products were consumed on average 1.7 times daily and sea vegetables used every other day. Brown rice and other whole grains were consumed 2.5 times per day compared to 0.5 times by the controls, and intake of legumes, cruciferous vegetables, and berries were 4 to 8 times higher.

Total cholesterol decreased from 240 to 206 mg/dl compared to 230 in the control group. The intervention group lost more weight, 4.06 kg to compared to 0.54 kg, and underwent statistically significant improvements in the five major hormonal and metabolic values associated with breast cancer risk: sex hormone-binding globulin, testosterone, estradiol, fasting insulin, and fasting glycemia. Serum sex hormone-binding globulin levels increased 25.2%, while testosterone and estradiol decreased 19.5%.

“We observed significant and favorable changes in hormonal indicators in breast cancer risk in a group of post menopausal women living in northern Italy,” the researchers concluded. “These results suggest that the multifactorial dietary intervention applied in this study may prevent breast cancer if continued in the long term....Compared with the usual Western microflora, the gut of macrobiotic or vegetarian subjects may be richer in lactobacilli and bifidobacteria.”

Compared to previous studies that involved a single factor, the DIANA trail involved a multifactorial approach that produced stronger results. “We suggest that these favorable changes are to be attributed to the cumulative effects of a comprehensive dietary strategy that combines lowered total fat intake, lowered proportion of saturated fatty acids, and lowered consumption of high-glycemic-index foods with increased intake of dietary fibers from cereals, legumes, and vegetables, and a high cumulative dose of diverse phytoestrogens from various sources.”

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*Source: Franco Berrino, et. al., "Reducing Bioavailable Sex Hormones through a Comprehensive Change in Diet: the Diet and Androgens (DIANA) Randomized Trial," Cancer Epidemiology, Biomarkers, & Prevention 10: 25-33, January 2001*

## **SPECIFIC PROTECTIVE FOODS & BEVERAGES**

Certain whole plant foods are particularly beneficial to include in everyday meals. Much of this information comes from Rebecca Wood's excellent resource, [The Whole Foods Encyclopedia](#).

### **CABBAGE FAMILY** (Brassica, Crucifer, Mustard)

Historically and nutritionally, this is the most important vegetable family. At the pinnacle of phytochemical research, this family includes plants with four petaled flowers which form a cross, thus the Latin name, crucifer. Their known phytonutrients aid the enzymes that detoxify carcinogens. Dark green leaves contain the most phytochemicals, so favor kales, collards, arugula and Brussels sprouts over cauliflower or a pale cabbage.

### **CARROTS**

A rich source of vitamin A, carotenoids and natural plant sugar, carrots also contain B vitamins, phosphorus, iodine, calcium and the phenol coumarin which has anticancer properties. Scientists at the National Institute of Environmental Health Sciences reported that eating carrots more than twice weekly, compared with no intake, was associated with 44% less breast cancer in a case-control study of 13,000 women conducted in Maine, Massachusetts, New Hampshire and Wisconsin in 1997 and 1998.

### **ONIONS**

Members of the onion family contribute exceptionally strong antioxidants and contain numerous anticancer agents. These vegetables are anti-inflammatory, antibiotic and antiviral.

### **DAIKON RADISH**

Effective against many bacterial and fungal infections, this elongated white radish contains a substance that inhibits the formation of carcinogens in the body.

### **BURDOCK**

This long dark root vegetable appears in both European and Asian formulas as an anticarcinogen among other things, restoring the body to normal health by cleansing and purifying the blood of toxins. Favored in Japanese diets, it grows wild across North America, and is cultivated for sale in natural foods stores as well as Asian markets. Cook like a carrot, but slice this dense root very thin so it cooks in the same amount of time as the other vegetables it accompanies such as onions and carrots.

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## *MUSHROOMS*

Certain mushrooms contain an abundance of polysaccharides, active compounds that have powerful enhancing effects on immunity, increasing both the numbers and activity of natural killer cells, the main destroyers of malignant cells, as well as increasing resistance to invasion by bacteria and viruses. These beneficial polysaccharides are not in the common button mushroom, but they are in a number of species cultivated for food in Asia, and now in the U.S. Shiitake, oyster mushrooms, enokidake and maitake all contain polysaccharides and make delicious additions to the diet. (Dr. Andrew Weil)

## *SEAWEED (SEA VEGETABLES)*

In a rat study done with a diet high in nori and kombu seaweeds, induced tumor incidences were half that of the control group. Also, the onset of tumors was delayed and the weight of tumors was lower. Kombu, in particular, decreases the risk of breast cancer according to an experiment done at the Harvard School of Public Health, and may contribute to low rates in Japan. (Jack)

## *SOYFOODS*

According to reports in *The New York Times* from the National Academy of Sciences, soyfoods benefit us in four ways:

1. Soybeans have been found to contain at least five compounds believed to inhibit cancer. One of these is chemically similar to the drug tamoxifen, which is used to prevent estrogen-dependent breast cancer. (Glenville) An element in soyfoods called genistein blocks the growth of new capillaries that supply tumors. People who eat soy have a low incidence of breast, uterine, ovarian and prostate cancers. Traditional soyfoods are among the staples of The Block Diet because they contain compounds that induce differentiation or the conversion of cancer cells to normal cells. (Diamond)
2. Soyfoods prevent and minimize menopausal symptoms—hot flashes and mood swings—by balancing hormones through the action of their phytochemicals, especially isoflavone.
3. Soyfoods prevent and reverse heart disease by lowering cholesterol 10% to 20%, more in people with higher levels.
4. Miso, in particular, contains a binding agent called zibicolin that eliminates radiation, pollution and nicotine from the body, thereby enhancing immunity.

However, not all soy is the same. Try to buy soy closest to its natural form—tempeh, tofu, soy sauce and miso or tamari. The more processing that is done to the soy, the fewer phytoestrogens are in the food. This is the case with TVP (textured vegetable protein) which is made up into meat look-a-likes. Soy products such as soy franks, burgers and ice cream have much lower amounts of isoflavones, since they usually contain considerable amounts of nonsoy ingredients. (Tagliaferri) In addition, soy isolates added to power bars contain toxins and car-

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cinogens due to processing. Dr. Andrew Weil recommends eating three to four servings of soy foods a week. (More than this may cause thyroid problems in sensitive individuals according to Dr. Shames, author of Thyroid Power: 10 Steps to Total Health.)

### *FERMENTED FOODS*

Naturally fermented sauerkraut, dill pickles and kim chee, whole grain sourdough bread, tempeh, miso (fermented bean and grain paste), and natural soy sauce (made from whole soybeans aged naturally without added alcohol) help build and maintain the population of intestinal flora. Lactic acid bacteria in fermented foods help the body produce natural antibiotics, anticarcinogenic compounds, and even compounds that retard or inactivate toxins and poisons.

Miso in particular is an anticarcinogen that is also effective in reducing the effects of radiation, smoking, air pollution and other environmental toxins. And, as reported in a 1998 issue of the *Japanese Journal of Cancer Research*, miso decreased tumors by two-thirds in animal experiments in Hiroshima, Japan. (Jack)

### *CITRUS FRUITS*

This family of fruits contains 58 known anticancer agents. Historically, in Asian countries, Mandarin oranges are specific for breast cancer.

### *FLAX SEEDS*

A Canadian study shows flax seeds shrink breast cancer tumors. (PCRM) A good recommendation is one tablespoon ground organically-grown flaxseeds daily, sprinkled on cereal or salad, or mixed in juice or a smoothie.

In addition to flaxseed's high level of omega-3 fatty acids, it is the most abundant source of lignans, containing over 100 times the levels found in other plant foods. Gut flora change plant lignans into compounds that are particularly protective against breast cancer. Lignans are capable of binding to estrogen-receptors and interfering with the cancer-promoting effects of estrogen on breast tissue. In addition, lignans increase the production of sex hormone-binding globulin which regulates estrogen levels by escorting excess estrogen from the body via eliminative pathways.

### *OILS & ESSENTIAL FATTY ACIDS*

While dietary fat content is moderately low in a preventive and healing cuisine, the most beneficial quality fat is of the omega-3 variety such as flax and walnut oils, since these fats inhibit tumor promotion and, therefore, may prolong survival; omega-9 in the form of olive oil is also acceptable in moderation as well as canola and sesame oil, according to Dr. Block. Corn, safflower and other oils higher in omega-6 fatty acids are to be avoided since these oils enhance the production of certain cancer-promoting substances that stimulate mammary tumor growth. (Diamond)

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High-lignan flaxseed oil (about 58% alpha-linolenic acid) may be the best choice because it also provides alpha-linolenic acid which demonstrates significant anticancer properties, especially against the spread of breast cancer through tumor growth and metastasis. (Murray) Since flax oil should not be cooked, substituting it for half the olive oil in salad dressings is a great way to enjoy it.

### **WATER, JUICES & TEAS**

The lymph system, a key component of our immune system, is a fluid system requiring adequate water to function at its highest capacity. And the single most important way to support the kidneys, especially during chemical or toxic treatments, is by maintaining adequate fluid intake—about 64 ounces per day, preferably of purified water.

Installing a good water purification system at the point of use, one that is certified to remove a thorough array of toxins, is the way to ensure that tap water is as pure as possible. The law says that bottled water is required to be as good as tap water! A solid carbon block filter is far superior to a granular carbon filter. (Please visit my website, [www.healingcuisine.com](http://www.healingcuisine.com) and click on Products to learn about the benefits of the system I recommend, and receive a \$25 rebate when you purchase through me.)

Dr. Block advises that about half the recommended fluid intake consist of fruit juices diluted with 50% water, vegetable juices, low-caffeine kukicha twig tea, and non-caffeine herbal teas such as ginger, chamomile, goldenrod or passionflower, all of which support various aspects of detoxification. (Diamond)

Green tea is unfermented tea. Specific components of green tea, called polyphenols, are destroyed during the fermentation process that is used to make black tea. Green tea significantly increases in the activities of antioxidant and detoxifying enzymes. (Murray)

### **PROTECTIVE LIFESTYLE FACTORS THAT COMPLEMENT DIET**

Equally as important as a good diet are these three other aspects of a healthy lifestyle. Each works hand in hand with the other to create balance and strength.

#### **I. EXERCISE**

Regular exercise tends to lower estrogen and progesterone levels independent of any weight loss that may result from exercise. According to a study of 25,000 women, published in *The New England Journal of Medicine*, those who exercised at least four hours per week had a 37% lower risk of breast cancer. On the other hand, animals forced to exercise excessively have higher rates. (McDougall)

Walking is the premier exercise because it's effective—generating deep breathing to oxygenate both the lungs and brain, while building bone mass and enhancing flexibility—easy to do, and

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is available to all. Of course, walking in nature is best in terms of air quality and personal enjoyment. Whatever is comfortable for one's current state of health and energy level is what's appropriate. I personally recommend walking and talking with a close friend once a week or so, for the great combination of Exercise with emotionally-nourishing Stress Management and Group Support. Other satisfying forms of exercise include hiking, bicycling, swimming, gardening, working out at a gym, yoga, tai chi, qigong and martial arts.

## II. STRESS MANAGEMENT

To manage stress well, make eating a special time. Sit down to eat at a place setting you enjoy. Make sure the television is turned off, or that you eat in an area where it is pleasant and quiet, or accompanied by soothing music. (I especially like dinner with Mozart, Puccini or smooth jazz, and for more ambiance during the dark months, candlelight at the table.) Either vocally or silently, offer a short affirmation or a prayer of gratitude to set the tone. Pay attention to what and how much you eat. Eat as slowly as possible, setting utensils down while you chew. It's interesting to note that the enzymes in saliva start the digestive process, so be conscious to mix these juices with foods to ensure that their incredible benefits will be enjoyed. Hatha yoga, in particular, is a de-stressing form of exercise. Meditation, prayer or journal writing are classic stress prevention practices.

Scheduling a weekly massage for a couple of months, then once or twice a month thereafter, is a great way to relax by having someone else touch, stimulate, stretch and exercise your body in a passive way.

To fully relax and renew, plan for daily naps whenever needed and when time allows.

Bathing in moderately hot water and taking saunas are great ways to change your state. Stay in long enough to notice an uplifting feeling of peace, but not so long as to exhaust yourself. Adding a large handful of sea salt to the bath adds minerals. (For showers, buy a shower filter that removes chlorine.) Brush the skin with a natural bristle brush, beforehand, to stimulate circulation of both lymph and blood to the skin.

## III. GROUP SUPPORT

A randomized controlled trial of women with metastatic breast cancer showed that women who received group support lived twice as long as those in the control group. (Tagliaferri) Group or private cooking classes are another good way to share support, as are health related lectures, seminars and workshops. Every time I consult with a client, or give a lecture or cooking class, I feel supported by knowing that more of us are taking care of ourselves. The good will shared in such events stays with us for months afterward.

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Did you know? Research conducted by Physicians Committee for Responsible Medicine on detailed surveys of Dr. Dean Ornish's patients and his control group concluded that frequent monitoring along with group support, family involvement, and ironically, stricter requirements, help patients make greater changes and reap greater rewards in adapting to low-fat and vegetarian diets in reversing disease.

Dr. John McDougall, sponsor of many weightloss and lifestyle retreats, notes that moderate diets are harder to follow than stricter diets because you are continually tempted by having your old favorite foods—meat, chicken and cheese. It is actually easier to quit completely instead of cutting down as with other bad habits such as smoking.

Reward yourself healthfully. When you feel good physically and emotionally, think about rewarding your good efforts and the positive lifestyle changes you have made in ways other than with food or drink. Call a friend to join you for a walk or a movie, concert or museum outing.

## CURRENT RESEARCH

### *Overeating and Inactivity Ups Breast Cancer Risk*

While neither overeating or inactivity may be significant alone, the combination of these two bad habits appears to significantly increase the risk of breast cancer, particularly in post-menopausal women. Women who don't work off the calories they consume are more than twice as likely as lean and active women to develop breast cancer. And the risk increases nearly five-fold after menopause. Overeating is interpreted as consuming more than 2100 calories.

*Source:* Cancer Epidemiology, Biomarkers & Prevention, June 2005; Jan 2005;(1):81-90, as reported in Nutrition Hints from Betty Kamen, PhD, and Dr. Michael Rosenbaum, MD, [www.bettykamen.com](http://www.bettykamen.com)

## CONCLUSION

Clearly, scientific evidence of diet's link with breast cancer prevention and recovery is overwhelming. May this research report contribute to the heightened awareness, and to the physical and emotional wellbeing of the women who read and use it. May the real issue of the power of our personal eating habits get the love and attention it deserves.

“The only reason we eat well is that we value ourselves.”—Dr. Chris Northrup

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## RESOURCES

Physicians Committee for Responsible Medicine, 5100 Wisconsin Ave., Suite 404, Washington, DC 20016, 202-686-2210, [www.pcrm.org](http://www.pcrm.org) and [www.cancerproject.com](http://www.cancerproject.com), Magazine, “Good Medicine”

Dr. Keith Block, Nutritional Oncologist, Block Medical Center and the Institute for Integrative Cancer Research and Education, 1800 Sherman Ave., Ste. 515, Evanston, IL 60201, 847-492-3040, [www.blockmd.com](http://www.blockmd.com)

Dr. John McDougall, author, live-in weight loss and lifestyle programs and travel, e-newsletter, P.O. Box 14039, Santa Rosa, CA 95402, 800-941-7111, [www.drmcDougall.com](http://www.drmcDougall.com)

Dr. Andrew Weil, “Self Healing” Newsletter, 42 Pleasant St., Watertown, MA 02472, [www.drweilselfhealing.com](http://www.drweilselfhealing.com)

Organic Consumers Association, [www.organicconsumers.org](http://www.organicconsumers.org), e-newsletter.

Oldways Preservation and Exchange Trust, The Food Issues Think Tank, Beacon St., Boston, MA, 617-421-5500, [www.oldwayspt.org](http://www.oldwayspt.org). Download their cultural diet pyramids: Mediterranean, Asian, Latin American and Vegetarian.

HEALING FOODS PYRAMID, University of Michigan Integrative Medicine, [www.med.umich.edu/umim/clinical/pyramid](http://www.med.umich.edu/umim/clinical/pyramid)

BAUMAN COLLEGE—Training programs at a California state-certified school to become a Nutrition Consultant and/or a Natural Chef, P.O. Box 940, Penngrove, CA 94951, 800-987-7530, [www.baumancollege.org](http://www.baumancollege.org)

ACADEMY OF HEALING NUTRITION—Curriculum integrates eastern philosophies with western nutritional concepts and practical hands-on cooking classes, [www.academyhealingnutrition.com](http://www.academyhealingnutrition.com)