Organic for Health

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To Mike, Chrisy, and Kayle,
who make every day brighter

Every human being is the author of his own health.

—Buddhist saying

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My Story

I've lived this book.

It began in August 2005, when I was diagnosed with breast cancer. The tumor was located toward the back of the breast close to the chest wall. My best option was to have the breast removed. The day before the surgery was scheduled, the surgeon called.

"Your pre-opt tests came back," he said. "Your liver enzymes are about two to three times higher than normal."

"What are liver enzymes?" I asked.

"Liver enzymes let us know how healthy the liver is," he explained. "You're not taking any medication that would affect the liver so we better find out what's going on. Surgery is on hold until we run some tests."

On hold. This malignancy was growing inside me and I was *on hold.*

The tests were inconclusive. The CAT scan, ultrasound, hepatitis tests, and iron absorption test offered no answers.

"The surgery is still risky," the surgeon warned. "Surgery could make your liver worse."

At this stage I was more worried about the cancer than the liver, so I told him, "I'll take my chances."

Three days later I had the mastectomy. The cancer didn't appear to have spread to my lymph nodes. This good news was short-lived when we decided I would not undergo any further cancer treatment because of my unhealthy liver. Every three months for the next year I took a liver function test. The results were always the same: the liver enzymes were two to three times higher than normal. In November 2006, when my doctor told me how concerned he was, I decided it was time to try to heal myself. I became my own guinea pig.

The liver, I discovered, removes toxic substances from the body, produces most of the body's cholesterol, and acts as a storage unit for vitamins A, D, K, and B12. The liver enzymes show how well the liver is functioning and, obviously, mine wasn't functioning too well.

With this information in hand, I developed a plan of action. For the storage unit, I stopped the daily vitamin and mineral supplements that I had taken for years, to prevent overdosing. For the toxic substances and cholesterol, I switched to organic foods and olive oil for cooking and baking. I stuck to this plan for six months. After the six months passed, I called my doctor to arrange blood tests.

Two weeks later I sat in the doctor's office. He walked in with a puzzled expression.

"Well?" I asked.

"Your tests are normal." He acted surprised. "Actually, they are better than normal. Your liver enzymes are low. Your overall cholesterol dropped forty points. Your good cholesterol went up forty points. Even your bad cholesterol dropped a few points. What did you do?"

What I did is the story behind *Organic for Health.* By discontinuing my multiple vitamins and multiple mineral supplements and switching to organic foods, I healed my liver. My body became better able to fight the reoccurrence of breast cancer.

A wise man once said, “Allow yourself to become what has so graciously been given to you.” Organic food is helping me do that.

Hormones, Antibiotics and E. coli

I call them The Big Offenders. These are the guys that add hormones and antibiotics to dairy cows, beef cattle, sheep, and chickens. They inject these hormones into cattle and sheep so the animals gain weight faster. The faster weight gain reduces the waiting time for the animal's slaughter, speeding the meat to your dinner table.

Dairy cows are injected with hormones to increase milk production. This increase in milk production requires frequent milking, which in turn leads to udder irritation and infections that require antibiotics. Since the infections don't always completely clear up, the government permits a certain amount of pus to remain in the milk. This is the milk you and your children are drinking and the butter you and your children are eating.

To make matters worse, the Federal Food and Drug Administration is considering approving a new antibiotic, cefquinome, to treat a pneumonia-like disease in cattle, despite warnings from health groups—and the agency's own expert advisers—that the decision will be dangerous for people. The medical community is very concerned that human diseases will develop resistance to cefquinome as they have with other antibiotics. Unfortunately, the FDA seems likely to approve the drug for cattle.

Added hormones and antibiotics in our beef are not the only concerns. Today, the non-organic ground beef you buy at the grocery store could come from any number of sources. Imported beef from all over the world is added to the American-raised beef that is ground into non-organic hamburger, and the consumer has no idea where that beef came from or how it was raised. Cleaner meat is safer meat. Cattle standing in feedlots, hoof-deep in manure, ready to be shipped to the slaughterhouses do not provide the cleanest beef around.

All beef have E. coli in their stomachs and intestines. Non-organic beef comes from grain-fed cows, and this is an unnatural and unhealthy diet for cattle. This diet requires the animal to produce extra stomach acids to break down the grains. The E. coli bacteria become resistant to the extra stomach acids of grain-fed cattle. When the grain-fed beef is slaughtered, the super E. coli bacteria in its stomach and intestines are often mixed in with the meat during processing. Our stomach acids are unable to kill off these super E. coli bacteria. If the meat is not cooked to a high enough temperature, the super E. coli bacteria survive, and we risk becoming very ill.

The healthy diet of natural American grass-fed cattle ensures that nature stays in check. Organic beef is grass-fed and pasture-raised. They are cleaner than non-organic beef because they have room to roam in pastures instead of standing in manure all day like feedlot, non-organic beef cattle.

Another dangerous bacteria in feedlot beef is the campylobacter bacteria, which cause severe and sometimes deadly diarrhea. Fifty-eight percent of cattle on the feedlot carry campylobacter, while only 2 percent of organic cattle do. Eating organic beef greatly lessens the risk of the campylobacter bacteria. For added safety, though, thoroughly cook all meat.

The United States Department of Agriculture permits antibiotics to be given to chickens to prevent disease and to increase feed efficiency. The Federal Food and Drug Administration approved two drugs for use in poultry: Baytril and SaraFlox. Both are fluoroquinolones, drugs that are important in fighting the bacteria that cause anthrax and

campylobacter, a serious diarrhea disease. Within a few years, doctors discovered fluoroquinolone-resistant strains of campylobacter in hospital patients. Because of this discovery, Abbott Laboratories, the maker of SaraFlox, pulled the product from the market. Bayer Corporation, maker of Baytril, has resisted pulling its product.

The U.S. Department of Agriculture also permits poultry producers to add growth enhancers and additives to feed to promote faster growth. The non-organic eggs you eat are hatched from chickens that are given these growth enhancers, feed additives, and antibiotics.

The U.S. Department of Agriculture has mandated that no organic food can contain added hormones, antibiotics, synthetic pesticides, irradiated components, genetically modified organisms, or reprocessed sewage. What does this mean? It means your regular, or non-organic, foods may. Organic milk, organic butter, organic eggs, organic meat, and organic poultry are not only healthier to eat, but they taste so much better. Notice that I said organic *butter.* I use organic butter, yet my cholesterol levels improved.

While the government insists that any residual hormones and antibiotics in beef, lamb, and poultry are harmless, research proves otherwise. Any added hormones and antibiotics in our food supply are potentially detrimental to our health. We have already seen bacteria becoming resistant to the latest class of antibiotics. As a breast cancer survivor, I certainly don't need any added hormones in my food. For sound health, neither do my children and grandchildren.

Seafood

The organic seafood industry is in its infancy. What qualifies as organic seafood is still in debate. While the USDA has guidelines for evaluating meat, poultry, dairy products, eggs, fruits, vegetables, and other crops, it has set no standards for organic seafood. Since a large part of our seafood is imported from Asia, this is a serious problem.

The National Marine Fisheries Service lists China as supplying 70 percent of America's tilapia and as the fifth largest supplier of imported shrimp. In monitoring Asian seafood, the Food and Drug Administration discovered that Asian imports were contaminated with carcinogens and excessive antibiotic residues. The presence of chloramphenicol, a powerful antibiotic, in shrimp is a serious concern. Chloramphenicol is used to treat bacterial meningitis and typhoid fever, but it can cause childhood leukemia. Regrettably, only a very small amount of imported seafood is monitored at all, so most of the contaminated seafood ends up on our dinner tables.

After traveling over two thousand miles throughout mainland China and spending five days journeying down the Yangtze River, it is not difficult for me to accept the scope of China's contaminated seafood problem. The waterways of China and Hong Kong are so polluted with industrial chemicals, farm effluents, and human waste that seafood exporters must rely on antibiotic treatment just to keep the fish alive. I saw several bloated and decaying bodies, both human and animal, floating down the Yangtze River after a flood. The Yangtze River empties into the waterways from which much of the exported seafood is fished.

Your safest bet is to shop for seafood that is labeled as a product of the United States. Until the FDA sets guidelines to certify organic seafood, this is your healthiest option.

Pesticides and Fertilizers

When I was a child, my mother's instructions in cleaning vegetables were to discard the outer leaves and wash the rest thoroughly. For vegetables that could be scraped, such as carrots or potatoes, she said to wash them well before scraping them. Fruit should be washed before it was cut, peeled, or eaten. My mother was ahead of her time. Even back then, she worried about the safety of food.

Today, pesticides and fertilizers are more potent than ever. They have to be to battle the ever-adapting bugs. My daughter's friend discovered this while she was working on her doctorate in entomology (insects) at the University of Florida in Gainesville. She spent long hours in the vegetable fields, especially the celery fields, monitoring the success of pesticides that were sprayed on the crops to combat insects. She tried to protect herself from the danger of absorbing pesticides into her skin by wearing gloves and boots. Since vegetables don't wear gloves or boots, the vegetables absorbed dangerous amounts of pesticides.

Grains, also, absorb lethal amounts of pesticides. Indonesia, a leading rice producer, introduced heavy chemical pesticides to kill off insects, like the Brown Planthopper, in order to boost rice yields. Yields increased. However, the overuse of pesticides resulted in the evolution of pesticide-resistant insects that threatened to decimate the rice crop. In addition to the grain's dangerous absorption of the pesticides, the pesticide run off into the surface water contaminated the water that, in turn, increased the harmful effects to human health and damaged fresh water fishing. When the Indonesian government realized the seriousness of the contamination, laws were passed that banned the use of many of the previous pesticides. Farmers were encouraged to turn to the Brown Planthopper's natural predator, the spider, to help manage the insect's infestation.

The health toll of these toxic pesticides and fertilizers on people is alarming. In Washington state, where I once lived, farmers had a high rate of cancer that researchers believed could be traced to the lethal pesticides and fertilizers sprayed on the crops. The June 2006 issue of *Movement Disorder* reported a study conducted by the Mayo Clinic that revealed pesticide exposure increased the incidence of Parkinson's disease in men.

Environmental Health Perspectives reported that American toddlers eating mostly organic foods have only one-sixth the pesticide residues in their urine of children eating non-organic foods. Preschool children in Seattle, Washington, were monitored to assess their exposure to pesticides in the diet. The children who ate conventionally grown, or non-organic, foods had six times the level of pesticides in their urine than children who ate organic foods. The eating of organic food lowered the children's exposure to toxic pesticides from above the recognized safety levels to below.

Malignancies in children linked to pesticides include leukemia, non-Hodgkin's lymphoma, and cancers of the brain. The risk of cancer for children is greater than the risk for adults, suggesting that children may be particularly sensitive to the carcinogenic effects of pesticides. Doctors Philip J. Landrigan and Herbert L. Needleman, authors of *Raising Children Toxic Free,* estimate that 80 to 90 percent of childhood cancer is caused by exposure to carcinogens in the environment. Safe levels of pesticides are usually

established for adults, not children. A child's body is smaller, as is the liver, so the body is not as well equipped to handle toxins in the food or in the environment.

The Environmental Protection Agency has concluded that toxic pesticide ingestion by nursing mothers has resulted in breast-fed infants consuming unacceptable levels of poisonous substances that can cause childhood cancers. This is all the more reason for young women of childbearing age to eat organic.

It is never too early to begin cancer prevention for your children. Start with organic foods. The absence of toxic pesticides and fertilizers in organic food, along with the additional antioxidants and immune boosters present in organic food, will enable the child's immune system to help fight childhood cancers.

The USDA lists green peppers, celery, and green beans as highest in pesticide absorption for vegetables. Strawberries, peaches, and grapes rate the highest in pesticide absorption for fruits by the USDA. The Environmental Working Group refers to the twelve most contaminated foods as the "dirty dozen." Eating these foods, if they are non-organically grown, will expose you and your family to an average of more than fifteen pesticides per day.

The "dirty dozen" of conventionally grown foods include:

1. Apples
2. Peaches
3. Bell peppers
4. Pears
5. Celery
6. Potatoes
7. Cherries
8. Raspberries
9. Grapes
10. Strawberries
11. Spinach
12. Nectarines

Add the USDA's green beans and you have the "dirty thirteen."

Studies have shown that:

Ninety percent of non-organic oranges analyzed contained pesticide residues.

Forty percent of all non-organic fruits and vegetables analyzed had detectable levels of pesticides.

Fifty percent of lettuce contained seven or more chemical residues.

Seventy percent of cereal bars contained pesticide residues.

Eighty percent of oily fish like tuna showed pesticide residues.

You cannot wash or cook off pesticide and fertilizer absorption. It's permanent. When you eat non-organic fruits and non-organic vegetables, you ingest the pesticides and fertilizers into your body. There, it travels to your liver, eventually passing into your

blood stream. Remember, if a fruit or vegetable has absorbed high levels of pesticides and fertilizers, then it is high in pesticide and fertilizer absorption whether it is fresh, cooked, frozen, canned, or made into jams, jellies, preserves, or marmalades.

Antioxidants

We hear a lot about antioxidants and how good they are for us, but what are they? Antioxidants are natural compounds in plants, which contain certain vitamins and minerals that protect the body against the effects of free radicals that can damage cells.

Normal chemical reactions can cause oxygen molecules in our bodies to become unstable. These unstable oxygen molecules are dangerous, and they are called the free radicals. These free radicals can cause cells to lose their ability to control basic functions. Free radicals are capable of multiplying to cause diseases like cancer and heart disease. Unfortunately, antioxidants cannot *always* protect cells. Cells cannot escape all free radicals. Antioxidants come to the rescue by interacting with and stabilizing free radicals to minimize some of their damage. When antioxidants neutralize free radicals, they become spent. Our bodies constantly need to replenish our antioxidant resources in order to continue fighting free radicals.

Two parts of the cell need protection from free radicals: the membrane, or outer part, and the interior part of the cell. The outer part of the cell is protected by the antioxidants beta-carotene, lycopene, vitamin E, and selenium. The interior part of the cell is defended by vitamin C.

We will deal with the antioxidants in the outer part of the cell first.

1. Beta-carotene promotes good vision by helping to neutralize free radicals in the lens

of the eye to prevent cataracts. Beta-carotene foods help to lower cholesterol and reduce the risk of heart disease and cancer. The best sources are:

Potatoes
Carrots
Pumpkin
Cantaloupe

2. Lycopene-rich foods are beneficial in warding off heart disease and several types of

cancer, such as lung, breast, and prostate. Lycopene assists in slowing the development of atherosclerosis, a buildup of plaque in the arteries. The best sources are:

Tomatoes
Apricots
Watermelon
Papaya

3. Vitamin E plays a role in immune function and may help in the prevention of blood

clots. The best sources are:

Nuts
Green, leafy vegetables
Cereals

4. Selenium is a trace mineral we need only in small quantities, but without it we could not live. Selenium enables the thyroid to produce thyroid hormones. Selenium helps to lower risk of joint inflammation. In a study of almost one thousand people, those who had low levels of selenium were more likely to have osteoarthritis of the knee. The National Public Health Institute in Finland reports that people with high selenium levels have a 60 percent less risk of lung cancer. The best sources are:

Shrimp
Mushrooms
Lamb

The interior part of the cell is defended against free radicals by vitamin C, the most powerful antioxidant of them all. Vitamin C aids the cell in protecting against cancer, heart disease, and stress. Vitamin C promotes the health of collagen, a major component of cartilage. A diet deficient in vitamin C increases the risk of developing arthritis. The best sources are:

Oranges
Red bell peppers
Broccoli
Strawberries

In reality, single antioxidants don't work well alone. It takes a network of antioxidants, like those in food, working together, to improve your health. This was well illustrated in a recent medical study published in the *Archives of Internal Medicine.* For almost a decade, a group of women participated in a study to see if vitamin supplements provided any heart benefits or lowered the risk of strokes. The women took vitamin C every day, and either vitamin E or vitamin A every other day. The results were that the women received little benefit from taking the supplements.

Taking antioxidants in the form of food produces better results. To maximize the benefits to your body, different antioxidants must work together, illustrating the complexity of antioxidants found in foods. I discovered this when I discontinued my daily multiple vitamin and mineral supplements and began getting most of my nutrients from organic food. My liver healed and my overall cholesterol levels dropped while my good cholesterol rose.

A debate is currently taking place on whether the vitamins and minerals in organic food are better for you than those in conventionally grown food. The debate is spurious. Think of your body as a house. The debate is between living in a house with lead paint and asbestos insulation or living in a house with latex paint and non-toxic insulation. Do we want our bodies to consume *dirty* vitamins and minerals laden with residue hormones, antibiotics, toxic pesticides, and toxic fertilizers from conventionally

grown food, or do we want our bodies to consume *clean* vitamins and minerals from organic food? Which of the two is healthier to the body? The clean vitamins and minerals from organic food are, of course.

Organic food is void of toxic pesticides and fertilizers, but that is not the only factor that makes it more nutritious than non-organic food. The quality of conventionally grown produce has consistently deteriorated through the years because of intensive farming practices. Intensive farming is concerned with productivity. To achieve high productivity, powerful pesticides, fertilizers, and growth-regulators are used. While intensive farming does provide large quantities of relatively cheap food, it is at the cost of the vitamins and minerals in the product. For example, the conventionally grown orange you are eating today has less vitamin C than the conventionally grown orange of fifty years ago.

Organic fruit, on the average, contains 50 percent more nutrients, minerals, and vitamins than produce that has been intensively farmed, as is the case with conventionally grown fruit. The antioxidant levels in organic strawberries, for example, are 60 percent higher than in their conventionally grown counterparts. Organic blackberries have a 50 percent antioxidant advantage over the non-organic blackberries grown with harmful pesticides and herbicides. In a recent European study reported by BBC News, organic tomatoes, organic peaches, and organic apples all have higher antioxidants than their non-organic equivalents. A ten-year study comparing organic tomatoes with non-organic tomatoes found almost double the level of antioxidants in the organic tomatoes. Organically grown vegetables also have higher nutrients. Organic corn has a 60 percent higher antioxidant level than non-organic corn. Rutgers University tested conventionally grown produce against organically grown produce. Organically grown vegetables had much higher amounts of iron, magnesium, potassium, and calcium than the conventionally grown vegetables.

The importance of organic food in children's health is gaining momentum within the scientific community. Consistently, organically grown produce has shown 30 percent or higher levels of vitamins and minerals than conventionally grown produce. Such disparities illustrate the importance for children of a diet rich in organic foods. It is the difference between a nutrient-rich diet and a nutrient-deficient diet.

Another important component of organic eating for children is the absence of additives. Studies are confirming that the use of artificial and "natural" food coloring and other additives can worsen hyperactivity and illness in children. Read the labels. Non-organic "fruit juices" are loaded with food colorings and additives. Benzoates and sulfites may trigger asthma attacks. They also destroy vitamin B1 in the food. Labels for cereals and drinks sometimes list preservatives like TBHQ, BHA, and BHT as "antioxidants," but they are a far cry from true, healthy antioxidants. The term "flavoring" is also misleading. It is not the real product and can cause allergy problems.

More than two thousand hospitals in the United States are now serving organic foods in the meals prepared for patients. Hospitals are recognizing that the way our food is produced affects the health of the people eating it. The negative health impact of current large-scale agribusiness practices is enormous.

How can we make sure we are eating the foods richest in antioxidants? Think color: red, blue, yellow, orange, and purple. Think organic. Studies verify that organic

fruits and vegetables consistently have higher antioxidants because they are not artificially over-produced with chemicals. Here are the top antioxidant-packed foods:

Blueberries
Beans
Cranberries
Blackberries
Raspberries
Strawberries
Oranges
Walnuts
Russet potatoes
Apples
Cherries
Plums
Corn
Tomatoes
Squash
Mixed leafy greens

Make sure they are organic to get the full benefits. A variety of rich antioxidant recipes are in the recipe section of the book.

Jane Goodall has shown pictures of monkeys who, when faced with a choice, will choose organic foods over non-organic foods. Monkeys at the Copenhagen Zoo will choose organic bananas and other organic fruits over non-organic fruits. It seems they are able to detect the dangerous residues in the non-organic food.

Can we learn from the monkeys?