



Quick Facts

Understanding Cancer

- **Cancer linked to arthritis, bowel diseases and diabetes**
- **Chronic inflammation, viruses, bacteria — possible cancer causes**
- **Increased risk from estrogens**

Nutrition is Key to Cancer Prevention & Treatment

- **Five daily servings of fruits, vegetables may cut cancer risk by 50 percent**
- **Nutrient deficiency increases cancer risk**

Watch Out for Quality of Vegetables

- **Limit fruits high in sugar**
- **Cruciferous vegetables like broccoli are best**

Pesticide/Herbicide Risks From Fruits, Vegetables

Fats — Good & Bad

- **Cook with coconut oil**

Meats

- **Avoid beef**
- **Barbecuing risks**

Carbohydrates

- **Should be avoided due to sugar**

Special Anticancer Nutrients

Part 1:

Prevent Cancer Before It's Too Late:

Most of us are terrified by the word “cancer.” Yet most of us have a friend, parent or sibling who is struggling with this horrifying disease. Aside from leukemia and possibly lymphoma, which both frequently occur during youth, most young people rarely concern themselves with fears of cancer.

But little do they know they are at the age when many cancers start to form. Recent studies have shown that cancers, such as that of the prostate and breast, can begin to develop anywhere from 10 to 40 years before they are diagnosed.

How Cancers Form

The process by which normal cells transform into cancer cells is too complex to adequately explain in this newsletter.

Suffice it to say that during their alteration, normal cells, which have a definite mortality, are converted into immortal cells. Normal cells generally divide about 50 times and then die. But cancer cells, unless purposefully killed, will continue to divide forever.

Not only do cancer cells have unlimited growth potential, but they also stop communicating with each other and with the normal cells that surround them.

Typically, cells are always communicating with one another — this keeps the cells in order and prevents their overgrowth. It's sort of like a community, where everyone has a job to do and a special place to reside. But cancer cells are anarchist.

They don't follow any rules. They grow into large masses, called tumors, and undergo a process known as “metastasis”, through which the cancer moves from its original site to grow in another part of the body.

Inflammation Spurs Growth

The origin of cancer has intrigued scientists for more than a century. Today we are a lot closer to an answer. We know of many things that can generate cancers, such as special tumor viruses (oncogenic



viruses), chemicals (carcinogens), parasites, radiation exposure and certain inborn genetic defects. A recent study found that one central event is most closely associated with cancer development — chronic inflammation. In the study, researchers looked at a large number of cancer patients and found that almost 70% had pre-existing chronic inflammatory diseases for 10 to 17 years before they developed cancer.

We know that people with chronic inflammatory diseases like lupus and rheumatoid arthritis, as well as those with inflammatory bowel disease (Crohn's and ulcerative colitis) and certain parasitic diseases, have a substantially higher cancer rate than that of normal people. If we include diabetes (also an inflammatory disease), we see that a great number of people are at risk.

Chronic inflammation can lead to free-radical generation and lipid peroxidation, and that can lead to cancer.

However, several cancers can be prevented by targeting the biochemical mechanism the body uses to produce inflammation: the COX-2 enzyme. High levels of COX-2 are generally present in most cases of breast, prostate and colon cancer.

You may recall that most of the anti-inflammatory medications, such as ibuprofen and the recently outlawed Vioxx, block this same enzyme. Studies have shown that these COX-2-blocking drugs significantly reduce the risk of certain cancers, as well as the growth and spread of cancers that are already present. But many oncologists might not tell you about the variety of much less harmful plant-based nutrients that inhibit COX-2 just as well as medications like Vioxx.

Viruses, Hormones Stimulate Cancer

There is growing evidence that viruses and some bacteria play a central role in causing cancer.

Viruses can spawn cancer by inserting genes that make the cell immortal and by producing chronic inflammation. In many cases, viruses produce cancer only when combined with another cancer "promoter," such as carcinogenic chemicals, radiation or bad nutrients. These viruses can lie dormant for decades and then suddenly produce a cancer when linked

with these promoters, which are called co-carcinogens. And viruses can pass from parents to children, possibly skipping one or more generations. This explains why cancer appears to be hereditary.

A prime example of the link between a cancer virus and a co-carcinogen is the mouse mammary tumor virus. Normally, this virus only causes cancer in the female mouse. If you castrate the female, removing estrogens, the virus no longer causes breast tumors. And if you expose a male mouse to the virus, no tumors are produced — unless you also give it estrogens. Then it will develop breast tumors, just like the female.

This mirrors the pattern of human breast cancer and could also explain why we are seeing an escalation in this particular disease.

Estrogens (primarily estradiol) increase breast cancer risk, and many pesticides and components of plastics contain xenoestrogens, which are estrogen-like chemicals absorbed by the body and then stored in the fat cells of the breast.

But you can effectively inhibit the impact of this toxic substance by consuming the spice turmeric, which contains curcumin, a flavonoid proven to control the spread of xenoestrogens.

Recently, it was discovered that a high percentage of women with breast cancer have human papillomavirus in their breast tissue and tumors. This is the same virus that causes cancer of both the cervix and the head and neck. Estrogens, smoking, alcohol and radiation can increase the cancer-causing ability of this virus. As we'll see, special nutrients can greatly reduce your risk.

There is a growing list of viruses linked to certain cancers, including leukemia, lymphoma, Hodgkin's disease, cancers of the head and neck, breast cancer, certain lung cancers, cervical cancer and mesothelioma.

Experts believe that mesothelioma, a cancer specific to the linings of the heart and abdomen, is directly linked to the virus SV-40, which contaminated millions of doses of the early polio vaccine.

Mesothelioma is thought to be caused through contact with asbestos, which was long assumed to be SV-40's primary carcinogen. But in fact, asbestos acts as a co-carcinogen.

SV-40 is blamed for childhood brain tumors, such as the deadly medulloblastoma and the ependymoma. There is concern that some recent doses of the polio vaccine could still be contaminated.

An Apple a Day...

One of the most concise studies on the ability of fruits and vegetables to prevent cancer used the best 200+ human and 22 animal cases available. The conclusion was that eating five servings of fruits and vegetables daily reduced cancer incidence by fifty percent.

For some cancers, the reduction was seventy-five percent. On the other side of the coin, deficiencies in certain nutrients have been shown to increase cancer risk anywhere from 200 to 1,600 percent.

Countless vegetables and fruits contain many cancer-fighting chemicals, from vitamins and minerals to complex molecules called flavonoids. One way these plant chemicals prevent cancer is by protecting cells throughout the body from free radicals and products of fat oxidation, which are also known as lipid peroxidation products. These harmful substances damage the cells' DNA and membranes, triggering inflammation. Anything that does this can cause cancer.

If fruits and vegetables are so powerful, why do so many studies fail to show significant protection in people who eat a lot of vegetables — even vegetarians?

In fact, a number of such studies found that vegetarians or those eating almost vegan diets did have significantly lower incidences of major cancers in areas such as the breasts, pancreas, ovaries, cervix, lungs, colon, skin, stomach and prostate. The studies exist, but few hear about them.

What you DO hear about are studies reported in the more media-friendly journals — such as the New England Journal of Medicine and JAMA (Journal of the American Medical Association) — which have a bias against nutritional treatment of disease. Here is a list of reasons why these studies fail to show protection:

- Major cancer-causing factors are not accounted for in the study — such as fluoride content of food and water, pesticide and herbicide residues on vegetables and the types of vegetables included in the study.
- The type of fat consumed in the diet is rarely

Anticancer Compounds Found in Fruits and Vegetables

- Allicin
- Antiestrogens and antiprogestins
- Carotenoids (50 in human diet)
- Coenzyme Q10
- Vitamins and minerals
- Ellagic acid
- Flavonoids (5,000 in our diet)
- Glucosinolates
- Glutathione
- Glycolipids and glycoproteins
- Immune-enhancing polysaccharides
- Indole-3 carbinol
- Isothiocyanates
- Phytates
- Protease inhibitors
- Saponins
- Sterolins
- Selenium
- Sulphoraphanes

considered. Fats play a major role in cancer risk.

- Genetic risk of the participants is almost never included. That is, is there a family history of cancer?
- Presence of chronic inflammatory diseases — such as arthritis, inflammatory colon diseases, parasitic infections, chronic viral infections and autoimmune diseases — is often ignored.
- Overall general health of the participants is withheld. This was a major criticism of both the famous study appearing in the New England Journal of Medicine claiming beta-carotene caused increased cancer rates in smokers and the recent study reporting increased mortality resulting from high-dose vitamin E supplements.
- Rarely do any of these studies address the type of supplement, its purity, absorption or utilization by the body. These are all important things to know.

When these factors are ignored, a study is all but worthless since many are major causes of cancer themselves and can interfere with the cancer-preventing effects of a good diet.

Cancer Combatants: Vegetables and Fruits

Types of Vegetables and Fruits

As with most things in life, quality trumps quantity when it comes to choosing fruits and vegetables. While fruits can have important cancer-fighting power, I don't usually suggest you eat a lot of them. That's because most are high in sugar, which increases your risk of cancer, as well as neurodegenerative diseases like Alzheimer's and Parkinson's. The link is that high calorie intake increases free-radical generation.

Certain vegetables contain extremely high levels of cancer-preventing substances, while others have very few.

The cruciferous vegetables — such as broccoli, Brussels sprouts, kale and cauliflower — are loaded. Studies have shown that these vegetables provide superior cancer-preventing power.

A number of other vegetables are big hitters, as well. These include turnip greens, mustard greens, collard greens, cabbage (especially purple cabbage), carrots, green and red peppers, onions, celery, parsley, eggplant, tomatoes, artichoke and cilantro.

Of the fruits, the most important are cranberries, currants, blueberries, blackberries, raspberries, strawberries and apples (especially the McIntosh variety). You'll probably notice that I omitted grapes, which do in fact contain a number of powerful cancer-preventing substances. The reason? Most commercial grapes are grown in California and are high in fluoride, which is used as an insecticide (cryolite) that is sprayed on crops.

Fluoride, a very reactive element, binds to all the components of the grape and is still present even after the fruit is sold in bunches or processed into juice and wine. Organic grapes may or may not contain it, depending on the grower.

Fluoride has been shown to increase cancer growth and bone cancer risk by 600% in young men. Several major studies found that cancer death rates in cities with fluoridated water were 10% higher than those of cities with fluoride-free water.

Cancer Causers: Pesticides and Herbicides

I can remember, when I was a resident in neurosurgery, laughing at my friend's wife because she religiously washed all her vegetables. I thought she was going overboard — a real health nut. Only now do I see just how smart she was.

Crops in this country — on some 900,000 farms and millions of acres of land — are sprayed with 1.2 billion pounds of pesticide a year. Some 70% of livestock are also doused regularly with poisons, and that may play a major role in the proliferation of Creutzfeld-Jacob (Mad Cow) disease.

Many pesticides, such as aldrin, dieldrin, endrin and heptachlor, have been proven harmful to humans and banned by the Environmental Protection Agency. The problem is that a significant amount of our food is grown in other countries — where the use of these chemicals is still legal.

It has been determined that people living in the industrialized world have as many as 75 pesticide and herbicide residues stored in their fat cells. Most of these compounds are fat-soluble and are therefore trapped in the body for an entire lifetime.

A recent study uncovered a strong correlation between pesticide exposure in young men and the early development of aggressive prostate cancer. Those exposed to pesticides lived only half as long as those not exposed.

Another study found that postmenopausal women exposed to PCBs (polychlorinated biphenyls — an organochlorine pesticide) had a higher risk of developing breast cancer — if they inherited a defect in a special detoxification enzyme. And pesticides can also give the human papillomavirus more power to induce breast cancer.

This shows how a number of cancer-causing chemicals and factors can act together to produce cancer. Sometimes they combine, in a process called synergism, to become infinitely more powerful than they would be alone. In our everyday lives, we are exposed to a number of carcinogenic agents — some weak, some strong. Many act synergistically, enabling two weak carcinogens to have a very strong cancer-causing effect.

The EPA watchdog agency does not test for synergistic or additive cancer-causing effects. They only test individual compounds. This puts us all at risk.

But many compounds found in fruits and vegetables can neutralize the cancer-causing effects of pesticides and herbicides. These include:

- Curcumin, found in the spice turmeric
- Epigallocatechin gallate (EGCG), a component of green tea
- Quercetin, a flavonoid found in cranberries, apples, onions and teas
- DHA, a component of omega-3 fats (found in fish oils)
- Glucosinolate, found in Brussels sprouts, kale and broccoli

These food products neutralize the cancerous effects of pesticides and herbicides by stimulating the body's detoxification systems, both in the liver and in all cells.

Another way to avert danger is by removing the pesticide and herbicide residues from your fruits and vegetables. Like my friend's wife, you should carefully cleanse all produce in a vegetable wash. Several brands are available. I use a product called Environne Fruit & Vegetable Wash (www.environne.com). When rinsing your produce, always use fluoride-free water, since the substance will bind to your food.

Some produce (peppers, squash, cucumbers, etc.) is coated with a wax that has been permeated by pesticides and must be scrubbed with a vegetable brush. I would also avoid the skin on apples, as poisons penetrate several millimeters into the peel.

I have never seen a cancer prevention study in which washed vegetables were used, so you can see how most studies are misleading.

Fats: Friend and Foe

Fats have been shown to play a major role in the evolution of cancer. Some fats prevent it, while others promote its development and aid its ability to spread. I call these "good fats" and "bad fats."

Among the bad fats are the omega-6 fats, which include corn, safflower, sunflower, peanut, soybean and canola oils. A number of experiments have

shown that these oils work as an activator for cancer, making it grow and spread like wildfire. They do this through a number of mechanisms, one of which is increasing the COX-2 enzyme. We call these the pro-inflammatory fats.

The good fats include the omega-3 oils and other oils that are converted into EPA and DHA, such as alpha-linolenic acid. The omega-3 oils come from algae, which explains how fish obtain them. This is also why farm-raised fish are devoid of omega-3 oils, which are composed of two nutrients — EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid).

Of the two, DHA has the more powerful anti-cancer effect and it is especially efficient in preventing cancer of the colon, prostate and breasts. Pure DHA is derived from algae, and an adult dose is 500 mg. a day. For children ages 2 to 12, the dose is 100 mg. a day.

DHA inhibits cancer using a number of mechanisms — principally inflammation reduction. Most of the others are beyond the scope of this newsletter. For more information on this and other cancer treatment topics, see my newly released book, *Natural Strategies for Cancer Patients*.

The Carlson Company (www.carlsonlabs.com) sells both high-dose DHA (700 mg.) and one of the purest fish oils, a Norwegian variety that contains 500 mg. of DHA. It has a pleasant lemon taste. All oils should be kept refrigerated.

Flaxseed oil is also one of the good oils. It is composed of alpha-linolenic acid, which the body actually turns into EPA and DHA.

But not all people can efficiently convert the oil — infants, small children and the chronically ill are among those who have problems. And the stuff very easily becomes rancid. The test I mentioned in the last newsletter (**Health Exams That Can Save Your Life, Dec. 2004**), the Essential and Metabolic Fatty Acid Profile, will indicate whether or not you are converting the oil.

The Cancer Prevention Diet

If you listen to the mainstream press, you probably think that the perfect diet should contain lots of soy products, whole grains, vegetable oils, cheese and milk. Nothing could be farther from the truth.

In fact, all of these promote the inception and growth of cancer.

Instead, your diet should mostly contain highly nutrient-dense vegetables, a few fruits, lean meats, low-glycemic carbohydrates and purified water. It is important that your diet contain no cow's milk, cheese, vegetable oils, processed foods, beef or beef products, soy products, sugar or foods containing it, artificial sweeteners, MSG (even in disguised forms) or fluoridated water.

Meats

The risk of getting Mad Cow disease (prion disease) is far too high to take a chance on eating beef. One beef product that puts you at highest risk is gelatin, which often contains neural cow components. It is also high in fluoride and the amino acid glutamate (an excitotoxin and a food additive commonly used to enhance taste). Many vitamins come in gelatin capsules or "softgels." I would not take them.

In addition, cattle have a very high incidence of two virally generated cancers — lymphosarcoma and leukemia. It has been shown that the virus that causes them can be passed to humans and may cause similar cancers. Those who work in the slaughterhouse are at higher risk for these cancers, while children who drink cow's milk are more prone to leukemia. Eating poorly cooked beef (rare or medium rare) can put someone at risk of consuming live cancer viruses.

Hot dogs, bologna and other processed meats can put you at risk for Mad Cow disease and they contain cancer-causing nitrites. A number of studies have shown an association between pregnant women eating nitrites in meats and their children developing brain tumors.

Organically raised turkeys, chicken, pigs and even cattle are much safer. But I am still hesitant about recommending organically raised cattle, since no studies have been done on the incidence of viral cancers in these animals.

It is also important to avoid overcooked or seared meats, as they develop powerful cancer-causing compounds called heterocyclic amines, which are strongly associated with colon and stomach cancer.

Barbecuing on an open grill is especially hazardous because of these chemicals. Some studies have shown that eating fresh vegetables with meats significantly reduces the heterocyclic amine danger, as do curcumin, quercetin, hesperidin and vitamin C.

Carbohydrates

In the past, carbohydrates were called starches, but actually, they also include sugars. Sugar should be avoided at all costs for a number of reasons.

Studies have shown that people who regularly eat sugary desserts have a 190% increased risk of developing cancer. Previously, we saw that intake was also associated with a greater risk of neurodegenerative disease. Excessive sugar consumption increases inflammation and magnifies free-radical damage. In addition, it can lead to reactive hypoglycemia and eventually diabetes.

Cancers love sugar, since it supplies them with most of their energy. Certain complex carbohydrates can mimic sugar because they are rapidly absorbed from the gut and converted to sugar. We call these high-glycemic foods. Examples include bananas, breads (especially white bread), white potatoes, white rice and pasta. Other carbohydrates are slowly absorbed — these are known as low-glycemic foods. Some examples are black beans, sweet potatoes, whole-grain rice and vegetables.

The Skinny on Fats

Since vegetable oils must be avoided, what is left for cooking? The best alternative is coconut oil. It is a very heat-stable oil, which means that it can be reused. And it is extremely healthy — a point I mentioned in the newsletter on heart health (**Heart Saver: Protect Yourself From Heart Attack and Stroke, Oct. 2004**).

Coconut oil contains a special type of oil known as a medium-chain triglyceride (MCT). This substance — which in extra-virgin form contains numerous anticancer flavonoids — is processed by the body the same way it uses glucose, but without the bad effects. I would suggest eating a tablespoon of it each day, as several studies have shown that MCT oils inhibit cancer growth and prevent weight loss associated with cancer.

Extra-virgin olive oil is another interesting cancer fighter. It is what we call a monounsaturated oil, meaning it will not go rancid. You can cook with it, but I would use coconut oil instead. If you do use it, you need to add turmeric to the oil to keep it from being damaged by the heat.

A number of studies have shown that extra-virgin olive oil prevents cancer in both laboratory animals and people. People living on the island of Crete consume great quantities of the stuff, and shockingly, despite being one of the heaviest-smoking populations in Europe, they have one of the lowest lung cancer rates. The oil contains a number of cancer-inhibiting flavonoids, as well as oleic oils.

A recent study found that extra-virgin olive oil not only prevented new cancers but could also be used to fight those that had already developed. Researchers found that the principle fat in olive oil, oleic acid, inhibited a gene (Her-2/neu) known to make some breast cancers extremely aggressive. Oncologists use a drug called Herceptin to do the same thing, but it produces a significant number of complications.

They also found that the oleic acid, when combined with even a small dose of Herceptin, could dramatically suppress this aggressive gene. Extra-virgin olive oil contains more of this oil than almost any other substance.

Another special oil of interest is conjugated linoleic acid (CLA). This unique fat dramatically reduces breast and colon cancer and possibly that of the prostate. Another advantage is that it causes a loss of body fat, making it a great weight-loss tool. About 1,000 mg. a day is optimal.

Special Anticancer Nutrients

If I were to make the perfect drug to fight cancer, I would want three things.

First, I would want it to kill or fix cancer cells without hurting normal cells. That is, it would have to be selective. Second, I would want it to make cancer cells more susceptible to other cancer treatments. And third, I would want it to protect the normal cells from the harmful effects of the other cancer treatments. Presently, there is no drug or combination of drugs that can do these things.

Cancer-Fueling Nutrients

- Sugar
- Omega-6 fats (vegetables oils)
- Calcium (prostate)
- SAMe
- Methionine
- Glutamate and aspartate
- Some vitamins when used alone

Yet God already created the perfect treatment for us. The same plant-based components listed in the sidebar for cancer prevention also accomplish our three goals. In fact, they do a lot more. Let's look at the ways these nutrients combat cancer:

→ Nutrients can suppress enzymes that enable cancer growth and proliferation.

All cancers require special enzymes to help them grow and spread throughout the body. In fact, cancer cells will force production of more of these enzymes on demand. For example, one enzyme (ornithine decarboxylase) multiplies 30 times in benign tumors and 100 times in malignant tumors. Suppressing this enzyme can slow the growth of these tumors. Another (tyrosine kinase) plays a major role in cancer cell invasion.

Plants contain about 5,000 different compounds, known as flavonoids. Some of these flavonoids — such as apigenin (celery), curcumin (tumeric), EGCG (green tea extract), isothiocyanates (broccoli), luteolin (artichokes) and quercetin (onions, apples and teas) — can powerfully restrain enzymes, but only in cancer cells. This means the tumor's growth is slowed and it is therefore less likely to spread. This has been confirmed in a number of studies.

→ Nutrients can cause cancer cells to kill themselves off.

All cells contain special "suicide genes" (p53, p21) that, when activated, can kill them. Normally, this is what happens when a cell is in danger of becoming a cancer cell. But once established, a cancer cell can switch off this gene, thus making itself immortal.

More and more nutrients have been found to wake

up this vital gene, including extracts of both green tea and persimmon, curcumin, apigenin, quercetin, luteolin and resveratrol. DHA, from omega-3 fats, can also activate the cancer cell's suicide genes.

When combined with traditional chemotherapy agents, these flavonoids and DHA can dramatically improve the selective annihilation of cancer cells, with no adverse effects on normal cells. In fact, they protect normal cells, making them stronger and less likely to transform into cancer cells themselves.

→ **Nutrients interfere with cancer cell reproduction.**

Cancer cells divide very rapidly. But many flavonoids and other plant compounds severely interfere with the ability of cancer cells to split, freezing them in the middle of division. This gives the suicide genes time to kill the cells. It also gives the chemotherapy drugs and radiation time to take effect.

→ **Nutrients inhibit inflammation.**

We have seen that inflammation is key to the development of cancer. Recent studies have shown that it also plays a major role in the growth and spread of the disease. Experiments found that when inflammation was triggered near a small cancer, it became very aggressive and spread faster.

In the previously mentioned heart health newsletter, I discussed a way to measure inflammation — the C-reactive protein test (C-RP). This has also proven to be a good measure of cancer survival for patients suffering from multiple myeloma, lymphoma, melanoma and ovarian, pancreatic and colon cancers. High levels indicate a poor prognosis.

Recently, the orthodox medical profession advocated using statin drugs to reduce the C-RP. This is a very hazardous way to do it. Statins are associated with mental decline, severe muscle weakness and even death. A recent study found that simply maintaining a diet high in fruits and vegetables significantly lowered C-RP levels.

Curcumin is a powerful anti-inflammatory comparable to the strongest drugs — minus their side effects — and has turned out to be one of the most powerful cancer inhibitors found thus far. It uses a

number of mechanisms to effectively restore bone marrow cells, build muscle, heal wounds, stimulate detoxification and suppress the COX-2 enzyme.

Proanthocyanadins (from grapes), resveratrol (grape skins), quercetin (onions, apples and teas), hesperidin (oranges), naringenin (grapefruit), aged garlic extract, vitamin E succinate, gamma-tocopherol (type of vitamin E), boswellia and bromelain have all been shown to significantly reduce inflammation and do so safely.

→ **Nutrients block telomerase.**

Every cell's DNA contains a small cap at the end of its twisted strands. This is called a telomere. It's sort of like the plastic cap on a shoestring that keeps it from unraveling. The telomere does the same thing for DNA. With each cell division, a little piece of the telomere is snipped off. Once it is all gone, the DNA falls apart and the cell dies.

Some cells, like sperm cells, contain an enzyme (telomerase) that can continuously replace the snipped off part, making the cells immortal. Most normal cells do not contain this enzyme. But cancer cells generate the substance like crazy. A new study found that some of the most powerful anticancer flavonoids are also powerful inhibitors of this enzyme, making cancer cells susceptible to an early death.

→ **Nutrients interfere with angiogenesis.**

One of the hottest and most productive areas of research in cancer treatment deals with drugs that interfere with angiogenesis. So what is angiogenesis? When a cancer begins to grow rapidly, it will soon outgrow its blood supply. Once that happens, it will die. To prevent this, early in the process, the cancer makes the surrounding normal cells secrete a substance that causes new blood vessels to grow into the budding cancer. Experiments using drugs to stop this have been very successful.

It is now known that a number of natural substances also interfere with angiogenesis, including DHA, curcumin, apigenin and luteolin. The last two flavonoids are found in celery and artichoke. Highly concentrated extracts are needed to accomplish this goal. Most can be purchased from natural-health suppliers.

→ Nutrients can block hormone-dependent cancers.

Some cancers are highly dependent on hormones to grow, spread and survive. Breast and prostate cancer are two of the most prominent. Not all breast cancers are hormone-dependent, but those that are can be better controlled if hormones are blocked.

Estrogen inserts itself into a receptor on the surface of the cell, much like a key fits into a lock. Some estrogens are very powerful, such as estradiol, which is associated with increased rates of breast cancer. Others are weak and have the opposite effect. A number of flavonoids, such as quercetin and hesperidin, have weak estrogenic effects.

While it blocks cancer in a number of ways, quercetin particularly inhibits breast cancer by blocking the estrogen receptor in the breast cells so that the powerful estrogen cannot insert itself into the “lock.”

Quercetin inhibits prostate cancer as well. It may do this in part by dramatically reducing inflammation in the prostate. This is why quercetin is so effective in treating prostatitis.

Resveratrol also inhibits prostate cancer by obstructing the influence of androgens on the DNA in prostate cancer cells. Androgens (such as testosterone) can greatly stimulate the aggressiveness and spread of prostate cancer.

→ Nutrients can stimulate the immune system.

The immune system is critical in fighting cancer. People whose immune systems are purposefully suppressed (transplant patients, for instance) have a significantly higher cancer rate than normal. In fact, it is impossible to cure either infection or cancer in someone with suppressed immunity.

After years of research, scientists have learned that the immune system is a double-edged sword. While it can rid one's system of cancer cells, it can also protect those same harmful cells from the body's retaliatory attack. Certain types of immune cells, called “blocking antibodies,” coat cancer cells so that the immune system cannot recognize them, allowing the cancer to grow unimpeded.

Cancer Prevention Checklist

- Wash all fruit and vegetables
- Avoid fluoride
- Avoid glutamate (MSG)
- Take a C-reactive protein test to gauge inflammation
- Use curcumin to neutralize pesticides

In general, antibodies promote cancer growth, while immune cells (T-cells or cellular immunity) suppress it. The secret is to stimulate only the cancer-fighting immune cells (T-cells) — and we now have a number of natural products that can do this, including:

- **Beta-1,3/1,6-glucan** — This is an extract of yeast cell walls. When highly purified, it can be safely used to stimulate anticancer immune cells. Several studies have confirmed its usefulness against a variety of tumor types. Never use cheap brands. In addition, beta-glucans have been shown to repair damaged bone marrow, lower cholesterol and protect against viruses, bacteria, fungi and cancer.

- **Lactoferrin** — This is a glycoprotein found in milk secretions. It has several useful actions besides stimulating cellular immunity. It also binds iron, increases WBC phagocytosis and inhibits inflammation.

- **Mushroom extracts** — The cells' walls of mushrooms contain a number of immune-stimulating components. The portions known as Maitake-D fraction and MD fraction are the most useful.

- **Inositol phosphate-6 (IP6)** — This product was developed by a cancer researcher at the University of Maryland. It works by stimulating cellular immunity but also by binding iron. Iron is essential to cancer growth. Be careful taking this product, as you do not want to make iron levels too low. Careful monitoring is essential.

→ **Certain nutrients can stimulate the spread and growth of cancer.**

While beneficial in cancer treatment, particular nutrients can actually make things worse. For example, methionine — an amino acid that supplies the body with vital sulfur and is thought to be an effective detoxifier — has also been shown to stimulate the growth and spread of a number of cancers, including breast cancer. This is because methionine plays a major role in DNA synthesis, a process vital to rapidly dividing cancer cells.

Of greatest concern is the recent finding that glutamate is a powerful stimulant of cancer growth and invasion. Follow-up studies have confirmed this. In fact, drugs that block glutamate were proven to significantly slow the growth of cancers and remarkably enhance the effectiveness of cancer chemotherapy agents. Most sensitive were malignant brain tumors, as well as cancer of the breasts, colon and lungs.

All of this becomes very important when you realize that the modern American diet is loaded with glutamate in the form of MSG (monosodium glutamate), hydrolyzed proteins, caseinate, soy products and natural flavoring. Our national obsession with soy is ludicrous when you realize that soybeans have one of the highest glutamate levels in the plant kingdom. Mushrooms, especially portobello mushrooms, also have high levels.

The one way to avoid glutamate food additives is to eat only freshly prepared foods.

Iron is another cancer “fertilizer.” A number of studies have shown that people with elevated iron levels have higher risks of developing cancer. They also have a higher mortality when they do. The explanation is that iron is essential for cell division — and cancer cells are constantly dividing like wildfire.



Dr. Russell Blaylock

About Dr. Blaylock

Dr. Russell Blaylock edits NewsMax.com's The Blaylock Wellness Report. He is a nationally recognized board-certified neurosurgeon, health practitioner, author and lecturer.

He attended the Louisiana State University School of Medicine in New Orleans and completed his internship and neurosurgical residency at the Medical University of South Carolina in Charleston, S.C..

For the past 26 years, he has practiced neurosurgery in addition to having a nutritional practice.

He recently retired from his neurosurgical practice to devote his full attention to nutritional studies and research. Dr. Blaylock has authored three books on nutrition and wellness, including *Excitotoxins: The Taste That Kills*, *Health and Nutrition Secrets That Can Save Your Life*, and his most recent work, *Natural Strategies for The Cancer Patient*. An in-demand guest for radio and television programs, he lectures extensively to both lay and professional medical audiences on a variety of nutrition-related subjects.

Dr. Blaylock is a member of the international board of the World Natural Health Organization. He is the 2004 recipient of the Integrity in Science Award granted by the Weston A. Price Foundation.

Dr. Blaylock serves on the editorial staff of the Journal of the American Nutraceutical Association and is the associate editor of the Journal of American Physicians and Surgeons, official publication of the Association of American Physicians and Surgeons.

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Men begin to accumulate iron sometime after puberty, while women start after menopause. This is one of the reasons our cancer risk goes up with age. Iron stimulates inflammation and free radicals. This explains the correlation between eating red meat and increased cancer risk. In fact, those who eat red meat daily have a 200% increased risk of developing cancer.

One way to gauge iron count is by monitoring your body's levels of ferritin, a protein that stores iron for your body.

Ferritin levels, which are directly proportionate to iron levels, reveal the progress of a person's cancer. High levels mean the cancer is growing and spreading. But countless oncologists fail to order iron studies on their patients and even encourage them to eat red meat to prevent weight loss.

Many of the flavonoids bind iron, preventing it from being absorbed and used by the cancer. Teas, quercetin, hesperidin, curcumin and various other flavonoids from vegetables bind iron.

Sugar is another cancer promoter. Cancer cells require considerable energy but have limited sources of it. I am amazed at how many oncologists and oncology centers tell their patients to eat lots of sweets — pastries, cakes, doughnuts, cheesecake or birthday cake. These doctors are trying to prevent the excessive weight loss common in cancer patients.

Recent studies have shown that cancer patients lose weight because of an excess buildup of an

immune chemical called tumor necrosis factor-alpha (TNF-alpha). Many nutrients lower this factor, thus reducing weight loss and fatigue. These include:

- Vitamin E succinate
- Curcumin
- Quercetin
- Hesperidin
- Grapeseed extract
- Lactoferrin

They also inhibit the growth and spread of cancer. All of these nutrients can be purchased without a prescription.

MCT oil can also boost weight gain in cancer patients without promoting cancer growth. In fact, MCT suppresses it. Extra-virgin coconut oil is a good source of this oil.

Finally, calcium can be a major cancer promoter, especially in the prostate. A recent study found that taking calcium supplements or drinking milk daily increased prostate cancer risk 297% and that it increased the spread of the cancer by an astounding 457%.

On the other hand, it could inhibit colon cancer, especially when combined with vitamin D3. Newer studies have found that taking vitamin D3 alone prevents colon cancer just as well. Every adult should take 1,500 IU of vitamin D3 each day.



The Blaylock Wellness Report is a publication of NewsMax Media, Inc., and NewsMax.com. It is published annually for \$48.00 per year and is offered by e-mail and online through NewsMax.com.

Our editorial offices are located at 560 Village Boulevard, Ste. 270, West Palm Beach, Florida 33409.

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In the next newsletter, I will discuss other important nutritional topics relating to cancer, including:

→ How to get the most out of your vegetables

- How to select the best vitamins and minerals and
- Secrets your oncologist will never share with you

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