



## Key Points

- Conventional cancer treatments have a long history of failure
- Immune system is the best weapon against cancer
- Strategies that help rebuild your immunity
- Natural compounds can make conventional treatments more effective
- Multidrug resistance is an oncologist's nightmare
- Glutamine and glutamate: Forgotten factors in cancer control

### PLUS

- Indoor pesticides linked to cancer in children

### ASK DR. BLAYLOCK

- What kind of water should I drink?
- Should I take nitric oxide?

# Natural Compounds Offer More Benefits for Cancer Treatment

There are as many types of cancer as there are tissues in the body, and several have special characteristics that demand special treatment. What many people don't know is that there is a revolution — actually several revolutions — going on in the field of cancer research.

In fact, the field is growing so fast that it is becoming difficult to keep up with all the new findings.

What's being questioned most is the old idea that cancer is caused primarily by mutations in specific genes called oncogenes. This theory has now been challenged by some of the most brilliant minds in cancer research.

A growing and impressive amount of research is showing that cancer development is not caused by mutated genes, but rather is associated with altered metabolism — that is, how cells produce energy.

This new theory suggests that changes in a cell's metabolism cause dramatic alterations in how cells produce energy, and those alterations create a state where systems that control cell reproduction go haywire. The result is cells that don't know when to stop multiplying.

This process seems to begin not with just any cell, as was previously thought, but rather with stem cells — special cells scattered throughout the body that when they are activated can produce any type of tissue in the body.

Normally, these cells are activated when an injury occurs or some kind of cellular repair is needed. Once they fix what is broken, they go back to being dormant.

In this month's issue of The Blaylock Wellness Report, I will explain how cancer kills the healthy cells it invades, why conventional treatments are so ineffective, and how you can use natural compounds to fight back against this deadly disease.

## Cancer Stem Cells: Drivers of the Disease

Scientists now hypothesize that when a person's metabolism is not working correctly, a great number of free radicals and lipid peroxidation

products are created. These damage surrounding cells, particularly the cells' DNA control systems.

When this occurs to mature cells, special suicide genes are activated to kill the cell before it can become cancerous. But those suicide genes are turned off in stem cells, so when a metabolism malfunction occurs the damaged stem cell begins to produce daughter cells in massive numbers.

Those daughter cells vary in how mature they will become. Some remain very primitive, while others actually become tumors that resemble failed attempts at forming organs. (These are called adenocarcinomas).

This is seen with most prostate cancers, breast cancers, colon cancers, pancreatic cancers, and skin cancers.

It's now believed that cancerous tumors are composed of mostly daughter cells that are, in fact, not very malignant. Some evidence suggests that they're not even true cancers.

We know this because if you transplant the part of the tumor composed of daughter cells into experimental animals, no cancers result.

So why are cancers so deadly, and why do they keep coming back?

The answer seems to be that the malignancy comes from the cancer stem cells, which make up no more than 5 percent to 10 percent of the tumor's total volume.

That means 90 percent to 95 percent of the tumor is composed of cells that are not that malignant, and

much easier to kill. This is why some chemotherapy drugs appear to work dramatically, only to have the cancer return with a vengeance. The drug is only killing the less malignant daughter cells, leaving cancer stem cells to make more at a later time.

## Conventional Treatments: History of Failure

When cancer stem cells enter the bloodstream and lymphatics, they are deposited in other organs and tissues and can produce new deadly tumors. This process is called metastasis.

Cancers vary in how malignant they are — that is, how likely they are to get out of control. Some tumors, including most in situ breast cancers, actually act more like benign tumors rather than true cancers.

The more primitive a cancer is, the more aggressive it is, and more likely to resist treatment.

I remember when most of the more aggressive types of cancer — such as leukemia, bone cancer, and colon cancer — were close to 100 percent incurable. I also remember the beginnings of chemotherapy, which was a dismal failure when it was first introduced.

Likewise, radiation therapy failed in most cases, and was associated with terrifying side effects, including terrible burns of the skin.

Surgery could cure most cancers if the tumors were still well localized and not too aggressive. But once the cancer invaded surrounding tissues or metastasized,

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**Author & Editor** Russell L. Blaylock, M.D.

**Contributing Editor** Matthew Kalash

**Art/Production Director** Phil Aron

For Subscription/Customer Service inquiries, call  
1-800-485-4350 or email [wellnessreport@newsmax.com](mailto:wellnessreport@newsmax.com).

Send email address changes to [wellnessreport@newsmax.com](mailto:wellnessreport@newsmax.com)

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the cure rate fell dramatically, even with multiple chemotherapy agents and radiation.

Unfortunately, even with all the advances we've made in chemotherapy and improved methods of radiation, the cure rate of these aggressive metastatic cancers has changed very little — it's still 5 percent to 10 percent.

When I started practicing in medicine, doctor's talked about five-year cure rates, as if that time frame represented a permanent cure.

But we now know that many cancers recur 10 or even 20 years after the original "cure." This is because cancer stem cells can go dormant for years or decades and then reawaken to create new tumors — often more aggressive than before. Unless cancer stem cells are killed or suppressed, a cancer will return.

One of the dirty secrets in oncology concerns cancers that are caused by the treatments themselves. We call these secondary cancers.

These treatment-caused cancers can be completely different than the original cancer. For example, I've seen patients treated for leukemia develop highly malignant brain tumors, years later, because of the radiation treatments they underwent.

Likewise, some chemotherapy drugs are associated with a secondary cancer rate of more than 30 percent.

The reason this happens is that all chemotherapy drugs and radiation treatments are carcinogenic — meaning that they cause cancer — because they induce intense inflammation in the body.

We now know that inflammation is the primary cause of most cancers.

Worse yet, the vast majority of conventional treatments have no effect on cancer stem cells, which are the driving force behind all cancers.

As a result, cancer stem cells can become dormant and later burst into aggressive activity, producing tumors that invade surrounding tissues and can enter the bloodstream or lymphatic system, spreading the cancer all over the body.

This especially affects the lungs, bones, liver, and the nervous system.

Several natural compounds have been shown to kill cancer stem cells in ways that conventional treatments rarely do. Quercetin, for example, inhibits pancreatic cancer stem cells, especially when it is combined with sulforaphane (which comes from cruciferous vegetables).<sup>1</sup>

## Kidney Cancer Cured by Immune System

Until fairly recently, it was assumed that the immune system could only kill a small number of cancer cells — a tumor about the size of a thumbnail. Then a remarkable case demonstrated that, in fact, the immune system could destroy massive tumors.

It happened when a person received a kidney transplant from a donor who had died of cancer. Unknown to the doctors, the kidney contained cancer cells. Because the recipient was undergoing immune suppression to prevent organ rejection, the cancer in the donated kidney spread all over the man's body.

Not knowing what to do, the doctors withdrew the immune suppressing drugs and expected the patient to die. To their surprise, once the immune system returned to full strength, all of the tumors — hundreds of them — disappeared.

Another study found that when quercetin was combined with EGCG (from white and green teas) the combination powerfully inhibited prostate cancer stem cells.<sup>2</sup>

Resveratrol inhibits breast cancer stem cells.<sup>3</sup> Curcumin inhibits cancer stem cells from breast cancers, colon cancers, liver cancers, and brain tumors.<sup>4,7</sup>

And these natural compounds are safe to take throughout the course of your life, thus continually suppressing any cancer stem cells that are not killed outright.

### Immunity: Best Weapon Against Cancer

The idea of using the immune system to fight cancer actually has a long history. In 1891, Dr. William Coley, a New York bone surgeon, injected streptococcal bacteria into a patient with an inoperable sarcoma (bone cancer), and demonstrated considerable shrinkage of the tumor.<sup>8,9</sup> He repeated this procedure on more than 1,000 patients, and a significant number were cured. The procedure became known as "Coley's toxin."

Despite remarkable results against some very aggressive and advanced cancers, Dr. Coley was either attacked or ignored by members of the medical community.

As the new science of chemotherapy and radiation

treatments rose in popularity, his findings were all but forgotten.

This scenario has been repeated over and over throughout medical history.

In the 1960s, two physicians — Dr. Tilden Everson and Dr. Warren Cole — reviewed hundreds of cases of spontaneous regression of cancer.<sup>10</sup> The most common factor in the cases was something that had stimulated the immune system, most often an infection. And it appeared that certain tumors — kidney cancer, choriocarcinomas, neuroblastomas, and malignant melanomas — were more affected than others.<sup>11</sup>

Studies have shown that those types of cancer are more likely to elicit an immune reaction. (Some tumors have very little immune sensitivity.)<sup>12</sup>

The last decade has seen a resurgence of interest in using the immune system to fight cancer. The most successful approach thus far has been the use of immunotherapy to combat malignant melanomas.<sup>13</sup>

Ironically, most conventional cancer treatments suppress anticancer immunity, particularly the most important part of the anticancer immune system: cellular immunity.

In fact, most chemotherapy agents significantly suppress the entire immune system, which allows cancer growth, invasion, and spread (metastasis).

Surgery and anesthesia also profoundly suppress immunity. And that condition lasts for at least two weeks after a procedure.

In addition, blood transfusions and many other drugs that are commonly given to cancer patients suppress immunity.

But those factors are not the main problem. When a cancer begins to develop, it uses certain chemicals from the tumor's microenvironment to suppress the body's anticancer immune cells.<sup>14</sup>

In fact, the cancer hijacks a mechanism that switches the immune system from an attack mode to one that actually suppresses immunity (called a Th1 to Th2 shift and an M1 to M2 shift). The immune system then actually protects the cancer by rendering cancer cells invisible.

As a result of the combination of immune suppression by traditional treatments (surgery, chemotherapy, and radiation), and the cancer's immune-suppressing effects, a person with cancer is essentially left defenseless.

In most cases, no effort is made by oncologists to correct this critical problem, even though solutions — in the form of natural compounds — now exist. But of course, pharmaceutical companies can't make billions off these simple natural treatments.

## Strategies for Rebuilding Immunity

In my book, "Natural Strategies for Cancer Patients," I discuss a number of natural ways to boost and rebuild cellular immunity, the most powerful type of anticancer immunity. My recommendations include:

- Beta-glucan
- Maitake mushrooms (D-fractions and MD-fractions)
- Lactoferrin
- Inositol phosphate-6 (IP-6)
- Astragalus
- Olive leaf extract
- Panax ginseng

These natural substances all boost anticancer immunity. But since I wrote that book, new research has discovered even more beneficial compounds.

When a cancer develops, it shifts the immune environment around the tumor (called the tumor microenvironment) toward a state of immune suppression, as noted above. But natural substances can counteract that mechanism.

For example, an herbal compound called ashwagandha (*Withania somnifera*) has been shown to switch the immune system back to cancer-killing mode (Th1).<sup>15</sup>

In one study, ashwagandha increased the number of natural killer immune cells (NK cells) infiltrating a highly malignant ovarian cancer.<sup>16</sup>

This plant extract also prevented bone marrow suppression, which is one of the most damaging effects

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of chemotherapy because it promotes tumor growth and spread. It also puts the patient at a very high risk of contracting a fatal infection.<sup>17-19</sup>

Combining ashwagandha with other immune-stimulating plant extracts — such as Maitake mushroom extract — had even greater immune-enhancing benefits.<sup>20</sup>

Ashwagandha also reversed the immune-suppressing effects of chemotherapy.<sup>21</sup>

Astragalus is another plant extract that has demonstrated remarkable properties — not just for stimulating anticancer immunity, but also guarding against inflammation and protecting the heart, liver, and other tissues, as well as having antidiabetic and antiviral properties.<sup>22</sup>

Another way cancers inhibit immunity is by recruiting special immune cells called macrophages from the bone marrow to the microenvironment of the tumor.<sup>23</sup>

Unfortunately, these immune cells can also be switched into an immune-suppressing mode (they are then called tumor-associated macrophages, or TAMs) by the cancer.

These immune-suppressing TAM cells play a major role in allowing the tumor to escape the body's immune system. Like other immune cells, they can exist either in a cancer-killing mode (M1) or a cancer-protecting mode (M2).

What cancer researchers are searching for is a way to convert the macrophages from M2 mode to the cancer-killing M1 mode.<sup>24</sup> Several natural compounds can do just that.

For example, luteolin suppresses the migration of these immunosuppressive cells to the tumors, thus improving the chances of the immune system killing the cancer.<sup>25</sup>

Curcumin has more anticancer properties than I can list here. (It would take a whole newsletter to address them all.) But one of the more important properties is inhibiting the migration of immune-inhibiting TAMs to the tumor, thus improving anticancer immunity.<sup>26</sup>

It has also been shown that curcumin inhibits the immune suppression triggered by tumors, and increases the ability of other specialized immune cells (cytotoxic T-lymphocytes) to kill tumor cells — which is the best of both worlds.<sup>27</sup>

In other studies, curcumin was shown to significantly

enhance immune destruction of cancerous tumors.<sup>28,29</sup>

One of the main problems with using curcumin is that it is poorly absorbed. But once absorbed, it has excellent bioavailability, meaning that it easily enters the tissues and organs of the body, especially the brain.

There are many ways to enhance absorption. For example, mixing curcumin powder with extra virgin olive oil enhances absorption by a factor of eleven.

Special formulations in which curcumin is combined with phospholipids or piperine also enhance absorption.

But the greatest absorption is ensured with the nanosized curcumin. A new product called NanoCurcumin has the highest absorption and bioavailability available, allowing excellent saturation of tumor cells with curcumin.

The manufacturers of that product also make a product called NanoCurcumin Plus, which contains nanoized boswellia, another powerful anticancer compound.

A product called PSK-16 also has impressive benefits.<sup>30</sup> It contains the plant extract *Coriolus versicolor* — which has demonstrated significant anticancer immune enhancement — along with 15 other compounds of a similar structure. Together, they form a powerful anticancer immune stimulant.<sup>31,</sup>

<sup>32</sup> It also contains beta-glucan, the most researched anticancer immune compound.

The most powerful tool for controlling or even curing cancer is the immune system. As noted here, a number of natural compounds enhance the effectiveness of the anticancer immune system.

## Making Conventional Treatments Safer and More Effective

The ultimate cancer treatment would be one that targeted only the cancer cells for destruction while protecting normal cells, tissues, and organs. Unfortunately, traditional cancer treatments like chemotherapy and radiation therapy do neither of those things.

In fact, both of those methods damage cells and organs — especially normal cells that divide rapidly, such as those in the liver, intestines, and bone marrow.

The idea behind chemotherapy is to poison all the cells in the body without killing the patient — while hopefully killing the cancer in the process.

Unfortunately, in far too many cases the patient is killed by the treatment. Chemotherapy is especially dangerous for patients who also have chronic diseases such as cardiovascular disease, pulmonary disease, liver disorders, and diabetes. In almost every case, chemotherapy leaves a patient's body so badly damaged that the side effects can be life-threatening, even years later.

For example, some of the most commonly used chemotherapy agents — such as cisplatin, Herceptin, 5-FU, and doxorubicin — severely damage the heart, kidneys, and brain.

Until recently, oncologists denied that their treatments could cause brain damage, despite the fact that thousands of patients who received the treatments complained of memory loss, confusion, and living in a fog.<sup>33-35</sup>

The doctors assumed that these dangerous drugs didn't enter the brain, but they do.

Heart damage caused by doxorubicin can occur acutely or can be delayed until years later. And the damage is very resistant to treatment by conventional heart drugs.

Fortunately, a number of studies have shown that natural substances can counteract and prevent this damage — not just to the heart, but to other organs, including the brain.

The plant extract boswellia has been shown to protect the liver from damage by doxorubicin.<sup>36</sup>

Damage to the heart is commonly seen in children treated with doxorubicin. That damage can result in severe heart failure later in life.<sup>37</sup>

Statistically, 20 percent of children who are treated for cancer will live more than 35 years after the diagnosis.<sup>38</sup>

In such cases, protection of the heart with natural compounds such as curcumin, quercetin, baicalein, CoQ10, and hesperidin is essential.

Brain tumors often trigger swelling of the surrounding brain tissue (a condition called cerebral edema), which can significantly worsen brain damage. Radiation treatments can also cause brain swelling.

In a recent study of patients with brain tumors, boswellia significantly reduced brain swelling caused by radiation treatments — more than steroids, which are traditionally used.<sup>39</sup>

There is also strong evidence that restricting caloric intake through intermittent fasting, and following a ketogenic diet can significantly improve the effectiveness of radiation and chemotherapy treatments, as well as reducing side effects.<sup>40</sup>

Other natural compounds that can sensitize cancerous tumors to destruction by radiation treatments and chemotherapy include:

- Curcumin
- EGCG (from green and white teas)
- Quercetin
- Piperine
- Silymarin
- Resveratrol<sup>41-45</sup>

In addition, apigenin and luteolin induce increased sensitivity of tumors to radiation treatments while protecting normal tissues and organs.<sup>46,47</sup>

Ellagic acid, found in high levels in raspberries, was found to potently sensitize cancer cells to radiation treatments.<sup>48</sup>

Triphala, vitamin E succinate, and eugenol all act as radio-sensitizing compounds for increasing the effectiveness of radiation treatments.<sup>49</sup>

### Benefits of CoQ10

Cisplatin is another commonly used chemotherapy agent. But its use is fraught with damaging effects on multiple organs and tissues, including the liver, heart, brain, bone marrow, eyes, and cranial nerves (especially the hearing nerves).

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Please note that this advice is generic and not specific to any individual. You should consult with your doctor before undertaking any medical or nutritional course of action.

## MultiDrug Resistance: Oncologists' Nightmare

After undergoing chemotherapy for a time, in most cases a patient's cancer will become resistant to the drug being used. In fact, the tumors will be resistant to all other chemotherapy drugs as well. This is a process called multidrug resistance (MDR), and it makes cancer very difficult to treat with conventional therapies.

The cancer cell does this by increasing production of a compound called P-glycoprotein, which pushes the drug out of the cancer cells. Once MDR is established, the cancer is

practically impervious to all treatments, and it frequently grows much faster than before.

Another reason cancer becomes resistant to treatment is that it shuts off cells' suicide genes, which normally kill cells that are in danger of becoming cancerous. The major suicide gene — called p53 — is suppressed (mutated) in more than half of all cancers, and probably functioning poorly in the rest.

The combination of mutated cell-suicide genes, immune suppression, and MDR allow cancer cells to grow freely, invade

surrounding tissues, and spread to distant parts of the body. This makes the cancer incurable.

Natural compounds such as curcumin, quercetin, immune stimulants, CoQ10, and hesperidin can correct all these problems. Studies have shown that curcumin, ashwagandha, and quercetin, for example, can reverse MDR — and make the cancer cells once again sensitive to chemotherapy.

Many flavonoids have been shown to make the p53 suicide gene start working once again, meaning the cancer cells will commit suicide.

Several natural compounds can protect against damage by cisplatin:

- Beta-glucan
- Boswellia
- Hesperidin
- Baicalein
- Curcumin
- Quercetin
- Coenzyme Q10 (CoQ10)<sup>50-57</sup>

It has been shown that terminal cancer patients who are given CoQ10 live about 40 percent longer than patients treated with traditional methods.<sup>58</sup>

Using CoQ10 along with other antioxidants — such as vitamin E, selenium, and vitamin C — has also been shown to induce partial remission in high-risk breast cancer patients, as well as inhibiting spread of the cancer.<sup>59</sup> And patients' quality of life improved significantly.

A 30-year study of CoQ10 use in cancer patients demonstrated that it stimulated anticancer immunity, prevented infections, and prolonged the survival of even terminal patients.

It is known that cancer patients have much lower CoQ10 levels than healthy people.<sup>60</sup>

Adriamycin, a commonly used chemotherapy agent, interferes with the enzymes needed to manufacture CoQ10 in the heart.

That explains the high incidence of heart failure with the use of such anticancer drugs.<sup>61</sup>

Unfortunately, oncologists often use combinations of highly toxic chemotherapy drugs on advanced cancer patients as a form of "palliation" — that is, to make the patients feel better and maybe live a few months longer.

The cost of such treatments runs into the hundreds of thousands of dollars, and it often causes severe pain and nausea, along with profound weakness.

CoQ10, on the other hand, is not expensive and in some cases can add significant years to a patient's survival, and (as noted) greatly improve his or her sense of well-being.<sup>62</sup>

Combining CoQ10 with the other powerful natural anticancer compounds such as curcumin, quercetin, hesperidin, baicalein, hesperidin, and ashwagandha has the potential to add even more time to a patient's life — and in some cases may provide a real cure.

CoQ10 combined with vitamin B6 (pyridoxal-5-phosphate) significantly improves anticancer immunity, especially by cytotoxic lymphocytes, which are a major cancer-killing type of immune cell.<sup>63</sup>

In a study of 32 cancer patients with tumors that had already spread, researchers found that CoQ10 could cause tumors to shrink significantly.

For a few of the patients, the tumors disappeared completely.<sup>64, 65</sup>

## Don't Forget Importance of Diet

The typical anticancer diet is very low in carbohydrates (no sugar), low in protein, and high in fats. Sugars, high glutamate (and glutamine) intake, and omega-6 oils (most vegetable oils) are big enemies. In combination, they are very powerful promoters of cancer and stimulate cancer growth and invasion in patients having cancer.

Foods should be organically grown and all vegetables should be washed in a vegetable wash. Drinking water should either be distilled or filtered to remove fluoride and other chemicals.

Artificial sweeteners such as aspartame and Splenda should be avoided. Exercise is important, but one should avoid aerobic exercises, as they generate too many free radicals. Prayer is essential.

## Glutamine and Glutamate: Forgotten Factors in Cancer Control

Cancer cells have abnormal metabolism. Mainly, this is because they use a process called aerobic glycolysis for energy. (Normal cells use a different process called the electron transport system.)

Glucose is the main fuel for cancers, and therefore all carbohydrates feed cancers.

But cancer cells have other fuels. It turns out that they can use the amino acid glutamine just as efficiently as they use glucose. In fact, some tumors are voracious glutamine consumers.

Within cancer cells, glutamine is converted into another amino acid called glutamate, which is used for energy production and to stimulate receptors on the cancer cell membrane, triggering increased proliferation of cancer cells and invasion into surrounding tissues.<sup>66</sup>

The list of cancers that have been shown to have glutamate receptors include:

- Colon cancer
- Breast cancer
- Prostate cancer
- Thyroid cancer
- Lymphoma
- Leukemia
- Lung cancer
- Bone cancers
- Pancreatic cancer

- Nasopharyngeal cancer
- Brain cancer<sup>67-72</sup>

Some cancers, such as melanomas and medulloblastomas, have very high numbers of glutamate receptors.

Blocking glutamate receptors has been shown to inhibit the growth and invasion of these tumors and greatly enhance the effectiveness of conventional treatments.<sup>73-75</sup>

Most diets, even those advocated by cancer center dietitians, contain high levels of glutamate, glutamine, and sugar.

Unfortunately, cancer patients are rarely told that they should avoid foods naturally high in glutamate and glutamine, and processed foods containing powerful glutamate additives, such as MSG, whey protein, hydrolyzed protein, soy protein, caseinate, natural flavors, carrageenan, and autolyzed yeast.

Foods naturally high in glutamate include all meats, fish, many cheeses, green peas, all soy products, beans, tomatoes (especially pureed or as a sauce), and many salad dressings, as well as milk and milk products.

While a ketogenic diet has powerful anticancer effects, high glutamate foods should be excluded from that diet.

Inside cells, glutamine is converted into glutamate by the enzyme glutaminase. Research has shown that inhibiting this enzyme slows cancer growth.<sup>76,77</sup>

The highest concentration of glutamine in the body is found in muscles. Terminal cancer patients lose a great deal of muscle and become emaciated (cancer cachexia) because the tumors steal the glutamine from their muscles in massive amounts.<sup>78</sup>

The answer to this problem seems to be blocking the glutaminase enzyme, as that prevents the cells from manufacturing glutamate.

But you also have to eliminate glutamate from the diet.

## Special Ways Plant Extracts Control Cancer

Cancer hijacks most cell-signaling mechanisms, which consist of hundreds of very complicated systems. The cancer then uses these mechanisms to generate massive numbers of new cancer cells, invade surrounding tissues, and eventually spread throughout the body.

Certain signaling systems are targets of beneficial natural anticancer compounds such as:



- Curcumin
- Quercetin Hesperidin
- Resveratrol
- Baicalein
- Berberine
- Apigenin
- Luteolin
- Bacopa
- Ashwagandha

By interfering with special cell-signaling systems, these natural compounds greatly inhibit cancer cells' ability to survive, especially when being attacked by an enhanced immune system.

One very important enzyme (called IDO) converts the amino acid tryptophan into a powerful stimulant of glutamate receptors called quinolinic acid. When suppressed, IDO severely interferes with cancer cells' ability to survive.

Curcumin is just one of the natural compounds that suppress this enzyme.<sup>79</sup> Apigenin, quercetin, resveratrol, EGCG, and baicalein also potently inhibit IDO.<sup>80</sup>

The real advantage that natural anticancer treatments have over traditional cancer treatments is that the former inhibit so many critical cell-signaling mechanisms that are essential to the cancer cell's survival. That makes it much easier to kill cancer cells.

On the other hand, chemotherapy drugs affect only one or two processes in the cancer cell.

Therefore the cancer cell can override their effects, as we see with multidrug resistance. (See "Multidrug Resistance: Oncologists' Nightmare," page 7.)

In addition, natural anticancer compounds have a high margin of safety, enhance the killing ability of traditional treatments, and protect normal tissues and organs from being harmed by those treatments.

The real benefit is that natural treatments can kill cancer stem cells, whereas most chemotherapy treatments cannot.

And as I noted, if cancer stem cells are not killed or at least made dormant, the cancer will return — and do so with a vengeance. Most studies have found that when a cancer returns it is much more aggressive.

It is a tragedy that most practicing oncologists are not using these safe, natural compounds to make their traditional treatments for cancer less damaging to the patient's organs and normal tissues.

An even greater tragedy is that they are not taking advantage of the fact that these same natural compounds also make conventional treatments considerably more effective. There is no excuse for these protective methods not being used. ■

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# Health and Nutrition Updates

## Indoor Pesticides Linked to Children's Cancer

The main problem with federal and state regulatory agencies is that they are virtually controlled by the industries they are supposed to be regulating. In the case of pesticides, herbicides, and fungicides, they also publish research articles defending those products which are questionable at best. Some of it is outright fraud.

Manufacturers then use this tainted research to defend the safety of their products, and many physicians and public health officials are victims of this ruse. Unfortunately, the public in general — and children in particular — are paying the price.

Almost all hotels now treat their beds with indoor insecticides, which causes the air to be filled with harmful chemicals. Most workplaces, schools, and universities also use these pesticides.

There is growing evidence that indoor use of insecticides is linked to an increasing incidence of childhood brain tumors, as well as other tumors. But because of all the phony studies paid for by the pesticide industry, there's a lot of confusion in medical literature on this subject.

One of the most carefully conducted studies found a strong link between exposure of pregnant women to insecticides — in particular flea and tick products — and a significant risk of brain tumors in children (especially very young children). Brain tumors were even more common if the mother also consumed nitrite-containing foods, such as cured meats.

Other studies demonstrated a strong association between these tumors and pest strips, garden insecticides, termite treatments, pesticide shampoos, and flea collars.

One observation, supported by a number of studies, is that the children most at risk have an inborn defect in their ability to detoxify insecticides and other agrichemicals. Interestingly, the cancer-causing effect is occurring at concentrations well below that known to kill insects. That completely refutes the people who claim, "Why worry, you ain't no bug".

These pesticide compounds are also known to cause neurodevelopmental defects that can lead to

irreversible learning and behavioral difficulties. Many commercial pesticide products and insect repellents contain several poisonous compounds that have a synergistic effect.

Several also add a compound to enhance absorption through the skin, which makes them especially dangerous for children.

The insect repellent DEET not only impairs learning in children, it has been shown to enhance the cancer-causing ability of commonly used pesticides. Children with low levels of detoxification enzymes are also at greater risk of neurodevelopmental problems.

The greatest risk is to children exposed at less than 5 years old. The younger they are, the greater the risk. This is because the very young have low levels of the detoxification enzymes they need to protect themselves.

Two of the most widely used pesticides, considered (wrongly) to be safe, are the agents pyrethrin and pyrethroids. Pyrethrin is a plant extract from chrysanthemums. Pyrethroids, which are more commonly used, are synthetic cousins that are more toxic and hang around in the environment longer.

The most common uses for these chemicals include pet sprays and shampoos and as a treatment for bedbugs and lice. Shampoos and powders, especially, present major hazards to children.

Pyrethroids have been linked to childhood brain cancer and appears to be especially dangerous as it easily penetrates the blood-brain barrier. Being fat soluble, they tend to concentrate in the brain and persist for long periods. One of the most aggressive and deadly childhood brain tumors, called a primitive neuroectodermal tumor (PNET) has been linked to pesticide exposure.

DEET enhances the skin penetration of pyrethroids, thus making them even more dangerous.

A number of studies have also linked indoor pesticide use with other cancers, such as leukemias, multiple myeloma and lymphomas, in both children and adults. I advise people against using pesticides indoors.

Fear of bugs is hardly worth ruining the lives of your children. ■



## Ask Dr. Blaylock

### Attention Readers:

Dr. Blaylock welcomes any questions or comments you would like to share.

Each month, he will select a few to be published and answered in the newsletter.

Please remember that he cannot answer every question.

When submitting a question or comment, please include full name, city, and state.

Please e-mail the doctor at: [askblaylock@newsmax.com](mailto:askblaylock@newsmax.com).

### Which Supplements Help Skin Cancer?

**Q:** I have numerous skin cancers on my face, neck, and extremities that keep coming back. What anti-inflammatory supplements and dosages would you recommend?

— Doris A., Newport Beach, Calif.

**A:** Your condition could be secondary to a defect in DNA repair enzymes. But in most cases, we see this with fair-skinned people exposed to the sun.

Increasing your intake of vitamin D3 to at least 2,000 IU a day is necessary to raise blood levels and get the skin protection you need. You should be tested for vitamin D3 blood levels to see if replacement has been adequate.

A product called Wrinkle Cream #9 from Specialty Pharmacy in Jackson, Miss., is a good skin cream to inhibit skin cancer.

Oral curcumin, quercetin, hesperidin, ashwagandha, and bacopa also add protection.

### How Can I Treat Neuralgia?

**Q:** I've had post-herpetic neuralgia for approximately four years. Are there any alternative treatments outside of the standard medical approaches like gabapentin, Cymbalta, and oxycodine?

— John B., Summerville, S.C.

**A:** Several things seem to help this pain. Curcumin combined with quercetin is of great benefit, mainly by reducing inflammation in the main pain spinal complexes and nerves.

Grape seed extract also is of benefit. Luteolin, apigenin and taurine are also of benefit.

Taurine counteracts excitotoxicity, which is at the core of the pain. The dose is two grams taken 30 minutes before a meal, three times a day.

### What Kind of Water Should I Drink?

**Q:** Do we need minerals to be present in our water for it to be healthy? Can we even absorb minerals from water? I trust you to give the final word. What type of water should I drink?

— John W., Fair Oaks Ranch, Texas

**A:** Water is a miracle substance in many ways. I use distilled water, to which I add 100 mg of magnesium malate per gallon. The interaction of magnesium with the water molecules alters the chemistry of the water making it a better hydrator.

Magnesium also reduces inflammation and is essential for hundreds of metabolic reactions.

Doing this will naturally make the water more alkaline and less acidic.

### Is There a Right Way to Take Silymarin?

**Q:** What is the best way to take Silymarin? How much would you recommend daily? Is it better to spread out the dosage during daily use?

— Gregory D., Conway, Ark.

**A:** Silymarin is poorly absorbed as a raw product. Newer methods encapsulates each particle in a phospholipid that greatly enhances absorption — called a phytosome.

The best absorbed is silymarin phytosome, which comes in a dose of 150mg capsule.

The usual dose is one capsule twice a day with meals.

### Which Supplements Help After Stroke?

**Q:** My elderly mother suffered a stroke recently. What are the some natural products that can help her recover?

— Michelle D., Gilead, Ohio

**A:** Bacopa has many benefits for the effects of a stroke, such as improving attention, memory retrieval, word recall, and functional activity, and reducing depression.

It also improves cerebral blood flow, which is essential after a stroke. And it counteracts excitotoxicity, which is a major damaging process in strokes.

By increasing a brain growth factor, bacopa stimulates repair in the brain. It has a very high margin of safety at all ages.

Gastrodin also blocks excitotoxicity, prevents microglial activation, improves the outcome of strokes and enhances memory formation and retrieval. It also reduces anxiety and depression.

The usual dose of bacopa is two 500 mg capsules three times a day with meals.

The gastrodin dose is two 300 mg capsules taken three times a day with meals.

### Should I Take Nitric Oxide?

**Q:** Your comments on nitric oxide got my attention. Is it safe to use the SuperBeets product?

— Sarah L., Yuma, Ariz.

**A:** The recent popularity of nitric oxide supplements, such as the beet extract, is based on some limited understanding of the science.

All cells in the body use nitric oxide. But they all use it in very small concentrations, and it has a very short half-life.

The health benefits that have been demonstrated have to do with nitric oxide produced within blood vessels, where it regulates blood flow and can lower blood pressure.

When nitric oxide is elevated — as seen in conditions that cause inflammation with pathological diseases such as strokes, heart attacks, arthritis, cancer, or neurodegenerative brain disorders — it becomes harmful because it makes inflammation worse and it increases production of a very powerful and damaging type of free radical called peroxynitrite.

Keeping nitric oxide levels elevated can worsen a number of diseases and conditions.

Most beneficial flavonoids reduce nitric oxide in the areas of damage.

Some flavonoids, such as hesperidin, blueberries, and ginseng selectively elevate only the nitric oxide in blood vessels. ■

To renew or subscribe to The Blaylock Wellness Report go to:  
**NewsmaxHealth.com/Newsletters** or call **1-800-485-4350**

## About Dr. Blaylock

Dr. Russell Blaylock 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 25 years, he has practiced neurosurgery in addition to having a nutritional practice. He recently retired from his neurosurgical duties to devote his full attention to nutritional studies and research. Dr. Blaylock has authored four books on nutrition and wellness, including “Excitotoxins: The Taste That Kills,” “Health and Nutrition Secrets That Can Save Your Life,” “Natural Strategies for Cancer Patients,” and his most recent work, “Cellular and Molecular Biology of Autism Spectrum Disorders,” edited by Anna Strunecka. 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.

He is the 2004 recipient of the Integrity in Science Award granted by the Weston A. Price Foundation. He serves as an assistant editor-in-chief for the journal “Surgical Neurology International.” He was also a lecturer for the Foundation on Anti-Aging and Regenerative Medicine. At present, he is a reviewer for the journal “Food & Chemical Toxicology” and other journals.

Dr. Blaylock previously served as clinical assistant professor of neurosurgery at the University of Mississippi Medical Center in Jackson, Miss.



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