



The Blaylock Wellness Report

Living a Long, Healthy Life

Edited by Russell L. Blaylock, M.D.

February 2009

Vol. 6, No. 2

Key Points

- Supplements alone are not the answer to health problems
- Antioxidant vitamins and minerals target different parts of cells
- Water-soluble vitamins? Fat-soluble vitamins? Is there a difference?
- Researchers have hidden agendas — find out what they are before you believe their studies
- Cheap vitamins are not the way to go

PLUS

- Avoid those 'green' light bulbs
- Adolescents and mental disorders

ASK DR. BLAYLOCK

- Juvenile diabetes advice; blocked carotid arteries; help for those suffering from tennis elbow

The Power of Supplements: Amazing Truths That Can Keep You Healthy *Part 2 of 2-Part Series*

Thomas Jefferson once said, "Health is worth more than learning," and while I agree with the great statesman, I firmly believe learning goes hand in hand with good health. That's why I have devoted two entire newsletter issues to imparting knowledge about eating for a great life — and for a longer one.

In last month's newsletter, Part 1, I stated that the foundation of a healthy life is a healthy diet. This is the single most important thing one must learn to achieve and maintain good health.

Of course, while it can be summed up in one sentence, it is far more complex to practice; indeed, we are inundated daily with messages that beckon us to follow a lifestyle that leads to bad choices, and in turn, bad health.

Once we realize the bad choices we've made, many people turn to quick fixes. As a result, far too many people depend on nutritional supplements alone.

Even worse, they usually select only one or two of the most recent supplements made popular by the media. And patients are not the only people confused about supplements.

Doctors, even those in research, are often even more misguided and confused than laypeople. Hopefully the information contained here, in Part II of this very important topic, will provide all the tools you need to be better informed.

When God designed man, he provided foods to maintain his body. If we examine the most healthful foods, we see that they contain a balance of proteins, carbohydrates, fats, minerals, vitamins, and special chemicals called flavonoids. Yet when people take supplements, they assume that taking just one or two can supply all of the essential building blocks the body needs.

Medicine by Media

The media, especially popular health magazines, play a major role in popularizing nutritional supplements. To keep their readers tantalized, they usually pick a supplement, something recently in the news, and extol its health-giving virtues. For example, in the past, vitamin C got all the attention. Scientists played a major role in this



phenomenon by asserting that vitamin C offered many health benefits if taken in very large doses.

As a result, people began taking vitamin C in large doses, but they took no additional supplements and rarely changed their diets. Reluctantly, scientists began conducting clinical studies on the effectiveness of vitamin C, to see if it could improve a number of health conditions. Unfortunately, these studies often showed it had little benefit.

Vitamin C had a number of factors working against it — sometimes the results of these studies were negative because the researchers doing the studies designed them to fail in order to protect pharmaceutical-based medicine.

This continues today: More recent studies testing supplements showed either little or no benefit — even harm — if the supplements are taken alone.

While many of the studies, like the vitamin C studies, were designed to fail or were misinterpreted so as to show failure or harm, some were correctly analyzed.

Researchers who have studied human nutrition and the biochemistry and physiology of nutrition demonstrated many decades ago that multiple nutritional factors, such as combinations of flavonoids, vitamins, and minerals is essential for their proper functioning.

For example, many people take supplements of a single type of antioxidant, yet we have known for a long time that antioxidants work together as a network. This means that all of the antioxidants must be taken in proper doses to effectively neutralize harmful free radicals.

This is for two reasons: First, each of the antioxidant vitamins and minerals operates in

a different part of the cell and even in different tissues. For example, vitamin C is water soluble and operates in the watery parts of cells, such as the cytosol, the blood plasma, and extracellular fluid spaces around cells.

Vitamin E, however, operates in the fatty parts of the cells, such as cell membranes and fat tissue. Together, the water-soluble and fat-soluble vitamins protect all parts of the cells and other tissues.

Care for Your Supplements

Make sure the supplements you choose are of good quality.

In general, I depend on companies that make pharmaceutical-grade products, meaning the company has standards of manufacturing equal to major pharmaceutical companies. This is a very difficult license to get. In my experience, the good manufacturing practices (GMP) licenses mean little. I have seen companies with extremely poor manufacturing practices carry this government-approved label.

One of my major criticisms of nutrient supplement distributors is that they are not careful about product deterioration.

All supplements should be kept in the refrigerator. This is because the higher the temperature, the faster the deterioration. Studies have shown that both supplements and pharmaceutical drugs last much longer when refrigerated. This is especially true for certain supplements, such as probiotics, oils, and protein products.

I have seen distributors of nutrients keep them in the trunk of their car during the hot summer months. Heat destroys most vitamins, protein products, oils, and some flavonoids. If you travel with your nutrients, you should keep them in a cooler.

Interactions Matter

We know that the supplements, vitamins and flavonoids interact among themselves, and the results are often advantageous:

- When vitamin C is taken alone, especially in cases of diseases associated with high levels of free radicals (such as diabetes and autoimmune diseases), a great deal of the vitamin C will become oxidized. Oxidized vitamin C then becomes a free radical itself and can damage tissues.

- Vitamin E can create problems as well. However, when vitamins E and C are taken together they function together to protect the body.

- Flavonoids and alpha-lipoic acid also play a major role in keeping the vitamins in a workable

state where they can protect the body.

This may explain studies that showed taking large doses of synthetic beta-carotene increased the risk of lung and prostate cancer in smokers.

Smokers produce enormous amounts of free radicals in all of their tissues, and these free radicals oxidize the beta-carotene. Once oxidized, the beta-carotene becomes a harmful free radical.

Synthetic beta-carotene has also been shown to deplete alpha-carotene and other forms of carotenoids, which normally play a much more

important role in protecting against lung and prostate cancer. In nature there are about 50 forms of carotenoids in our foods, in addition to beta-carotene. Taking other forms of vitamins alone such as synthetics can deplete an assortment of vital nutrients.

Poor Quality Produces Poor Results

All of these factors explain why many of the studies we see reported in the popular media claim vitamins may increase disease rates or even increase death rates. Why do researchers use single nutrients and poorly compounded vitamins? There are several reasons:

- **In some cases these studies were funded by pharmaceutical companies or researchers receiving large grants from pharmaceutical companies.** Pharmaceutical companies see nutritional supplementation as a major competitor.

- **Researchers can reduce expenses for these studies if they convince vitamin makers to donate the vitamins to be used in the study.** Remember, most of these studies use tens of thousands or even hundreds of thousands of people — a very expensive proposition if you have to purchase the vitamins. The company donates the vitamins in hopes that the study will show positive results, which would be a great advertising benefit.

Most of these companies, however, make very cheap vitamins.

- **Physicians and many researchers do not seem to understand that vitamins and other supplements differ greatly in quality and bioavailability.** If a vitamin is cheaply made and poorly absorbed, it is doomed to failure before the study begins. Many vitamins come as hard tablets and often these hard tablets will not dissolve in the GI tract, hence they are never absorbed.

To prevent breakage during transit, vitamin manufacturers add binders and fillers to the supplement. If too many are added, the tablet will not dissolve in the gut. I remember a patient who had a colostomy bag into which the intestine emptied directly. When the patient took one of the popular brands of hard tablet vitamins it would end up in the bag in the same condition in which he took it.

For some supplements, the problem is bioavailability. For a supplement to work properly,

it has to be absorbed and it must reach the intended organ or tissue in a form that the tissue or cell can use. This is a very exacting science.

When I examined most of the studies that reported no benefit, or even harm by nutritional supplements, I found they used poorly compounded supplements in forms that were either not bioavailable, that is readily available for absorption and distribution to cells and tissues, or in doses that were too low.

There are precautions to consider when mixing certain nutrients:

- In higher doses, vitamin C can destroy vitamin B-12, so they should be taken at a different time of day.

- The flavonoids in vegetables normally block iron absorption, but vitamin C dramatically increases the absorption of iron, even in the presence of vegetables.

So if you are concerned with reducing your iron load, take vitamin C between meals. If you need more iron, take it with meals.

- The flavonoids in tea, called catechins, powerfully block iron absorption. I have rarely heard doctors tell their iron-deficient patients to avoid tea when taking iron supplements, and it explains why many anemic patients do not respond to iron supplements.

- The iron in meats is highly absorbable but can be blocked by vegetables. This is one reason why a mixed diet of meats and vegetables greatly reduces the risk of cancer over a meat diet alone.

High iron levels greatly increase the risk of cancer and worsen a great number of other ailments, such as diabetes, autoimmune diseases and arthritis.

Even high-normal levels can increase disease risk.

Studies of leukemia patients have shown that those with higher iron levels had more

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recurrences of their disease, were more resistant to chemotherapy, and had a much worse prognosis. High iron levels dramatically increase free radical production and inflammation.

The carotenoids are also a special case. Supplements that consist of only synthetic beta-carotene can deplete other vital nutrients, as we have seen. A number of studies have shown that each of the carotenoids (such as alpha-carotene, lycopene, lutein, canthaxanthin, zeaxanthin, and cryptoxanthin) can have different functions as well as concentrate differently in various tissues.

For example, lutein levels are highest in the retina, the liver, and the lungs. Alpha-carotene levels are highest in the breast and cervix, while lycopene is very high in the liver, lungs, and breast.

Carotenoids play a major role in cancer prevention and control, and each acts in a specific organ or tissue. Some of the carotenoids, including alpha-carotene, beta-carotene, beta-cryptoxanthin and gamma-carotene, are converted in the body into vitamin A. Others can be metabolized into a great number of compounds that have also been shown to inhibit cancer. And because they can be dissolved in lipids as well as water, they play a major role in protecting the brain.

Most people are aware that very high doses of vitamin A over extended periods can cause liver and brain toxicity, especially in the very young.

The unique thing about carotenoids converted to vitamin A is that they will never produce enough vitamin A to be toxic, no matter how high a dose of the carotenoids taken. There is no known toxic dose of beta-carotene, even for infants.

The Importance of Vitamin E

Vitamin E, like the carotenoids, is also made of a number of components. In fact, there are eight forms of vitamin E in nature — four tocopherols (alpha, beta, delta, and gamma) and four tocotrienols (alpha, beta, delta, and gamma).

Most vitamin E sold in stores is alpha-tocopherol. While we know the most about alpha-tocopherol, the gamma form is rapidly coming to the forefront as the form that combats inflammation.

Recent studies have shown that the tocotrienols may be much more protective of the brain than the traditional tocopherols. They may also play a major role in preventing cancer.

While vitamin E is fat soluble, toxicity is rare. However, some studies report immune suppression in doses over 1,000 international units (IU), and some people may experience muscle weakness in high doses. There is also evidence that the tocopherols may damage the tocotrienols if taken together, so take them at least three hours apart.

Vitamin E is often referred to as “nature’s best chain-breaking antioxidant,” which means it is best at protecting cell membranes.

Each molecule of vitamin E can protect 100 molecules of membrane phospholipids. If taken alone by people with high levels of free-radical production, the tocopherol will oxidize to tocopheroxyl, itself a free radical. This can be prevented by taking a mixture of antioxidant vitamins, minerals, and flavonoids.

The form of vitamin E also matters. The most commonly sold form of vitamin E is dl-alpha-tocopherol, a synthetic. Only the natural “d” form (d-alpha-tocopherol) is beneficial.

BLAYLOCK TIP

The Benefits of Good Bacteria

Beneficial probiotic bacteria perform a number of useful functions. They help digest and absorb our foods, and they play a role in generating special nutrients (such as vitamin B-12 and N-butyrate). They also keep our immune system functioning properly, prevent food allergies, help repair the gut lining, and suppress bad bacteria.

When a baby is born, its gut is sterile. However, soon after birth, the baby’s colon is colonized by a variety of good bacteria. These bacteria adhere to the cells of the colon and play a major role in the development of the baby’s immune system. In fact, the gut contains the largest portion of the immune system and produces one of the most important immune proteins, or “globulins,” called IgA.

Specific probiotic bacteria increase the production of this critical immune component. The IgA globulin protects the lining of the entire GI tract from our nose to our anus.

Another function of probiotics is the metabolism of hormones, in particular estrogens. Abnormal metabolism can produce powerful compounds that may cause breast cancer as well as other cancers.

Women with deficient or low numbers of probiotic organisms in their colon are at a higher risk of breast cancer.

When supplementing with probiotics, always choose a refrigerated brand and always remember to keep it refrigerated at home.

Another problem I have with most vitamin E supplements is that the vitamin E is mixed with vegetable oil, usually one of the N-6 oils. These oils promote inflammation, increase cancer growth and spread, and trigger lipid peroxidation. The only brand of pure vitamin E and tocotrienol I know of is Unique-E, which you can get from www.vitacost.com.

Vitamin D is another special nutrient. Vitamin D-3 is the form that protects best. Other forms have shown little benefit. Vitamin D3 has been shown to protect against a number of diseases, including cancer.

People with higher levels of vitamin D-3 have lower incidences of breast, colon, ovarian, and prostate cancer and a significantly lower risk of non-Hodgkin's lymphoma. Non-Hodgkin's lymphoma is the fastest-growing type of cancer in young adults.

With the widespread use of sunscreens and advice to avoid sunlight, vitamin D deficiency is becoming epidemic. Previous RDA recommendations of 400 IU a day are far too low. New recommendations suggest 2,000 IU a day to as high as 5,000 IU. At the higher doses, above 2,000 IU a day, a blood calcium level should be obtained to make sure excessive calcium is not being absorbed, especially if calcium supplements are being taken. This can be done one week after starting the higher doses. This should be repeated at two months.

There is a sly trick vitamin manufacturers use when listing numerous ingredients in supplements. They usually extol the health benefits of the additives, such as acetyl-L-carnitine, but the amounts are so small they are essentially useless.

Sometimes a supplement with many ingredients can be useful if the ingredients have additive or synergistic effects.

Capsules or Tablets?

What about the form of the supplement — capsule versus tablet? In general, I prefer the capsule or a liquid because it enters the system faster and is better absorbed. However, I also worry about taking too many capsules because of the ingredients in the capsules themselves.

Some capsules are made of animal gelatin, which can mean significant levels of fluoride and a risk of prion contamination (mad-cow disease). Newer

capsules are made of vegetable gelatin or fish gelatin, which is safer and dissolves much faster.

I prefer to empty the contents of the capsules in water, especially my magnesium supplements. This can be important when attempting to stop a migraine attack or with an impending stroke or heart attack.

Some supplements outside the capsule have a bitter taste that few can tolerate, however.

It is my sincere hope that all of my readers will find the information in this two-part newsletter useful. Remember — the best way to prevent disease, slow the aging process, and in some cases treat disease is to follow these guidelines:

- Maintain a healthy diet.
- Avoid environmental toxins.
- Exercise regularly.
- Get adequate, restful sleep.
- Use nutrient supplements to make up for deficiencies.

Many nutrient combinations have been shown to be safer and equally — or even more effective — than many pharmaceutical drugs.

Finally, I hope my readers will get a copy of Suzanne Somers' new book "Breakthrough: Eight Steps to Wellness." In this, the newest of her books, she interviews a number of leading nutrition specialists who explain their philosophy on staying healthy. I am interviewed in the book as well.

BLAYLOCK TIP

Not All Fats Are Bad

Think all fats are created equal? Think again.

There are many benefits to omega-3 fats:

- Prevent depression
- Treat bipolar disorder
- Prevent preeclampsia (abrupt hypertension during pregnancy)
- Reduce premature births
- Protect baby's brain
- Modulate anger, anxiety, fear
- Improve immunity
- Counteract autoimmune diseases
- Prevent and treat cancer
- Protect the brain
- Fight cardiovascular disease
- Prevent and treat arrhythmia
- Combat stroke

Health and Nutrition Updates

'Green' Light Bulbs Dangerous And Not So Green

Ironically, the “green revolution” has become a hazard in itself. In their quest to reduce carbon emission (to prevent the mythical “global warming”), the greens have proposed converting all light bulbs to the new small light bulbs called compact fluorescent lights, or CFLs, that use fluorescent mercury.

Unfortunately, this creates a tremendous personal and environmental danger. The mercury content of one bulb can ruin a home, especially if the broken glass is vacuumed.

Since the mercury is converted into a gas inside the vacuum, the vacuum cleaner will disperse the mercury throughout the house and cause significantly high levels of atmospheric mercury.

In Maine, a CFL broke in a child's bedroom and the cleanup cost was over \$2,000. The government regulatory agencies now suggest a special 11-point cleanup program for homeowners who break a CFL bulb.

The steps sound as though they were designed for handling one of the most poisonous substances on Earth, which mercury is. Manufacturers defend themselves by saying one bulb contains only 5 milligrams of mercury, but that is enough to contaminate 6,000 gallons of water. The child's room had mercury levels that were six times higher than the EPA considers safe.

Disposing of the bulbs has also become a major problem, since 300 million CFLs were sold last year. Several states and countries have banned incandescent bulbs, including California, Canada, Australia, and the European Union.

Recycling plants are rare as hen's teeth, meaning that disposal of the bulbs will create massive contamination of trash cans, garbage trucks and disposal sites, as well as groundwater.

Workers in trash collection and disposal plants will also face major contamination and health risks. Burning the trash will release toxic clouds of mercury into the atmosphere, which will require spending billions of dollars to clean up the mercury-contaminated disposal sites. So much for

the greening of America. The media has been used to sell the public on CFL bulbs. For example, Diane Sawyer on ABC's “Good Morning America” made the statement that if every household replaced just one standard bulb with a CFL . . . it would be like removing 2 million cars from the road.

The statement ignored the danger of releasing mercury into the atmosphere, which would dramatically increase if we convert to CFLs.

If that was not enough, the FDA dispensed a press release advising pregnant women to eat fish, even if it is contaminated with mercury, because of the importance of omega-3 oils in the development of the baby's brain.

You would think that there were no other sources of omega-3 oils but fish. Most supplements have been molecularly distilled to not remove only mercury but also PCBs and other dangerous chemicals. The reason the government will not recommend supplements is that it has spent millions in a campaign to convince Americans to avoid supplements of all types.

Mercury from fish accumulates in a baby's brain and can remain for a lifetime.

The omega-3 oils neutralize some of the toxicity, but studies have shown a loss of intellectual function in these children.

Adolescents in Greatest Danger Of Mental Disorders

It is well known that the age of greatest risk for depression, personality disorders, anxiety, and schizophrenia is 14. Why?

The reason is tied to the fact that the brain undergoes its most important development during adolescence — not its most rapid development, but the most important in terms of behavior and the ability to function in society.

The last parts of the brain to develop are the prefrontal lobes, which sit just behind the forehead. This area of the brain is called the “executive” brain, because like an executive, it makes all the major decisions. The prefrontal lobes connect to

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virtually all other areas of the brain, constantly listening, probing and analyzing everything the brain thinks and does.

One of the more important functions of the prefrontal lobes is planning and behavioral control in an area called the orbitofrontal cortex. This is the decision-making area of the brain.

The orbitofrontal cortex analyzes a set of proposed actions and decides if the reward is greater than the potential harm.

Brain scans have shown that risk takers, that is, the “no fear” teenagers who are prone to tempt fate and take dangerous risks, have reduced activity in the orbitofrontal cortex.

As a result, they concentrate only on the reward of an action, failing to appreciate that it could lead to great harm or even death.

Because the adolescent prefrontal brain is underdeveloped, messages from other parts of the brain can become jumbled and misinterpreted, leading to personality disorders, anxiety, and depression. They are also at the greatest risk of becoming addicted to drugs, and the addiction is more likely to recur later in life.

Because this critical part of the brain is underdeveloped, adolescents are also more prone to damage from vaccines, dietary excitotoxins (such as MSG), environmental toxins (such as mercury and lead), and mind-altering drugs.

Many recreational drugs can lead to significant damage to these parts of the brain, resulting in a lifelong inability to cope, and also can lead to the triggering of the development of neurodegenerative diseases later in life.

This delay in prefrontal brain development means youths will be more susceptible to suggestion and propaganda.

Normally the prefrontal lobes mature around age 26, but drugs, vaccination, and exposure to toxins may delay their maturation even further. To learn more about how you can avoid these problems see my DVD “Nutrition & Behavior” at www.russellblaylockmd.com.

When the Immune System Kills the Brain

I believe that many neurodegenerative diseases, such as Alzheimer’s dementia and Parkinson’s disease, are caused by chronic brain inflammation. There is growing evidence that chronically activated microglial (the brain’s immune cells) are at the center of this inflammation.

Millions of research dollars have been spent studying the formation of a special protein crud called beta-amyloid, which until now, has been considered the cause of Alzheimer’s disease. Treatments were designed to decrease this buildup. One proposed way was to create a vaccine that

would target the brain crud itself.

Before the vaccine was tested on Alzheimer’s patients, I was asked by a reporter if I thought it would work. I replied that I thought it would lead to a disaster.

My study of the literature of the disease had indicated that Alzheimer’s was caused by overactivation of the

brain’s immune system (microglial). Any vaccine would further activate the microglial. Months later the test was done and several of the patients experienced a dramatic worsening of their condition and died. An autopsy disclosed that their brains were intensely inflamed.

Since this disaster, newer animal and human studies have shown that chronic inflammation of the brain, especially in those having the APOE-4 gene, will show a gradual accumulation of the same crud seen in human cases of Alzheimer’s disease.

In other words it is the inflammation itself that is causing the beta-amyloid to accumulate and not the other way around.

The microglial-brain inflammation theory had a big boost when Dr. Edward Tobinick and his co-workers at the Institute for Neurological Research injected a drug that blocks the inflammatory cytokine TNF- α (an inflammatory hormone) into the spinal fluid of 12 patients with mild to severe Alzheimer’s disease.

Many diseases, such as Alzheimer’s dementia and Parkinson’s disease, are caused by chronic brain inflammation.

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.

In several of the patients there was a rapid, dramatic improvement in fluency, verbal memory, and other tests of memory. The injections were given once a week in the perispinal space for six months. When microglia are activated they secrete large amounts of TNF- α , which then reacts with one of its receptors to trigger destruction of brain connections and brain cells (neurons).

There are a number of chemicals found in vegetables and fruits that can calm overactive microglial. One such flavonoid, called curcumin, has been shown in animal models of Alzheimer's disease to be very effective.

Curcumin is so effective, in fact, that they are now testing the spice extract in patients.

Calming the microglial also reduces the secretion of the excitotoxins glutamate, aspartate and quinolinic acid. I have coined the name "immunoexcitotoxicity" to describe this process. Keeping one's diet free of excitotoxin additives will also help prevent this devastating disease. Excitotoxin additives include:

- MSG
- Hydrolyzed protein
- Soy protein isolate
- Caseinate

Since people over age 50 who receive the flu vaccine for five years in a row will experience a 1,000 percent increase in risk of developing Alzheimer's disease, people should think twice about getting this largely ineffective, mercury-containing vaccine.

Recent studies, reported in a prestigious medical journal, have shown that the flu vaccine did not prevent pneumonia in the elderly, which is the only reason it has been promoted.

A 35-year multiple-subject study found that there was no decrease in flu-related deaths in those taking the vaccine. The claim of 39,000 deaths a year as the result of the flu is a bold-faced lie, which they secretly admit.

Statins Found to Increase Cancer Risk

A new 41,000-patient study reported in the Journal of the American College of Cardiology found that taking statins to lower LDL-cholesterol

was associated with a significant increase in cancer risk. Researchers were not certain if the increase was due to the dramatic lowering of the LDL-cholesterol or to taking statins.

My studies indicate both may be at fault.

We know that statins significantly impair the immune system and that immune surveillance, a system whereby the body's immune system continuously scans the body for newly appearing nests of cancer cells, is also impaired.

The desire by the elites of medicine to place small children on these dangerous drugs for their entire lives is insane. They have also suggested that even people with normal cholesterol levels be placed on statin drugs. The American Cancer Society and oncologists should be pleased by this, since it will mean more money for them.

In test animals, ginkgo extracts have been shown to reduce the size of brain infarcts (strokes) and significantly reduce the resulting neurological damage.

Ginkgo Biloba — New Discoveries

Ginkgo biloba, an extract from the ginkgo tree, has been shown to have many useful properties including improved blood flow through small arteries, improved brain nutrition, improved anti-inflammatory action, cancer inhibition, and memory enhancement in cases of age-related memory loss.

New studies indicate that it may play a significant role in preventing Alzheimer's disease. In one study it was found that components of the ginkgo plant called ginkgolides, protected the synapse from beta-amyloid damage; that is, the brain crud found in Alzheimer's disease. Synaptic damage is the earliest stage of the disease and can occur years before the dementia manifests itself.

In test animals, ginkgo extracts have also been shown to reduce the size of brain infarcts (strokes) and significantly reduce the resulting neurological damage. The protection was evident even when the supplement was given two hours after the stroke.

Other studies demonstrated that ginkgo reduced the damage to the hippocampus, essential for memory, and reduced cognitive impairments as well. Using experimental models of Parkinson's disease, researchers also found that ginkgo extract is a powerful protector of the neurons that are affected in Parkinson's disease. The protection may be due to inhibiting free-radical damage.

One way ginkgo protects the brain is by mildly inhibiting glutamate receptors. Overstimulation of these receptors causes excitotoxicity, a major mechanism in neurodegenerative disorders, so calming them protects the brain.

While ginkgo extract is most often used for middle-aged to elderly people, one study looked at healthy young people to see if it could improve their thinking and attention. They found that the extract significantly improved their speed of attention, which plays a major role in learning.

Not surprisingly, ginkgo extract was also found to have powerful protective effects on the heart. It was shown to increase the level of a number of antioxidant enzymes and it reduced lipid peroxidation in the heart muscle as well.

These two abilities would be of major importance to someone recovering from a heart attack or suffering congestive heart failure.

The extract was also shown to improve circulation in the coronary arteries of patients with

coronary artery disease. Yet another study found that ginkgo extract improved blood flow through the coronary arteries in healthy elderly adults.

More studies have shown that people with heart failure have a high incidence of mercury accumulation in their heart muscle, which dramatically increases free-radical damage. In one study, it was shown that ginkgo extract reversed the toxic effects of mercury on the heart.

The source of the mercury in heart failure patients includes one or more of the following:

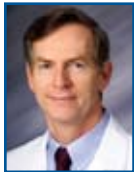
- Dental amalgam
- Vaccines that contain thimerosal
- Contaminated fish
- Living in areas with high levels of mercury in the atmosphere

Finally, for those with an impaired orbitofrontal cortex (risk takers) ginkgo has been shown to be an effective treatment for acute mountain sickness (condition from high altitudes).

About Dr. Blaylock

Dr. Russell Blaylock edits Newsmax.com's **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 duties 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.

Also, Dr. Blaylock has been appointed to serve on the Scientific Advisory Board of the Life Extension Foundation. 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 on the editorial staff of the Journal of American Physicians and Surgeons, official publication of the Association of American Physicians and Surgeons.

He previously served as clinical assistant professor of neurosurgery at the University of Mississippi Medical Center in Jackson, Miss., and is currently a visiting professor of biology at the Belhaven College, also in Jackson.

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Ask Dr. Blaylock

Attention Blaylock 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.

Q: Are there supplements that can help with juvenile diabetes?

— Mary P., Ridgeland, Miss.

A: There are a couple of things that all parents need to understand about Type 1 diabetes, which is also referred to as juvenile diabetes.

The disorder represents an interaction between specific genes and environmental influences, meaning people may have the genes for a particular disorder but they will not develop the disease unless they are exposed to a particular environmental toxin.

The exposure also has to occur at a particular time during development. We know, for example, that animals with a gene for developing juvenile diabetes will only develop the disorder if they are exposed to MSG early in life.

MSG and other excitotoxins are regularly added to a number of foods, even foods fed to small children. This may be enough to trigger the disorder.

With juvenile diabetes, the insulin-producing cells in the pancreas are destroyed or severely damaged, so that there is a deficiency or a very low level of insulin. Fortunately, there are a number of natural products that can improve insulin function. These include bitter melon, curcumin, quercetin, hesperidin, resveratrol, and alpha-lipoic acid. These nutrients can increase the effectiveness of insulin, thus making the low levels more efficient.

Juvenile diabetes is devastating due to the high levels of glucose in the blood and tissues that it produces. Because of its high level of reactivity, glucose chemically reacts with a number of proteins, enzymes and lipids in cells and tissues producing destructive chemicals called advanced glycation products or AGEs.

These not only interfere with various protein

functions and enzymes but also generate an enormous number of free radicals and lipid peroxidation products. These reactions cause the complications associated with juvenile diabetes.

A number of natural supplements reduce the AGEs and neutralize the free radicals and lipid peroxidation products.

Nutrients that reduce AGEs include curcumin, quercetin, resveratrol and carnosine (not to be confused with L-carnitine).

Alpha-lipoic acid, curcumin, quercetin, hesperidin, carnosine, vitamin E, vitamin C, magnesium, and vitamin D-3 and the carotenoids also neutralize the free radicals and lipid peroxidation products.

The diet of a person with juvenile diabetes should be high in fresh vegetables (this contains vegetable fiber), a few fruits, no sugar (especially fructose) and must be low in high glycemic foods, such as white rice and potatoes.

All artificial sweeteners should be avoided. The product Just-Like-Sugar (a composition of natural ingredients including chicory root) can be used to sweeten foods and drinks. Purified water should be the drink of choice.

Probiotics are also important to keep the immune systems of diabetics strong and to prevent yeast and bacterial overgrowth in the colon. Vitamin D-3 at a daily dose of 2,000 IU is also essential. Oat beta-glucan will help stabilize the blood sugar and improve immune function. Regular exercise and adequate sleep are also essential.

Q: Is surgery the only way to open a blocked carotid artery?

— Shirley C., Sarasota, Fla.

A: If the artery is completely blocked, then the answer is yes. In most cases the blockage is from

50 percent to 70 percent, and in that case there are non-surgical treatments that can be applied to reduce the risk of a stroke.

An increase of magnesium is of the utmost importance. Low magnesium in the diet is one of the most common links to strokes, and recent estimates suggest that 75 percent of the American public is deficient in magnesium.

Raising magnesium levels in the blood and tissues does several things, including improving blood flow through the artery, preventing the formation of blood clots (the most common cause of strokes), reducing free radicals and lipid peroxidation in the lining of the artery, and reducing excitotoxicity, which can cause the free radicals to form in the arteries.

Several studies have shown that aged garlic extract can reverse atherosclerosis and thus open the artery. Avoid sugar (especially fructose and high-fructose corn syrup), high glycemic foods, and omega-6 oils.

Recent studies indicate a high intake of omega-6 oils (corn, safflower, sunflower, peanut, soybean, and canola oils) plays a major role in atherosclerosis, which is the cause of the blockage. Americans consume 50 times more of these inflammatory oils than they should.

A higher intake of omega-3 oils, especially DHA, reduces the stroke risk and protects the brain at the same time. Since free radical formation and lipid peroxidation are the major causes of the damage to the artery, all antioxidants reduce the risk, especially if used in combination as discussed in this newsletter.

Many flavonoids, such as curcumin, quercetin, pomegranate extract, hesperidin, and resveratrol

also reduce the risk. Then, add to the list a high intake of buffered vitamin C, natural vitamin E (I suggest the Unique-E brand), and alpha-lipoic acid. Ginkgo biloba protects the brain against stroke damage and improves blood flow through arteries.

Because MSG and other food additive excitotoxins (for a more complete list, see past newsletter issues) can increase artery inflammation and free radical formation for prolonged periods, be diligent — avoid them. Even with surgery, one should use these supplements afterward, since recurrence of the blockage is very common with surgery alone.

Q: Is there a way to relieve the inflammation caused by tennis elbow?

— Katherine M., San Mateo, Calif.

A: These suggestions will help: Get plenty of rest for your elbow, use a binder, and apply warm compresses. There are anti-inflammatory supplements that can help speed healing and strengthen ligaments, too.

At the top of the list is curcumin, which not only powerfully reduces inflammation, but also strengthens tissues. Mixing it with extra-virgin olive oil improves absorption. I suggest adding 500 milligrams to 1 tablespoon of the oil and mixing well. Take three times a day.

Quercetin, Picnogenol, hesperidin, and resveratrol also reduce inflammation and strengthen tissues, as well as drinking 3 cups of strong white tea. Arthritis Triple Stack, a product containing curcumin, MSM, and glucosamine, works well. You can get it at www.specialtyrx.com. Be sure to take it with meals.