The Blaylock Wellness Report
Living a Long, Healthy Life
Edited by Russell L. Blaylock, M.D.
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Key Points

- Biased doctors rely on profitable pharmaceutical drugs without considering natural alternatives
- Magnesium deficiency is linked to a wide range of diseases
- Depletion of magnesium increases with age
- Magnesium can help relieve diabetes symptoms

PLUS

- Yeast infections — hard to diagnose
- Geoengineering — what it is and how it affects you

ASK DR. BLAYLOCK

- Cranberry extract is better than cranberry juice for urinary tract infections
- Hawthorn can treat mild to moderate hypertension
- The benefits of vitamin K

Magnesium: The Forgotten Miracle Nutrient

Far too often, a remarkable natural substance is overlooked for decades by the medical establishment. Because of biased doctors' reliance on pharmaceutical drugs, safer and more beneficial natural treatments — some of which had been used successfully for centuries in the past — are set aside. Eventually, they are forgotten altogether.

Among these overlooked natural substances, one occasionally finds a real jewel — something so universally beneficial it almost defies description. Magnesium is one of those substances.

In this issue of The Blaylock Wellness Report, I will discuss the many benefits of magnesium, including its anti-inflammatory and antioxidant properties, which make it a great remedy against a wide range of ailments.

Critical for *Every* Tissue in the Body

I have been studying magnesium and using it in my neurosurgical practice for almost 30 years. I discovered this incredible element during my medical residency.

At the time, one of the most difficult complications for patients suffering from intracranial bleeding (bleeding within the skull, also called subarachnoid hemorrhage) was intense spasm of the brain's vital blood vessels. This complication often led to death. Yet medicine offered little to treat this deadly condition.

After studying the mechanism by which intracranial bleeding caused vessels to go into spasm, I looked for drugs that were known to relax spastic vessels. None were available.

Further research led me to several studies that demonstrated the ability of magnesium to relax blood vessels. I tested various combinations of magnesium solutions and found that as the concentration of the magnesium increased, the spasm could be stopped by irrigating the area.

I showed my program chairman what I had discovered, but he showed little interest.

Back then, I didn't know that an even better solution was to prevent the spasm in the first place by giving a patient magnesium along with the IV fluids rather than merely irrigating the surface of the brain. A fatal spasm was prevented because the real problem was a deficiency

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Magnesium — As Important As Potassium

I always find it strange that while no doctor would consider starting intravenous fluids on a patient without adding potassium, they steadfastly refuse to add an equally important electrolyte — magnesium.

Most doctors are completely unaware of how common magnesium deficiency is in seriously ill patients, and even in chronically ill patients. Too many doctors treat magnesium as if it were a dangerous substance, when in fact complications are quite rare, even in massive doses.

Certainly, it is far safer than potassium.

of magnesium in the brain and the blood vessels themselves.

Years later, I started giving subarachnoid hemorrhage patients intravenous magnesium in large doses, and I never had a patient die from blood vessel spasms again. Meanwhile, this devastating complication continued to occur with my colleagues' patients.

I have since learned that magnesium is critical for the health of not only blood vessels, but also every tissue and organ in the body. Deficiencies of this essential element are linked to many maladies. These include:

- Heart disease
- Strokes
- Atherosclerosis
- Abnormal kidney function
- Muscle weakness
- Diabetes
- Insulin resistance
- Metabolic syndrome
- Inflammation
- Excitotoxicity
- Neurodegenerative diseases
- Impaired lung function
- Cancer
- Immune system disorders

Magnesium has also been shown to be a major weapon against depression and even suicide.

Doctors Misread Magnesium Levels

Unfortunately, most doctors know very little about magnesium, and they rarely order tests to determine if a patient is magnesium deficient. And even on the rare occasions when they do think to test magnesium levels, they usually test blood levels — which is a poor measure of body content. Why? **Because 99 percent of the magnesium in our bodies is located within the cells. Only 1 percent is in the blood. Doctors who order a blood test and then tell their patients they have normal magnesium levels are not looking in the right place.**

Several studies have shown that a person can be severely depleted of tissue and organ magnesium yet have perfectly normal blood levels.

Key to Stopping Inflammation

After years of study, it is obvious to me that, in many instances, the damage done by a disease process comes not from outside the body, but rather from inside. In fact, the mechanisms activated by the body to protect itself in the short term can — if activated persistently — result in considerable damage to tissues and organs in the long term.

In previous newsletters, I have emphasized that medical science is discovering that chronic, low-level inflammation is a key factor in a great many diseases.

A perfect example of this process is viral diseases. In most cases of persistent viral diseases, such as herpes viruses and human papillomavirus (HPV), it is not the virus itself that destroys tissues and organs. Instead, it is the body's reaction to the viruses.

When viruses invade the body, the immune system is activated. It releases massive amounts of free radicals and lipid peroxidation products in an attempt to kill the virus. If the virus is not killed rapidly, thus allowing the immune system to return to normal, these oxidation products begin to destroy the body's surrounding tissues.

The same process occurs with exposure to any of the following:

- Industrial pollutants
- Toxic metals (mercury, aluminum, cadmium, and lead)
- Pesticides and herbicides
- Excess iron
- High levels of excitotoxins
- Oxidized fats

This is why normal cholesterol is harmless but oxidized cholesterol is so deadly. When cholesterol (or any other fat) is oxidized, it triggers chronic immune activation.

A subsequent release of storms of free radicals and lipid peroxidation products results in atherosclerosis (hardening of the arteries). This doesn't occur overnight; it takes decades — even a lifetime.

The same is true for cancer. **The reason cancer takes so long to develop is that, in most cases, it results from chronic inflammation. Over many years, released free radicals damage the DNA, which results in activating cancer genes and cancer-promoting cell signaling processes.**

Studies have shown that in the vast majority of cancers, a smoldering chronic inflammation existed for as long as 17 years before the cancer developed. For instance, HPV does not cause cervical cancer, as many people think. Rather, it causes chronic cervical inflammation which eventually leads to cancer in a small percentage of women.

This explains why studies show that a number of nutrient supplements can drastically reduce cervical cancer even without curing the virus — because the supplements are all anti-inflammatory substances. We see the same thing with breast cancers and prostate cancers.

So, how does magnesium play into all this? Magnesium has been shown to be a very powerful anti-inflammatory element, as well as an antioxidant.

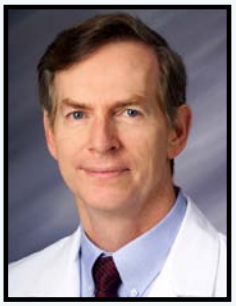
Recent studies have shown that magnesium stops inflammation by inhibiting calcium-triggered inflammation pathways in cells. In one experiment, researchers used a substance known to induce severe inflammation (lipopolysacchride) and found that if animals were given magnesium prior to exposure to the inflammatory chemical, the inflammation was drastically reduced.

Other studies have shown that calcium itself is a major trigger for inflammation, which should cause concern for everyone — especially women — who have been told to take large amounts of calcium supplements and drink milk to avoid osteoporosis.[1] Magnesium counteracts this negative effect of calcium, which means that if you take calcium supplements, you should take magnesium as well.[2] Animal studies have also shown that as magnesium deficiency gets worse, the release of pro-inflammatory chemicals (called cytokines) increases dramatically.[3]

So, **as your body becomes more inflamed with age, your risk increases for developing inflammation-related diseases such as hypertension, heart disease, cancer, neurodegeneration, and strokes.** Unfortunately, magnesium deficiency is very common, especially in those who eat a Western diet high in red meats, fats, and sugars, and low in fresh fruits and vegetables. It is also known that carbonated sodas deplete the body's magnesium. Americans, both young and old, gulp down these dangerous sodas at a frantic pace.

As much as 75 percent of Americans eat diets deficient in magnesium, and two-thirds of these people are significantly deficient.

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 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 four books on nutrition and wellness, including "Excitotoxins: The Taste That Kills," "Health and Nutrition Secrets That Can Save Your Life," "Natural Strategies for The Cancer Patient," 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.

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. He serves on the editorial staffs of the Journal of the American Nutraceutical Association, Surgical Neurology International, and the Journal of American Physicians and Surgeons, official publication of the Association of American Physicians and Surgeons. He is also a lecturer for the Foundation on Anti-Aging and Regenerative Medicine.

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

Magnesium Depletion Worsens With Age

Many medical studies suggest that magnesium deficiency significantly contributes to the aging process itself and to one's vulnerability to aged-related diseases. Animal studies have shown that magnesium-deficient diets increase the animal's risk of oxidative stress. They also show that the animals' tissues are more susceptible to damage by lipid peroxidation, a major process in all human diseases.

As we age, magnesium deficiency increases. There are many reasons for this:

- Poor magnesium absorption by the gut
- Increased urinary loss
- Reduced uptake by bone
- Poor movement of magnesium from bone to replace dietary losses
- Effects of stress on the adrenal gland
- Chronic inflammation

In addition, numerous drugs also deplete magnesium, especially heart and high blood pressure medications, which many elderly people take. Birth control pills deplete magnesium, putting both young women and their babies at risk.

Low Magnesium and Heart Disease

Magnesium plays a major role in protecting all of the blood vessels in the body, especially the heart. A growing number of studies show that magnesium plays an important part in preventing heart failure, heart attacks, abnormal heart rhythms, and heart muscle degeneration.

Studies have shown that low magnesium intake, especially if extended over a long period, can cause significant damage to the heart and can eventually result in complete failure. Convincing evidence suggests this is because low magnesium triggers progressive inflammation of the heart, and even the infiltration of inflammatory white blood cells into the heart muscle.

Low magnesium also causes an elevation in a number of inflammatory, cell-signaling molecules called cytokines, such as interleukin-6 (IL-6) and TNF-alpha. Both of those substances are associated with a poor prognosis in cases of heart attack and congestive heart failure.

Studies have also shown that levels of another inflammatory substance, called substance P, rise in the heart muscle and blood with low magnesium, and that substance P stimulates histamine release, which worsens inflammation. In animal models of magnesium deficiency, as the deficiency worsens the animals develop progressive heart damage (cardiac lesions).[4] This is accompanied by a rise in inflammatory cytokine levels both in the heart and within the endothelium (the lining of blood vessels).

High levels of substance P are common in human heart disease.

Yet another important study demonstrated that substance P came from the spinal cord ganglion (a bundle of nerve cells) supplying nerves to the heart, and glutamate (an excitatory neurotransmitter) caused it to be released.[5] Once substance P entered the heart muscle and blood, it triggered intense inflammation in the heart and caused a depletion of essential glutathione — one of the cell's most important antioxidant systems.

The study also found that after magnesium had been at low levels for two weeks, one inflammatory marker (PGE2) rose 300 percent higher than normal. Either blocking the glutamate receptors or raising magnesium levels quickly lowered the PGE2 to normal levels.

These results confirm that inflammation of the heart muscle plays a major role in congestive heart failure, and that reducing the inflammation dramatically improves heart function. This may explain why hawthorn is so effective in treating heart failure — because it reduces inflammation and excitotoxicity (immunoexcitotoxicity), a condition in which nerve cells are damaged or killed by excessive stimulation by glutamate.

This also tells us that one of the major triggers for inflammation in the heart is excitotoxicity, which is caused by too much glutamate.

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Studies have shown that the entire nerve system of the heart is controlled by glutamate-type receptors, and that when these receptors are over-stimulated they can cause the heart to beat abnormally (a condition called an arrhythmia) or possibly even destroy nerves within the heart.

The heart muscle itself contains numerous glutamate receptors. When they are overstimulated, they can lead to congestive heart failure caused by excitotoxicity.

Processed Foods Contain Excitotoxins

Understanding the effect of excitotoxins on the heart becomes very important when we realize that processed foods are absolutely filled with excitotoxin additives such as:

- Monosodium glutamate (MSG)
- Aspartame sweetener
- Hydrolyzed vegetable protein

I am an avid label reader, and I can tell you that very few processed foods are free of these additives. Americans, and increasingly people in other nations, are consuming massive amounts of these destructive foods — though you can't really call them "food."

Research has shown that when animals are purposely made deficient in magnesium and then frightened (introducing stress), most will die. But if magnesium is added back into their diet, scaring them will not kill them.

The mechanism for death appears to be related to the fact that one of magnesium's principle jobs is to control one of the glutamate receptors (NMDA receptor) in the heart. When magnesium is low, the receptors become oversensitive.

Then, even low levels of glutamate can cause neurons to essentially "short out."

This is what causes the MSG-associated headache, diarrhea, flushing, and rapid heartbeat that comes from eating foods high in MSG (sometimes called "Chinese restaurant syndrome").

It is important to understand that high glutamate levels can cause widespread damage in the body without your knowledge. Many people tell me that they don't have to worry about MSG because they don't experience Chinese restaurant syndrome. They are fooling themselves.

The diets most people consume in this country are an explosive combination: low magnesium levels and high amounts of excitotoxic additives. There are an estimated 5.3 million Americans living with congestive heart failure, and 660,000 new cases are diagnosed each year. These are the people at greatest risk from this deadly combination.

It's a sad fact that, in most cases, heart doctors are neither telling people to avoid food with excitotoxin additives nor suggesting that they take magnesium supplements.

Why Magnesium Is Vital For Your Health

Magnesium is essential to the body for the following reasons:

- Producing energy
- Reducing inflammation
- Regulating blood vessels (endothelial function)
- Preventing blood clots
- As an antioxidant
- Aids proper immune function

A chronic deficiency in magnesium is associated with high blood pressure (hypertension), strokes, heart attacks, atherosclerosis, ischemic heart disease, cardiac arrhythmias, abnormal lipid metabolism, excessive platelet aggregation (blood clots), increased death from heart disease, asthma, chronic fatigue, depression, suicide risk, seizures, coma, sudden cardiac death, and a number of other neuropsychiatric disorders. Quite an impressive list.

Many medical studies suggest that magnesium deficiency contributes to the aging process itself and increases vulnerability to aged-related diseases. Animal studies have shown that magnesium-deficient diets increase the risk of oxidative stress and damage by lipid peroxidation, a major process in all human diseases.

Elevated Hormones Make The Heart 'Irritable'

Low magnesium levels also cause a drastic increase in the release of "fight-or-flight" hormones called catecholamines (specifically epinephrine and norepinephrine) into the blood. These hormones cause heart disease by raising blood pressure, which strains an already weakened heart and leads to congestive heart failure.

These hormones also damage the brain and lead to degenerative brain diseases such as Parkinson's.[6]

When catecholamines are elevated, blood pressure rises and the heart becomes irritable,

Statins Rob the Heart of CoQ10

As if our diet isn't bad enough, Americans spend billions of dollars each year on cholesterol-lowering drugs, called statins, that make them even more vulnerable to low magnesium levels and high amounts of excitotoxins. This is because statins deplete the heart of its most important energy molecule, coenzyme Q10 (CoQ10).

When the heart is deficient in energy, it becomes more sensitive to excitotoxicity and inflammatory damage. Based on what we now know about heart failure, tens of thousands of people have probably died because the medical establishment has ignored these important issues.

which can result in an arrhythmia and possibly sudden death. Studies have shown that magnesium significantly reduces the release of excessive norepinephrine.[7]

The first study suggesting a link between magnesium in drinking water and the risk of death from heart attack came from Japan in 1957. A later study from Finland in 2004 confirmed the Japanese data, showing that the higher the magnesium level, the more protective it was.[8]

Yet another recent study found that mineral water with the highest magnesium content lowered high blood pressure if it also contained calcium.[9] However, calcium alone can have numerous harmful effects. **Magnesium also reduces blood clots by slightly increasing the bleeding time but doesn't have a negative effect on normal blood clotting.**[10] The ability of magnesium to improve the function of the endothelia (the cells lining arteries) and to reduce excessive clotting provides major protection against heart attacks and strokes.

Magnesium is essential for normal heart function and plays a role in preventing heart irritability; it is critical for heart muscle energy production and for preventing heart inflammation.

Women Need More Magnesium

One study of healthy post-menopausal women aged 47 to 78 found that when the subjects were placed on a magnesium-poor diet for six months they developed more heart irritability than normal.[11]

However, two of the 29 study participants had a fourfold increase in ectopic beats (a disturbance of normal cardiac rhythm) in their ventricles, which indicates a significant increase in heart irritability.

It also suggests that some people are especially sensitive to magnesium deficiency.

The authors of this study noted that many women regularly eat a diet that is as deficient of magnesium as the women in the study. American women have diets that generally do not meet even older RDA recommendations of 210 mg per day of magnesium.

Now that RDA requirements have been moved up to 320 mg per day for women, even more are classified as severely deficient.

If healthy women are developing abnormal heart irritability on low-magnesium diets, then those with pre-existing heart disease or those who drink alcohol and caffeine are at an even greater risk.

The study also explains why mortality following a heart attack is much higher when magnesium levels are low, and why giving magnesium to heart attack patients reduces mortality.[12, 13]

One of the most common causes of death following a heart attack is heart arrhythmias — abnormal heartbeats such as atrial or ventricular fibrillation, when the heart beats so fast that it appears to quiver.

People who have not had a myocardial infarction and die of sudden, unexpected heart failure have also been found to have lower levels of magnesium in their heart muscle than levels found in a healthy heart.[14, 15]

This study was done over 30 years ago, so one can expect magnesium deficiency to be far greater today

A note from Dr. Blaylock: Advertisements for various supplements may appear in the newsletter or attached to the newsletter. I have nothing to do with these advertisements and do not endorse them. The only supplements I endorse are those that I list in the newsletter. This is not to say that I object to the supplements; it's just that I am not familiar with the supplements being advertised.

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.

BEWARE: Not All Fish Oil Supplements Are Created Equal

A Buyer's Guide to Making Sure You're Getting Maximum Benefits

In the last few years, fish oil has become one of the bestselling supplements in America. Unfortunately, due to its popularity, the market has become flooded with ineffective fish oil products, making it extremely difficult for consumers to make a smart choice. BUYERS BEWARE! Researchers strongly caution against taking the wrong fish oil *as it can actually cause more harm than good*. The good news is, choosing the very best fish oil for your health can be EASY with these expert-recommended tips.

TIP #1: Avoid Synthetic or Altered Fish Oils

For maximum health benefits, it is recommended to choose a supplement made with pure fish oil. How can you tell? One tip is to look on the label for the source of fish since synthetics won't ever list this. Salmon is the most preferred source. Stay away from supplements made from 3 or more types of fish, as this "blend" is synonymous with cheap and unhealthy fish byproducts.

TIP #2: Insist on Molecular Distillation

Molecular Distillation is currently the only known method to eliminate 100% of toxins and contaminants in fish oil without disrupting the precious omega-3 compounds. Because this is an expensive process, most fish oil supplements skip this critical step. So be sure the fish oil supplement you take says "Molecularly Distilled" someplace on the label. If it doesn't, don't even consider taking it!

TIP #3: The Correct Dosage & The Right Balance

Focus on the total Omega-3s, not the total amount of fish oil. Experts recommend a minimum of 800 mg of total omega-3s daily. Also, the ratio of EPA to DHA should match the natural ratio in fish. The best fish oil supplements have 3 mg of EPA to every 1 mg of DHA.

WARNING: Look for a fish oil supplement that only contains a single variety of fish, rather than a blend of several types, and definitely avoid any supplement if the label lists "marine lipids" on it. This term means that the fish oil has been made using a "blend" of leftover fish pieces and byproducts.

TIP #4: Synergistic Ingredients Are Critical

Most fish oil supplements do not contain the synergistic ingredients needed for maximum health benefits, significantly undermining their effectiveness, potency and value. According to *The Stop Aging Now Institute*, a leading authority on heart health, these nutrients work extremely well with fish oil because:

- CoQ10, a natural energy booster, has been shown to dramatically revitalize heart and brain function
- Those with low levels of Vitamin D3 are approximately two times more apt to suffer a heart attack
- Vitamin E has been shown to stop oxidation of LDL cholesterol, a factor in the hardening of arteries

Saving the Lives of Thousands

A ground-breaking new product called Omega-T®, developed by world renowned heart health expert Dr. Andreas Papas, has become one of the fastest growing fish oil brands in America. This pure blend is made using Molecularly Distilled omega-3s from imported Norwegian salmon. Every batch is certified to be 100% free of all contaminants. Omega-T® contains a powerful dose of 840 mg of omega-3s in the perfect 3:1 ratio. Additionally, Omega-T® is fortified with CoQ10, Vitamin D3 and Vitamin E for maximum effectiveness. Lipase has also been added to eliminate any aftertaste.

Beyond the proven purity and effectiveness of this formula, Omega-T® is also extremely affordable. If you were to purchase each ingredient separately, you would pay well over $160 per month, but Omega-T® is priced as low as $16.50 per bottle!

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent disease.

with the public's dependence on junk food and carbonated sodas, which deplete magnesium.

Low Magnesium and Sudden Cardiac Death

Sudden cardiac death is defined as dying within one hour of the onset of symptoms with no previous history of heart problems. Sudden cardiac death accounts for more than 50 percent of all heart attack deaths, with 184,000 to 462,000 fatalities annually.

One of the largest and best studies ever conducted on sudden cardiac death and magnesium used women from the Nurses Health Study, which contained data on 121,000 female nurses aged 30 to 55 years old.[16] Researchers selected 505 women to follow for 26 years to see if there was a relation between magnesium levels and sudden cardiac death. The study looked at magnesium intake from the diet as well as measures of blood magnesium.

What they found was that women with the lowest dietary magnesium intake and the lowest blood magnesium were significantly more likely to die of sudden cardiac death than those with the highest magnesium levels and intake. Dietary intake was not as good a measure as blood magnesium. Women with the highest blood magnesium were 77 percent less likely to die suddenly.

Magnesium has been shown to protect the cardiovascular system in many ways:

- **Improving vascular tone (the contracting tension in blood vessel walls)**
- **Regulating metabolism of lipids (fats)**
- **Playing a vital role in endothelial function reduces inflammation**
- **Lowering blood pressure**
- **Inhibiting blood clots**

It has also been shown to lower levels of C-reactive protein, which is far more important for heart health than lowering cholesterol.

That's a lot of bang for your buck. Drugs companies hate magnesium because it is not patentable and is dirt-cheap.

Magnesium Deficiency And Atherosclerosis

There is some evidence that magnesium deficiency may play a role in atherosclerosis, also called hardening of the arteries. In one study that used experimental animals, magnesium supplementation inhibited the deposit of lipids in the walls of the aorta — that is, it inhibited plaque formation, a major factor in atherosclerosis.[17]

In the bloodstream, about 60 percent of the magnesium comes in the form of a free ion and the rest is bound, mostly to a protein called albumin. This makes a lot of difference when measuring magnesium to see how it relates to disease risk, and also explains why so many studies found no link between blood magnesium levels and various diseases.

To see if there was a relation between ionized magnesium and blood lipids (such as cholesterol), researchers examined 29 men with an average age of 72.5 years, who had impaired insulin sensitivity, a common condition in the elderly. They found that the level of blood-ionized magnesium — but not total blood magnesium — correlated closely with levels of LDL (potentially harmful) cholesterol and total cholesterol.

Magnesium: Where to Find It

Vegetables, especially green, leafy vegetables such as spinach, contain a lot of magnesium. Some nuts (almonds, cashews, and peanuts), seeds (pumpkin), beans (black, white, and navy), and fish (halibut and tuna), also contain generous amounts of magnesium. While unrefined grains (whole wheat flour, oat bran, barley, buckwheat flour) are excellent sources, refined grains, such as white flour, are generally low in magnesium.

Supplemental magnesium comes in various forms. Each differs in terms of cost and how well it is absorbed. Magnesium oxide is the most common form on the market and is very cheap. Most people absorb about 60 percent, but some people only absorb about 20 percent. If you develop diarrhea, you'll know that the supplement is being poorly absorbed.

The best-absorbed forms include magnesium citrate, magnesium citromate, and magnesium ascorbate. Avoid chelated forms, especially magnesium aspartate, since they contain an excitotoxin. The suggested dose is 500 mg twice a day taken with food.

Oral magnesium is safe except in those with impaired kidney function or varying degrees of heart blockages. In these cases, you should seek the recommendation of your physician.

Because magnesium is a powerful anti-inflammatory element, it would be expected to help prevent cholesterol from oxidizing; this may explain why it reduces atherosclerotic plaque in experimental animals.

In my research, I came across a study from 1959 that demonstrated some remarkable findings concerning the interrelationship between calcium and magnesium and atherosclerosis.[18]

Researchers knew from previous studies that feeding animals large doses of magnesium markedly reduced the amounts of lipids deposited in the heart valves of the left side of the heart and in the aorta.[19] The atherogenic diet (one that causes atherosclerosis in animals) also increased the body's demand for magnesium.

This study looked not only at lipid deposits in the wall and valves of the heart, but also calcium deposits in the kidneys, which are common in people with kidney disease associated with atherosclerosis.

They found that feeding the animals a high magnesium diet and moderate-to-high amounts of calcium prevented kidney damage, removed the calcium from the kidneys and heart, and prevented lipid deposits in the heart and its valves.

However, if the calcium intake was very low, the magnesium had no protective effects. What's more, high-calcium intake did not cause problems as long as the magnesium intake was high.

The important observation here is that magnesium protected the heart, kidneys, and blood vessels even when the cholesterol was extremely high (much higher than seen in most people). But one must have an adequate intake of calcium — somewhere around 600 mg a day.

Magnesium and Diabetes

The earliest stage of atherosclerosis is called endothelial dysfunction. You'll recall that the endothelium is the layer of cells that line arteries. These cells act as the brains of the blood vessel, regulating its opening and closing, thus regulating blood flow and — most importantly — preventing fats (lipids) from entering the wall of the blood vessel. In the first stage of atherosclerosis, oxidized lipids enter the vessel wall.

There is a close correlation between endothelial dysfunction and insulin resistance, a condition in which insulin becomes less effective at lowering the body's blood sugar. Insulin resistance is the precursor of Type 2 diabetes.

A recent study examined 657 women ages 43 to 69 from the Nurses Health Study, and found that higher magnesium intake significantly lowered the inflammation marker hsCRP as well as E-selectin, a molecule that indicates endothelial dysfunction.[20]

Higher magnesium intake has also been shown to reverse insulin resistance. This means that taking in more magnesium can possibly stop diabetes before it starts.

Interestingly, researchers found that women with the highest magnesium intake were older, less likely to smoke, were physically active, and had a lower intake of trans-fats. While grains supplied the greatest amount of magnesium in their diet, the greatest effect on blood vessel inflammation came from green, leafy vegetables, and nuts.

Only green, leafy vegetables lowered elevated levels of interleukin-6, which are closely associated with heart failure. Another study also found dramatic improvement in endothelial function with magnesium supplementation in 50 patients with coronary heart disease.[21]

Magnesium is critical for the human body. It is essential for proper function of the heart and cardiovascular system, the muscles and nervous system, and every other tissue and organ in the body. And while the medical elite may overlook the importance of magnesium, you shouldn't. ■

REFERENCES

1. Lin, C.Y., et. al., Br J Anaesth 2010; 104(1): 44-51.
2. Bussiere, F.T., et. al., Eur J Nutr 2002; 41(5): 197-202.
3. Weglicki, W.B. and Phillips, T.M., Am J Physiol 1992; 263(3): 3Pt2): R734-737.
4. Weglicki, W.B., et. al., Mol Cell Biochem 1992; 110(2): 169-173.
5. Tejero-Taldo, M.T., et. al., J Pharmacol Exp Ther 2004;311(1): 8-13.
6. Mazur, A., et. al., Arch Biochem Biophys 2007; 458(1): 48-56.
7. Shimosawa, T., et. al., Hypertension 2004; 44: 897-902.
8. Kousa, A., et. al., J Epidemiol Community Health 2004;58: 136-139.
9. Rylander, R.,et. al., BMC Public Health 2004; 4: 56.
10. Guzin, K., et. al., J Matern Fetal Neonatal Med 2010; 23(5): 399-402.
11. Klevay, L.M. and Milne, D.B., Am J Clin Nutr 2002;75: 550-554.
12. Rasmussen, H.S., et. al., Lancet 1986; 1: 234-236.
13. Abraham, A.S., et. al., Arch Intern Med 1987; 147: 753-755.
14. Chippenfield, B. and Chipenfield, J.R., Am Heart J 1978; 95: 732-737.
15. Johnson, C.J., et. al., Am J Clin Nutr 1979; 32: 967-970.
16. Chiuve, S.E., et. al., Am J Clin Nutr 2011; 93: 253-260.
17. Ouchi, Y., et. al., Arteriosclerosis 1990; 10: 732-737.
18. Vitale, J.J., et. al., Am J Clin Nutr 1959;7: 13-22.
19. Vitale, J.J., et. al., J Exp Med 1957; 106: 757.
20. Song, Y., et. al., Am J Clin Nutr 2007; 85: 1068-1074.
21. Shechter, M., et. al., Circulation 2000; 102: 2353-2358.

Health and Nutrition Updates

Yeast Infections Are a Diagnostic Nightmare

Occasionally, the medical community sheds light on an issue that has been largely ignored but is responsible for a great deal of suffering. For instance, in 1986, when Dr. William Crook came out with his blockbuster book, "The Yeast Connection," few in the medical profession considered yeast infections a serious problem. Except in cases of seriously ill patients with compromised immune systems and in women with vaginal yeast infections, the topic didn't get much attention.

Since then a number of people have written similar books, some quite good and others rather weak. But a tendency to over-generalize shows through in these books. When a new discovery is made, the tendency of laymen is to attribute nearly every malady to that cause.

Physicians think differently. We are taught to examine symptoms and processes on a more particular level. For instance, an inflamed gallbladder causes severe pain in the right upper quadrant of the abdomen, as well as a collection of other clear, well-defined symptoms.

Likewise, appendicitis has its nice, neat little presentation: pain in the abdomen, loss of appetite, swelling, and fever. It makes things nice and orderly for the doctors to have everything in neat diagnostic packages that "go by the book."

On the other hand, diagnosis is sometimes not so simple — sometimes a disease comes along that seems to imitate everything under the sun. This was the case, for example, with syphilis, often called the great masquerader. It can present as dementia, skin lesions, blood vessel disease, heart failure, blindness, or a number of other disorders.

Infections that are slow to appear and can grow anywhere in the body also present major diagnostic problems for doctors. We see this with Lyme disease, which can have a great number of presentations,including arthritis, headaches, weakness, and muscle pains.

Doctors tend to classify these cases as psychological or stress-related, especially if they affect women. Many modern diseases have languished under such catch-all diagnoses for decades before someone finally proved they were real diseases. This happened with chronic fatigue syndrome, autism spectrum disorders, ADD and ADHD, schizophrenia, anorexia nervosa, chronic Lyme disease, and multiple-chemical sensitivity.

Growing evidence suggests that yeast infections are more of a problem than most people think. And because they can invade any tissue or organ, including the brain, these infections can present complaints and symptoms that almost defy diagnosis.

Yeast infections are another of these diagnostic nightmares.

One of the diagnostic difficulties is that when doctors attended medical school, they were taught that yeast infections were not a problem unless a person's immune system was very suppressed. This is probably true in many cases in the past — but today, people are inundated with a growing list of things that suppress immunity, such as pesticides/herbicides, toxic metals, over-vaccination, stress, a Western diet full of immune-suppressing ingredients, and widespread use of statin drugs. Overuse of antibiotics, not only medically but in foods and water supplies, also plays a role.

Growing evidence suggests that yeast infections are more of a problem than most people think. And because they can invade any tissue or organ, including the brain, these infections can present as a constellation of complaints and vague symptoms that almost defy diagnosis — unless you know what you are looking for.

We have also learned that many microorganisms, such as bacteria, viruses, and yeast, can assume essentially invisible forms that make most diagnostic tests ineffective. These so-called "stealth organisms" can hide inside of cells and, when ready, leave the cell and assume a pathologic, or disease causing, form.

A friend of mine, Jane Remington, recently wrote a very useful and fascinating book called "Recaging the Beast — The Disease Behind Disease: The Yeast-Fungal Connection," which explains the

implications of yeast infections and a lot more. I highly recommend the book.

Geoengineering: Is It Destroying Our Brains?

The Internet is littered with stories and video clips of chemtrails, the parallel white lines emitted from airplanes streaking across our skies. I have looked at the pictures over the years and was skeptical about their significance in the beginning. For one thing, I never saw such trails in my home state of Mississippi.

Yet, over the past year I have noticed more and more of these obvious trails that extend from horizon to horizon. Some days they are so thick — and in such an obvious pattern — that one can hardly see the sky.

After watching the video "What in the World Are They Spraying: The Chemtrail Geo-engineering Coverup Revealed," by G. Edward Griffin, I am convinced that something is actually going on. The idea put forward by Griffin is that geoengineering is being conducted to prevent global warming.

How? By reflecting more of the sun's heat into outer space using artificial clouds. If they are using a mixture of barium and nano-sized aluminum to make the cloud mixture, as many are now saying, we are in serious trouble.

Recently, the Council on Foreign Relations posted a series of papers on its website concerning geoengineering. In these papers, a number of environmental scientists, climatologists, and political scientists discussed the urgency for such a project.

While the papers did not admit that such a program was presently active or exactly what compounds were being used, they did suggest that the public needed to be told some very frightening stories of doom to force the program.

Biologists in Hawaii and several other states in the continental United States have recorded rising aluminum levels in soil samples, as well as in lakes and various plants. These aluminum levels are of considerable concern.

If these massive amounts of aluminum are being sprayed into the atmosphere, we will see a dramatic rise in a number of diseases, including pulmonary diseases, asthma, and neurodevelopmental and neurodegenerative diseases.

As I discussed in the November 2010 issue of The Blaylock Wellness Report, aluminum is an extremely toxic element, even in very small concentrations. It is known to poison vital cell functions and is linked to diseases such as Alzheimer's dementia, Parkinson's disease, and amyotrophic lateral sclerosis (ALS). It also promotes bronchiospasm (a sudden contraction in the walls of the lungs), which damages the delicate lining of the lungs. People with asthma and chronic pulmonary diseases are at the greatest risk from environmental aluminum.

Because aluminum has been shown to produce significant brain inflammation, it can disrupt early brain development. This means that children exposed to aluminum during their first five years are at the greatest risk.

Because aluminum has been shown to produce significant brain inflammation, it can disrupt early brain development. Children exposed to aluminum during their first five years will be at a great risk of neurodevelopmental disorders.

Studies have also shown that airborne aluminum travels along the olfactory nerves (in the nose), which lead directly into the parts of the brain most affected in Alzheimer's disease (the fronto-limbic area). This pathway is so efficient in transporting chemicals that pharmaceutical companies are busy working on drugs that can be sprayed into the nose to have direct access to the brain.

It is very possible that the type of aluminum used in geoengineering would be extremely small, nanosized particles measuring one-millionth of a millimeter. Nanosized aluminum is considerably more inflammatory and destructive to the brain than normal aluminum.

Spraying the atmosphere with thousands of tons of nanosized aluminum particles every day for years would mean a massive increase in every neurodegenerative disease — Alzheimer's dementia, Parkinson's, and ALS.

Because plants would concentrate the aluminum in leaves and fruits, our food would become incredibly contaminated. Animals that eat contaminated plants would also be contaminated.

Include the massive amounts of aluminum added to vaccines, and our future will be in real jeopardy. We need to find out if this program is in effect. If it is, we must stop it. ■

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: I've been reading about the health benefits of vitamin K in preventing heart disease and osteoporosis; however, it is in very few foods and the supplements all seem to be made from natto (fermented soy). Is it safe to take a supplement made from natto, or will this cause excitotoxicity?

— Nancy M., Nipomo, Calif.

A: Vitamin K is indeed a vital nutrient and has more functions than just blood clotting. For example, it plays a role in preventing osteoporosis, reduces inflammation, and stimulates the production of mitochondrial energy.

Fortunately, it has no toxic effects even in very high doses — that is, it will not cause excess clotting of the blood. As for it being made from natto, the vitamin K is concentrated and any traces of the glutamate from the soy is far too small to be of any consequence.

Q: I was recently diagnosed with a urinary tract infection. The doctor prescribed Cipro. Can anything be done naturally to treat this?

— Marian R., Billings, Mont.

A: Cranberry juice has been shown to be effective for many people, but not all. Cranberry extract may be better than juice since it doesn't contain bacteria-promoting sugar, and has a higher concentration of beneficial flavonoids.

Other flavonoids may also be beneficial, including ellagic acid and curcumin, both of which have proven antibacterial activity. They also reduce inflammation.

One innovative treatment for urinary tract infection is D-mannose, a special type of sugar. It lines the wall of the bladder and urethra and prevents bacteria from adhering to the tissues — which is essential for infection to occur — and allows bacteria to be flushed out during urination.

D-mannose comes as a powder and the usual dose is two to three scoops a day mixed with water or juices. Vitamin C as ascorbic acid also reduces bacterial infections of the bladder, and magnesium reduces bladder infection in people with chronic interstitial cystitis.

Q: Last year my husband had an abdominal aortic aneurysm. He wants now wants to get off his statin medications. What supplements would you recommend for him and how much?

— Margaret L., Toronto, Ont.

A: Of course, stopping any medication is a personal choice and should be done with the knowledge of your doctor. That said, sometimes medications need to be tapered off.

An aortic aneurysm usually develops due to a combination of atherosclerosis and a weakness of the fibrous and muscular wall of the vessel. Several natural substances are known to strengthen blood vessels and reduce damage caused by atherosclerosis.

For example, proanthocyanidins from grapeseed extract, hesperidin chalcone, lysine, vitamin C, and white tea catechins play a major role in

strengthening and protecting blood vessels.

Curcumin and quercetin reduce atherosclerosis and reduce inflammation in blood vessels. In combination, they have quite a powerful effect. In addition, they lower cancer risk and reduce inflammation in other areas of the body.

Pomegranate (high in the flavonoid ellagic acid) has been shown to not only prevent atherosclerosis but to also reverse it. To avoid the sugar in pomegranate juice, take it as an extract concentrate.

Another very critical element — as discussed in this newsletter — is magnesium.

Q: Both my daughter and I are suffering while taking Levaquin and Cipro. Is there anything that we can do to be able to lead a normal life free from pain?

— Ann B., Charleston, Ill.

A: You and your daughter are among many who have suffered from taking these medications. It is suspected that medicines that contain fluorine, such as Cipro and Levaquin, are especially toxic to many tissues, including the brain.

It is known that higher intakes of magnesium reduce pain levels and inflammation as well as neutralize the toxic effects of excess fluoride. It is also important to avoid dietary excitotoxins, as they produce widespread inflammation in many tissues.

Inflammation plays a major role in these pain syndromes. Antioxidant flavonoids, such as curcumin, quercetin, ellagic acid, hesperidin, apigenin, luteolin, and proanthocyanidins also reduce inflammatory pain. Zinc in a dose of 30 mg per day can counteract depression and inflammation as well.

Avoid pro-inflammatory oils, such as the omega-3 oils (corn, safflower, sunflower, peanut, canola, and soybean oils.) Instead, cook with extra-virgin coconut or olive oils. Add turmeric to the oil to add to the anti-inflammatory effect.

R-lipoic acid in a dose of 300 mg with each meal will also reduce the number of free radicals produced by fluoride. Avoid fluoride in all other products as well.

Q: I have high blood pressure and have been taking Tanormin (25 mg) for years. Can I take hawthorn to try to get my blood pressure to acceptable levels?

— Diane S., Philadelphia, Pa.

A: As I have discussed in several past issues of this newsletter, hawthorn extract is accepted as an effective supplement for treating mild and moderate hypertension. Start with a dose of 500 mg twice a day. If more is needed after a week, go to three times a day. The highest dose I have used in patients is 1,000 mg three times a day.

Be careful when mixing hawthorn with antihypertensive medications, as they have additive effects. I had one patient who, despite being under a doctor's care, had long-term, uncontrollable blood pressure. When he combined the hawthorn with a lower dose of his blood pressure medication, he got excellent results.

Magnesium also lowers mild and moderate hypertension; so taking it with the hawthorn would be even more effective.

Studies have shown that CoQ10 (in a dose of 300 mg three times a day) along with a mixture of antioxidants, also lowers blood pressure. ■

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