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Dr. David G. Williams

The More Things Change, the More They Stay the Same

I probably wouldn't have paid that much attention myself, but with our 4-year-old son, Kade, around, it's pretty hard not to notice the resurgence of all the comic book superheroes of yesteryear.

Superman, Batman, and Spider-Man led the way. Then came Iron Man, an updated version from the original in the 1960s, and now the Incredible Hulk. By slightly tweaking and updating their stories, writers have made these heroes as popular today as they were 50 and 60 years ago. The good-vs.-evil theme is as relevant today, and as intriguing, as it was back then. We've obviously learned the value of revisiting entertainment ideas that have worked in the past.

Revisiting healing techniques, healing ideas, and even research from the past, however, doesn't seem to be something we place much value in. This is particularly true for anything that has been condemned and criticized by mainstream medicine.

There are dozens of examples that readily come to mind. Most people still erroneously think that eating eggs raises the risk of heart disease. Research for the last *five decades* has proven that nothing could be further from the truth. Eggs are an excellent source of many nutrients: lecithin, essential fatty acids, zinc, vitamin A, B vitamins, lutein, zeaxanthin, and others. It's true that regular consumption of eggs can raise your cholesterol level, but the nutritional value of eggs far offsets their cholesterol content—and high cholesterol isn't the real problem anyway for most people with heart disease.

The heavy advertising in the 1970s extolling the proposed benefits of mothers using corn oil and margarine to "polyunsaturate their entire family" still has many people today believing that margarine and vegetable oil are safer than butter and coconut oil. And although the research leaves no doubt that the higher consumption of omega-6 fatty acids like those found in corn oil increases inflammation, pain, joint problems, and even heart disease, the general public is still unaware of the truth.

And for the last several years, the media, with the backing of the pharmaceutical industry, has taken to citing any study they can find that questions the benefits of antioxidant use. A favorite study they like to use from three years ago reported that taking antioxidant vitamins can speed up the development of cancer. (*J Natl Cancer Inst 05;97:481-488*)

This study has been cited dozens of times, by practically every major news outlet, to explain how taking vitamins can be dangerous to one's health. You probably remember it. Cancer patients who took either beta-carotene or vitamin E were reported to be 40 percent more likely to suffer a recurrence of their cancer compared to those not taking the supplements. I'm sure the results will continue to be reported for years to come, and cause many people to fear the use of vitamins. What you probably won't hear about, however, is the latest report by the same researcher, Isabelle Bairati, saying they've reanalyzed the original data and found they got it wrong.

In This Issue

You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on. — Benjamin Franklin

The only people who had their cancers return were smokers who refused to quit smoking while they were receiving their radiation or chemotherapy treatments. (*Int J Cancer 08;122:1679–1683*)

This is the type of lopsided propaganda you'll definitely be seeing as pharmaceutical interests continue in their attempt to downplay the safety and effectiveness of nutritional supplements. And you can be certain the story won't change even when the research turns out to be misinterpreted or false. It's the same thing that happened to another one of our superheroes, Popeye.

Give That Man a Segar

Popeye was created in 1929, and quickly became popular in the comics, film cartoons, and, later, on television. By eating spinach he develops superhuman strength and muscles. His creator, EC Segar, picked spinach based on a German study of 1870 showing that spinach contained about the same amount of iron as there is in red meat. In 1937, it was discovered that the original published research was incorrect. (The scientists had a decimal point in the wrong place.) Spinach has no more iron than other leafy vegetables, and isn't that great of a source. In fact, it's hard for the body to digest and assimilate the iron unless the spinach is combined with some form of acid (lime or lemon juice, for example). In spite of these revelations, Segar continued to use spinach as the source of Popeye's eye- and muscle-popping transformation—and the public hasn't been any wiser for the last 70 years.

Some of the latest research gives the spinach story another twist. Researchers at Rutgers University have extracted natural substances called phytoecdysteroids from spinach. (These are plant versions of the hormone that causes molting in insects.) When tested on human muscle tissue they sped up muscle growth by 20 percent. Rats given injections of the compound also showed significant increases in strength and muscle growth. (*J Agric Food Chem 08;56:3532–3537*)

While eating spinach is definitely recommended and a great health habit, I'm not sure what, if any, effect it will have on muscle growth. To achieve the levels of the hormone used in this study would require eating a kilogram (2.2 pounds) of spinach a day. Some enterprising chemists have already managed to isolate specific ecdysteroids, particularly one called 20-EC (or 20-hydroxyecdysterone), from various plants. 20-EC has been available in various body-building supplements for a few years now, though there's some question as to how well it actually works in real athletes.

Their Ads Are for Their Financial Health, Not Your Physical Health

There's a lot of misinformation going around these days, and much of it is in the form of advertising. Non-patentable nutritional supplements will forever be in the crosshairs of pharmaceutical companies. The last thing they want or need is an inexpensive product cutting into their profits from drug sales. They don't want any "natural" superheroes. The lesson for you to learn is to stick with your supplements. When the mainstream media starts telling you how bad they are for your health, that's a reliable indicator that they're actually working too well.

A while back I wrote about the pharmaceutical company Merck and their heavy promotion of the vaccine against human papillomavirus (HPV), Gardasil. It's still being pushed as the safe answer to preventing cervical cancer and genital warts in young women. At my last check there had been 8,864 cases of adverse effects reported by girls and women receiving the Gardasil vaccination. Since the first of this year 140 were considered serious, 27 were life-threatening, 10 resulted in spontaneous abortions, and 6 caused Guillain-Barré syndrome (a condition in which the nerve coatings deteriorate rapidly). Eighteen deaths have been tied to the vaccinations.

The FDA's approval of the vaccine, the marketing programs used to push the vaccine, and practically everything associated with this product is an outrage. To make matters worse, our Congress passed legislation that makes the pharmaceutical companies immune from prosecution and/or any damages that arise from illnesses, disabilities, or deaths caused by vaccinations. It's

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obvious our so-called representatives are not operating in our best interests.

Keep in mind that cervical cancer is known to be caused by an infection spread through sexual contact, and that condoms are quite effective at preventing the transmission of HPV. Also, we know that HPV remains the most common sexually transmitted disease—with an estimated 6 million women contracting it each year. And, in over 90 percent of these cases, the immune system simply eliminates the problem. A better answer is obviously increased condom usage and improving immune function.

As for genital and anal warts, which are also caused by HPV, there is a natural remedy that works far better than a vaccination. An ointment containing an extract from green tea was recently shown to be effective.

A study in Bogotá, Colombia involved 502 male and female patients ages 18 and older. The number of anal and/or genital warts ranged from two to 30 per individual. The patients applied the ointment three times a day for 16 weeks. Almost 60 percent of the individuals had a complete clearance of all warts during this time frame. Almost 90 percent showed improvement—with about 80 percent exhibiting over half their warts resolved. (*Obstet Gynecol 08;111:1371–1379*)

The ointment used is made in Germany, and is now sold in the US under the name Veregen. It's made from green tea extracts and other natural compounds. Unfortunately, Veregen is currently available only by prescription, but it's well worth asking for if you or someone you know has these problems.

A Trace Mineral With a Mighty Benefit

When it comes to HPV, or any virus problem for that matter, it's crucial that you are getting adequate amounts of selenium in your diet.

Over a decade ago I devoted an entire issue to the importance of glutathione levels in the body. At the time I called glutathione the granddaddy of all antioxidants, and explained how every single condition we associate with aging has been linked to glutathione levels. Studies have shown that individuals who maintain the highest levels of glutathione remain the healthiest and live the longest. The very important relationship between selenium and glutathione has just recently come to light during the last few years. [*Editor's note: Full information about the benefits of glutathione can be found in Vol. 6, No. 11 of* Alternatives. *For your convenience, a copy of that issue can be found in the Subscriber Center of the* Alternatives *Web site,* www.drdavidwilliams.com.]

Selenium is a trace mineral that the body incorporates into proteins to make over 25 different selenoproteins (like the enzyme glutathione peroxidase)— some of the strongest antioxidants that work to prevent cellular damage from free radicals. They also help regulate thyroid function and assist the immune system.

A few years ago, researchers working with the flu virus discovered that animals deficient in selenium were more susceptible to infectious diseases. This wasn't earth-shattering news—or unexpected. It's well known that being malnourished or nutritionally deficient will result in an impaired immune system.

Their shocking discovery, however, was that when animals with a selenium deficiency were contaminated with the flu virus, the virus mutated into a far more virulent form when it was passed on to the next animal. The researchers compared the initial virus to the mutated form, saying that the first would typically cause only a mild pneumonia, while the latter would result in life-threatening severe pneumonia. In simple terms, they discovered that selenium deficiencies cause viral mutations that could turn a harmless flu bug into a worldwide, life-threatening flu pandemic. Why the importance of selenium wasn't broadcast to the masses I'll never understand. And the ramifications of having adequate selenium reserves in the body reaches far beyond the flu virus.

Further Viral Effects

It appears that selenium also has a very strong link to another viral disease: HIV/AIDS.

The work is still ongoing into the exact details of how HIV utilizes selenium. Recent studies have shown that providing adequate amounts of selenium to the virus slows its replication. HIV requires selenium, and will invade other cells in an attempt to get more of the mineral. The virus' need for selenium helps explain several aspects of AIDS.

Research has shown that one of the hallmarks of AIDS progression is a decline in the patient's selenium blood plasma levels. This is accompanied by a decline in the selenium-containing antioxidant glutathione peroxide as well. Not only this, but infection rates are highest in geographic areas of the world where soil selenium levels are the lowest and infection rates are lowest where selenium levels are the highest.

The AIDS infection rate is highest in those African countries with low levels of selenium in their soil: Zimbabwe, 25.84 percent; Botswana, 25.10 percent; Zambia, 19.07 percent; South Africa, 12.91 percent; and Côte D'Ivoire, 10.06 percent. In contrast, Senegal

in West Africa has the lowest levels of AIDS at 1.77 percent—and the highest levels of selenium-rich soil.

(Senegal also has one of the lowest rates of cancer in Africa, another benefit of their selenium-rich soil.)

It's probably no coincidence, either, that males transmit the AIDS virus more easily than do females. Selenium is concentrated in semen, and sperm cells also contain high levels of the trace mineral. Not only can there be a significant loss of selenium during sexual intercourse, the invasion of these cells by HIV in its search for the mineral quickly transforms them into a carrier of the virus.

You might recall that in the early days of the AIDS epidemic there was widespread abuse of oxidant drugs in the form of nitrite inhalants. These produced an abundance of free radicals, which further depleted glutathione and selenium levels and sped up the disease process.

An individual's selenium reserve, at the time of infection and subsequently, also helps explain the variable latency period between the time of HIV infection and the appearance of AIDS. For some it is rather quick, while for others it can be years—and some HIV-positive patients have never developed AIDS.

Numerous doctors have started treating their AIDS patients utilizing either increased amounts of supplemental selenium or the four basic components of glutathione peroxidase—selenium, cysteine, glutamine, and tryptophan—and have seen remarkable results.

Increasing glutathione levels with the selenium and cysteine makes the immune system more responsive to viruses and cancer as well. Glutamine helps alleviate depression problems and helps heal the intestinal tract, resulting in better digestion and the elimination of diarrhea. Advanced AIDS patients have been shown to have tryptophan levels at about half the amount of those with the disease. Increasing tryptophan helps protect against dementia by increasing serotonin levels in the brain.

The idea has not been to "eliminate" HIV from the body, which many researchers now feel would be impossible, but rather to supply it and the rest of the body with adequate amounts of selenium. It's more of an effort to live with the virus much like we can live with other potentially harmful pathogens in our body, but keep it in check to minimize any harm. The additional selenium and the antioxidants associated with it help stop the virus from replicating and invading other cells to "feed" its need for selenium.

Not only is this program very cost-effective at $10 to $20 a month, it has been instrumental in allowing patients to live normal, otherwise healthy, productive lives. I've spoken with many of these patients, and practically all of the long-term survivors are on programs that include selenium, N-acetylcysteine (NAC) to increase glutathione levels, and other antioxidants. I have a report of one individual who has been HIV-positive for 21 years. After undergoing practically every known treatment, he still had detectible levels of HIV—until he took selenium. After taking a 200 microgram daily dose his viral load dropped from 20,000/mL to 49, which is considered undetectable. Additionally, he hasn't been sick since taking the selenium and has experienced no side effects whatsoever.

It Keeps Getting Better

Much of what I've discussed so far has had to do with HIV and AIDS. Keep in mind, however, that it also applies to any virus or viral infection. This could be something as simple as the cold or as serious as the next pandemic influenza virus, bird flu, West Nile virus, Ebola, hepatitis, hantavirus, Marburg virus, smallpox, or some viral agent spread through bioterrorism. Other than isolation and the use of questionable and unproven vaccines, there's not much in the form of treatment for any of these problems.

Viral threats are certainly not the only reason you should make the effort to increase your selenium level.

Longevity and Cognitive Decline

Several studies have found that selenium blood levels fall as we age and those with the lowest levels experience shorter life spans. One study showed a drop of 7 percent at age 60 and 24 percent by age 75. In one study involving 1,389 patients ages 60 to 71, it was discovered that, when compared to those with the higher selenium levels, those with the lower levels have a highest likelihood of experiencing cognitive and neurological problems. (*Epidemiology 07;18:52–58*) (*Sci Total Environ 95;170:133–139*) (*Med Hypotheses 97;48:355–360*)

Cancer

Selenium prevents cancer. It's been proven time and time again. One study involved 1,312 patients with no melanoma skin cancer. Half received a placebo and the other half received 200 mcg of selenium for an average of 4½ years. Those who took the selenium had an overall decrease in all cancers of 35 percent compared to those on the placebo. Prostate cancer decreased by 63 percent, lung cancer by 46 percent, and colorectal cancer by 58 percent. The effect was so dramatic that the blinded part of the study was ended early so those on the placebo could be told the benefits of taking selenium. (*JAMA 96;276:1957–1963*)

Other research has now found that increasing levels of selenium could cut the incidence of bladder cancer by as much as 70 percent. And it also appears that breast cancer is far more prevalent in individuals with low selenium levels—and supplementation could lower those rates as well. (*J Surg Oncol 80;15:67–70*) (*Mol Carcinog 99;26:213–225*)

A study in Arizona of 1,763 individuals found that those with lower levels of selenium were more likely to have polyps in their intestinal tract than those with higher levels of the mineral (33 percent compared to only 9 percent). Polyps are considered pre-cancerous. (*J Natl Cancer Inst 04;96:1669–1675*)

Heart Disease

From common sense and all research indications, it seems apparent that selenium and the enzymes produced from it, like glutathione peroxidase and thioredoxin reductase, help prevent the oxidation of LDL cholesterol. It's the oxidation of LDL cholesterol that starts the inflammatory process leading to the development of plaques in arteries. (*Circulation 98;97:1930–1934*)

There are other antioxidants that are needed to prevent heart disease, but keep in mind that selenium is one of the most powerful ones.

Arthritis

This is another area where there hasn't been enough research concerning selenium. We do know that with inflammatory arthritic conditions like rheumatoid arthritis there are consistently lower levels of selenium in the blood, and oftentimes a low intake of the mineral.

Selenium is a part of not only antioxidant proteins, but anti-inflammatory ones as well. Along with omega-3 fatty acids, selenium can prove to be a godsend to many with rheumatoid arthritis. (*Biol Trace Elem Res 96;53:51–56*) (*Ann Rheum Dis 94;53:51–53*) (*Semin Arthritis Rheum 97;27:180–185*)

The Rest of the Story

One of the primary reasons the public has never discovered the necessity and benefits of selenium stems from the fear of toxicity (a needless fear, as you'll see). Selenium is definitely one of those compounds that, if its use became more widespread, would put a huge dent in the multi-trillion dollar health care system.

The common tactic to discourage the use of a vitamin, mineral, or other supplement is to exaggerate any possible dangerous side effects and then throw in a study or two showing that it doesn't work. These are exactly the things that have been happening to selenium.

The US Food and Nutrition Board actually lowered the RDA for selenium in 2000 from 70 mcg for men and 55 mcg/day for women to 55 mcg/day for both. They obviously ignored the 1996 cancer study report I mentioned above showing the benefits of 200 mcg/day without any side effects. The same board set what is called the tolerable upper intake level (UL) at 400 mcg a day.

In China, where a large number of the selenium studies and treatment programs have been undertaken over decades (they have widespread selenium deficiencies there), the UL is set at 819 mcg/day with no adverse effects; the "low adverse effect level" is considered to be 1,054 mcg/day.

Toxic symptoms, by the way, are easy to recognize. The first indications are "garlic breath" and dry skin. Later the fingernails acquire white patches, become brittle, and fall off. Studies in China have found that the nail and hair loss occurs when selenium intake reaches 4,990 mcg/day. (*J Trace Elem Electrolytes Health Dis 94;8:159–165*)

Obviously, taking the 200–400 mcg/day, which has been proven to help in cancer, AIDS, and other conditions, on top of whatever one consumes in their diet, wouldn't be a problem. Research consistently has shown these levels to be totally safe and effective. It's somewhat surprising (well, maybe not) that the FDA would choose the RDA level of 55 mcg/day for a phase III study of 32,500 men, funded by the National Cancer Institute, to test the benefits of selenium and vitamin E on preventing prostate cancer. I suspect the results, which will be released after the 2013 completion date of the study, will be underwhelming and cited as proof that selenium is worthless. Honestly, they could save their money (actually our money), since research has already proven it will be largely ineffective at that dosage. Even worse, hundreds of decent, unsuspecting men will die needlessly—simply because they didn't receive the amount of selenium they needed for cancer protection.

Sometimes a Good Diet Isn't Enough

Ideally we should be able to obtain all the nutrients we need from our diet, but that is becoming more and more difficult.

Food sources for each of the three amino acids I mentioned earlier (tryptophan, cysteine, and glutamine, used in the production of glutathione) are those rich in protein. This includes beef, pork, poultry, fish, eggs, et cetera. One of the most cost-effective ways I know of getting adequate amounts is from either whey protein or spirulina. Properly processed whey protein is one of the

(*Selenium continued on page 111*)

NEWS TO USE FROM AROUND THE WORLD

This Is Your Brain on Drugs

CHICAGO, ILLINOIS—It seems not a day goes by now that we don't hear about the increasing number of individuals suffering from memory loss, dementia, cognitive decline, and Alzheimer's. As our population ages, this is one problem that won't get any better for the foreseeable future. Researchers are confronting the problem on several fronts, but one area that has gotten very little attention is the dramatic increase in both prescription and over-the-counter drugs. Thanks to a report just presented at the American Academy of Neurology annual meeting, maybe that will change.

Dr. Jack Tsao, a professor of neurology, has found that the class of drugs called anticholinergics could be one of the culprits.

After learning of a couple of cases where individuals began to experience severe memory loss and hallucinations immediately after taking anticholinergics, Dr. Tsao took a closer look.

He and his group began analyzing the data from an ongoing study involving 870 Catholic nuns and clergy members. The average age in the study group was 75 and their medications and any changes in their cognitive function had been monitored for about 8 years. Dr. Tsao discovered that those individuals taking anticholinergic drugs saw their rate of cognitive function decline 1.5 times faster than those individuals not taking these drugs. *(AAN meeting 2008; Abstract S51.001)*

I won't get too technical here (since it will probably confuse me more than anyone), but since the use of this type of drug is so widespread, it's something you should know.

Anticholinergic drugs block or impede the action of the neurotransmitter acetylcholine. In a nutshell, among other functions, if you block acetylcholine you block muscle contractions. It's surprising just how many commonly used drugs fall into this category. It would probably take several issues just to list them all, so, instead, I'll just briefly mention a few conditions and a few of the drugs used to treat them.

(Again, please keep in mind that this is *not* anywhere near a complete list, and even the safety warnings that come with most drugs won't define them as being anticholinergic. If you take any medication, ask your pharmacist if it is anticholinergic.)

- Asthma, bronchial spasms (Atrovent, Spiriva, Elixophyllin, Theo-24)
- Bladder overactivity, spasms (Detrol, Ditropan, Enablex, Sanctura)
- Gastrointestinal or stomach cramps, spasms (Hyospaz, hyoscyamine)
- Diarrhea (Lofene, Logen, Lomotil)
- Pain, inflammation (Codeine or any of the dozens of medications that contain codeine, OxyContin, Oxydose, Roxidocone)
- Anxiety disorders, panic attacks, seizures, muscle spasm (alprazolam, diazepam)
- Fluid retention, high blood pressure, heart failure (Lasix, Capoten)
- Allergies, allergic reactions, arthritis (prednisone, Sterapred)
- Motion sickness (Scopace)
- Parkinson's disease (Cogentin, Akineton, Norflex)

If you take any form of medication it's important to understand there are side effects. It may come as a shock to many people that many of the side effects may not be discovered for years, if not decades, after a drug has been given the blessing of the FDA. When it comes to side effects, the pharmaceutical companies and the FDA are hoping the public will forget that it was drug use that caused these problems in the first place. In that respect, I guess destroying people's memory and cognitive function works to their advantage.

What Can They Be Thinking?

ELK GROVE VILLAGE, ILLINOIS—By this time you've surely heard about the American Academy of Pediatrics recommendations for screening children as young as age 2 for cholesterol levels.

The good news is that the Academy recognizes the presence of a serious problem: our current epidemic of childhood obesity. They are also aware of the connection between excessive weight early in life and the risk of later cardiovascular problems such as heart attack and stroke.

The bad news is the solution they present: the use of statin drugs in children as young as age 8. The list of problems associated with statin drugs is alarming enough in adults: depression, suicidal thoughts, blockage of CoQ10 production, muscle damage, cancers, et cetera. And this is what can happen after only a few years on these drugs. There are no truly long-term studies of their effects, because the drug class is barely 20 years old—the first statin, Mevacor, became available in 1987.

The media is playing its loyal part, reporting the story with an approving attitude. My prediction is that statins' effects on the still-developing brains and muscles of children will be awful beyond belief. For children who have a cholesterol "problem" (more accurately, a weight problem), repair their diet and get them outdoors to play instead of giving them drugs.

(Selenium continued from page 109)
best ways to raise and maintain higher glutathione levels in the body. (This is one of the reasons I strongly advocate and personally consume a whey protein shake each morning. It's also the reason I have utilized spirulina as the base component of Daily Advantage.)

Regarding selenium, as I said earlier the content in food depends greatly on the amount of the mineral in the soil to begin with. Russia and China have large areas of selenium-poor soil. We routinely see reports of selenium deficiencies in those areas, since most of their food is grown and eaten locally. (As a side note, when you combine the low selenium content in China with the mutation of viruses in low-selenium hosts, it's no wonder that so many nasty viruses originate in that part of the world.)

The soil conditions everywhere in regards to selenium availability are worsening due to a couple of factors. First, acid rain has been created from increased levels of sulfur and nitrogen in the atmosphere. This changes the pH of the soil, making it more difficult for selenium to bind to plant roots. Additionally, heavy metals such as mercury in rainfall quickly bind to selenium and form insoluble compounds. Both of these problems lower the amount of selenium entering the food chain.

It will be interesting to see what will happen in Europe over the next couple of decades. I wouldn't be surprised to see a significant decrease in their overall health picture. The European Union has recently restricted the sale of some of the best forms of selenium supplements, and Europe's soil is practically devoid of selenium. Much of their selenium comes from imported wheat, but prices of the grain have skyrocketed and the drought in Australia has limited supplies. (Australia, unlike the US, has severely selenium-deficient soils—which probably contributes to the high incidence of asthma, skin cancer, and other problems in that country.)

It's also important to note that individuals with more serious digestive problems, such as Crohn's disease, stomach stapling, or other difficulties, are at a higher risk of selenium deficiency.

Where to Get Your Selenium

Selenium is becoming more difficult to obtain from our food supply. Plants take up selenium from the soil and propagate it through the food chain. The problem, however, is that the concentration of selenium in the soil varies tremendously around the globe, as I mentioned earlier. In this country, for example, the soil in the Midwest, derived from ancient sea beds, contains as much as 50 ppm—which is as much as 1,000 times the amount contained in the Pacific Northwest, Great Lakes area, Northeast, or Florida where levels are less than 0.05 ppm.

Currently, the best dietary source of selenium remains the Brazil nut. Nuts that you have to crack yourself have an average of 100 mcg of selenium each. Already-cracked nuts only contain about 1/8 to 1/4 of that amount (the processed nuts generally come from a different area of Brazil where the soil levels of selenium are lower). Tuna, beef, turkey, seafood, mushrooms, eggs, and brewer's yeast are also food sources, but the selenium content can vary dramatically. For this reason I strongly suggest that you get additional selenium in your supplements. Make sure your multivitamin/mineral provides at least 100 mcg in the form of selenomethionine.

At this time selenium is readily available and very inexpensive…exactly the kind of natural "superhero" I like. It will generally be available in 200 mcg capsules. Take one a day along with whatever you get from your diet (average 60 to 110 mcg/day in the US or only 11 to 67 mcg/day in Europe) and your multivitamin/supplement (for example, Daily Advantage at 100 mcg/day).

A 300-count bottle will last 10 months. From several of the sources I've checked online, you can buy that amount for about $10—only a dollar a month. One example is NSI Selenium Select, available online at *www.vitacost.com*. That alone should cause a few pharmaceutical executives to lose a little sleep.

The Right Fat Is Good Fat

The omega-3/omega-6 fatty acid imbalance is back in the news again. It's something I've been talking about for years. The latest research found that getting enough omega-3 fatty acids in the diet is twice as important for boosting mental power in girls as it is in boys.

Health and nutritional data was studied on 4,000 girls and boys ages 6 to 16. Overall, those kids who consumed more omega-3 oils scored significantly better on all testing. The researchers also discovered that an increase in omega-3 consumption accounted for twice as much improvement in girls as it did in boys.

The consumption of omega-3 fatty acids (from fish, nuts, flax, or chia) in this country has declined for decades in favor of omega-6 fatty acids (oils from corn, sunflower, soy, cottonseed, and safflower). Deficiencies in omega-3 fatty acids have been linked to increases in crime, violence, suicide, depression, bipolar disorder, inflammatory diseases, cardiovascular diseases, et cetera. This latest research is just another indication that the female body has an increased need for omega-3 fatty acids.

Location, Location, Location

Other research has found fat stores in different areas of the body actually contain different types of fat.

For example, in females the fat in the hip area contains more omega-3s than belly fat. The hips of a female appear to be a reservoir for omega-3s that can be drawn upon during pregnancy, ensuring that those critical fats are available during the development of a baby's brain and nervous system.

For the longest time, body fat has been looked at as a dormant deposit in the body that provides a cushion for our organs and an emergency energy source. We're just beginning to understand that it plays a far more active role in our health than anyone ever thought. In many ways, body fat acts like an endocrine organ.

Fat cells produce and release the hormone leptin. When there are adequate amounts of fat stored in the body, leptin signals the brain to stop the feeling of hunger. Leptin also triggers the burning of fat for energy rather than storage. The story of leptin is still unfolding.

We now know that excess omega-6 fats in the body release compounds that promote inflammation and contribute to pain, arthritic joints, cardiovascular disease, diabetes, and other problems.

This latest research adds another piece to the puzzle by showing us the extreme importance of having the right kinds of fats stored in the body. In the future, I wouldn't be surprised to see tests that determine not just the amount of fat in the body but also the ratios of the various types. You can be decades ahead of this trend by getting your diet closer to those of a hundred years ago when the omega-3/omega-6 ratio was closer to even.

The dramatic dietary and food changes our society is undergoing will have a drastic impact on the health and well-being of generations to come. Over the last hundred years the intake of omega-3s vs. omega-6s has changed significantly. And just as we've begun to realize the importance of additional omega-3s during pregnancy, the government has advised that fish consumption needs to be reduced during pregnancy due to mercury toxicity.

It's a case of throwing out the baby with the bath water that will affect the future health of generations of our children. Rather than condemn the only omega-3 source the general public is aware of, we need to be recommending safe alternatives. We know that certain types of larger fish, such as swordfish and large tuna, are mercury toxic. But other omega-3–rich products like chia are readily available. [*Editor's note: Dr. Williams has written often about the large benefits of making small changes in your diet. For a summary, see "More* Alternatives" *in the Subscriber Center of the Alternatives Web site,* www.drdavidwilliams.com.]

As I travel around this country and abroad, it becomes even more apparent that the economic instability we're experiencing could last for some time. These changes create a lot of extra stress and worry. This is when it's important to count our blessings and focus on what really matters in the grand scheme of things. Maintaining your health should be one of your top priorities—and I'm sure that, as an *Alternatives* reader, it is for you. Not only is it hard to regain your health if you're suffering from some chronic illness, but, without your health, your ability to contribute and logically work through any difficulties that arise will be impaired.

Taking control of your health is a form of independence. Unlike the massive herd of sheeple in this country who haven't yet grasped the concept of prevention, together we have an opportunity to step back and see what's causing many of our problems. Knowing the cause is more than half the battle. We can then take the necessary steps to avoid the diseases and health problems most people now accept as commonplace. And it doesn't always take some million dollar machine or questionable drug. More times than not, a simple lifestyle adjustment, diet change, or supplement can make a world of difference. My job is to keep us ahead of the crowd—and with your help and support that's exactly what I'll keep doing.

Take care,

If you have questions or comments for Dr. Williams, please send them to the e-mail address listed to the right or the postal address listed on the second page. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

Here's how you can reach us:

- For Customer Service matters such as address changes, call **800-527-3044** or write to **custsvc@drdavidwilliams.com.**
- If you are a licensed health professional and would like to learn how to begin reselling MHN supplements to your patients, please e-mail practitionerinquiries@davidwilliamsmail.com.
- For back issues or reports, call **800-718-8293.**
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