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Dr. David G. Williams

Truly a Shot in the Dark

Recently, I wrote about the “revolving door” between government agencies like the FDA and the CDC and the pharmaceutical industry. If you play the “game” right and work your way up in one of these governmental regulatory agencies to a position of power and influence, you can

count on a lucrative job offer from the pharmaceutical industry. Most recently we saw the former head of the CDC take a job with Merck as president of their \$5 billion vaccine division.

No doubt, vaccines are big business. And the pharmaceutical industry quickly fell in love with the new H1N1 (“swine flu”) vaccine. It became more attractive than ever when the US Secretary of Health and Human Services, Kathleen Sebelius, decreed that vaccine makers had immunity from any lawsuits that result from any “swine flu” vaccine. As the topper, the FDA fast-tracked H1N1 vaccine approvals and helped promote their use.

I still believe that some time soon we’ll face a true worldwide flu-type pandemic. The swine flu isn’t it—and, even if it were, vaccinations are not the answer for dealing with the problem. But this hasn’t stopped the pharmaceutical industry or the government agencies, which supposedly exist to protect the public, from pushing these dangerous products.

Thankfully, through the Internet and publications like *Alternatives*, the public has started to see behind this veil of deception. Compliance with the voluntary H1N1 vaccination program has been less than anticipated. Not only has the public shunned the injections, a growing number of medical professionals worldwide also feel the risks outweigh any possible benefits. Some governments have cut back on their purchases of the vaccine. The Prime Minister of Poland recently announced that his government won’t buy the vaccines for swine flu because they haven’t been properly tested, and, if they do decide to

buy them, they won’t buy from producers that won’t take responsibility for possible side effects.

This is not to say the drug makers are suffering, however. Britain-based GlaxoSmithKline sold \$1.36 billion of the vaccine in just the last quarter of 2009 and has booked orders of another \$2.1 billion—and they are only one of several who make the vaccine.

Any vaccine can be a gold mine for drug companies if they get the support and right pressure behind them from the government. Gardasil, the vaccine from Merck that promises to prevent cervical cancer in girls, was recently given approval from the FDA to be used for the prevention of genital warts in boys and men, ages 9 through 26. Reportedly, 2 out of every 1,000 men develop the warts. The FDA news release stated, “the manufacturer will conduct post-marketing studies to obtain additional information on the safety and effectiveness of Gardasil in boys and men.” It would seem these studies should be done before any approval or sale was allowed, when you consider that there have been over 9,000 reported adverse events (seizures, paralysis,



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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

autoimmune disorders, et cetera) and 20 deaths attributed to the vaccine's use in young girls. (Keep in mind that the FDA itself estimates that only about 10 percent of all adverse reactions are reported.)

By the time you read this, I'm sure you'll be seeing another major push to get the H1N1 vaccination. Don't do it. Follow the guidelines I've detailed in past issues on how to strengthen and equip your body to naturally deal with the flu virus and other pathogens. And for the last several months I've been testing and evaluating another remarkable, natural "tool" that may hold the key to effectively preventing viral and bacterial infections that invade the body by way of the upper respiratory tract. I'll share complete details in a minute. [Editor's note: For a flu-prevention regimen that works, and without the side effects of vaccines, visit the Subscriber Center of the Alternatives Web site, www.drdauidwilliams.com.]

The drug makers now have a huge supply of the vaccine ever since the public has learned 1) that the swine flu bug hasn't been as serious or severe as predicted, 2) the vaccine hasn't been tested adequately and, 3) the vaccine can have devastating side effects. Don't be surprised to see the pharmaceutical companies roll out the scare tactics. They can even offer the vaccination free and make money. They get to write off "donated" vaccines on their tax returns and offset the astronomical windfall profits on the vaccines they do sell.

I also suspect you'll begin to see government efforts to "mandate" or force these vaccinations on segments of the population. Again, it's all part of the new golden rule... "The one with the most gold makes the rule."

Good Bugs, Top to Bottom

I've been a strong proponent of probiotics for as long as I can remember. I've probably tested, ingested, cultured, formulated, and incubated as many pre- and probiotic liquids, tablets, and suppositories as anyone on the planet. I've always believed the beneficial bacteria we harbor in our bodies provide one of the most potent tools we have to fend off pathogens of all forms. Research is beginning to finally

support this idea, and we're seeing more and more probiotic supplements and foods on the market each year.

Having a predominance of friendly, beneficial bacteria throughout the gastrointestinal tract in large part determines just how efficiently our immune system can respond to invading pathogens and prevent infections from taking hold. When we think of friendly bacteria, we generally think of those in the middle and lower intestinal tract, but our entire gastrointestinal tract is lined with colonies of bacteria. And most common pathogens enter the body through the nose or mouth. The influenza virus is a good example. It can be airborne and enter through the nose and upper respiratory tract or enter through direct contact with our mouth, nose, or eyes through touching, kissing, drinking after someone, et cetera. Our first line of defense is very often the beneficial bacteria that reside in our nose, mouth, and throat. While there's been a stronger push to boost the beneficial microorganisms in the mid and lower bowel, those residing on the front line have largely been ignored.

Over the Lips and Past the Gums

More than 600 species of bacteria have been identified within the oral cavity. Most of those species probably play a less important role in our health. Researchers, however, have found that higher numbers of the more prominent beneficial species directly correlate to a reduced incidence of everything from halitosis (bad breath) and dental caries (cavities) to ear infections, strep throat, and tonsillitis. (*J Appl Microbiol* 06;100:754-764) (*J Med Microbiol* 03;52:829-833) (*Revista de Microbiol* 99;30:332-334) (*Scand J Infect Dis* 93;25:31-35) (*Ann Otol Rhinol Laryngol* 97;106:571-574)

One of the primary investigators in this field of research has been Professor John Tagg with Otago University in New Zealand. Over a 25-year period he has collected and studied hundreds, if not thousands, of species and strains of oral bacteria. He has learned that the body's oral immune response can be enhanced dramatically through the use of oral probiotic lozenges, particularly those which contain the species *Streptococcus salivarius*.



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Much of the work I cited above involving tonsillitis, strep throat, and otitis media (inner ear infection) was either performed by Professor Tagg or based on his research efforts. His research is a continuing effort that I'm sure will have a dramatic impact on how we can approach a long list of problems in the future.

For example, the species of bacteria we're talking about, *S. salivarius*, has numerous strains. *S. salivarius* K12 is the one that replaces the malodorous bacteria on the back of the tongue that causes bad breath. Dr. Tagg's work shows that K12 is also effective at preventing and helping treat periodontal disease, recurrent tonsillitis, and viral infections. Along with strain K12, strain 18 provides ear infection protection. Prevention of dental caries seems to be enhanced by strains M1A and T32.

Professor Tagg and his team continue to isolate and study probiotic strains of bacteria that can be used for specific bacteria/pathogen-related problems such as body odor, skin infections, and urogenital infections.

Professor Tagg has helped develop a commercial throat lozenge, BLIS K12 Throat Guard. This product, sold in New Zealand, incorporates primarily the K12 strain of *S. salivarius*. Tests have shown that using this lozenge can help restore the natural bacterial flora of the mouth and throat. And these bacteria, in turn, produce compounds referred to as "bacteriocin-like inhibitory substances" or BLIS, which act as natural antibacterials and help control the growth of undesirable invasive microorganisms that cause infections.

Research has shown that the greater numbers of beneficial bacteria also simply take up the physical space that harmful pathogens need to colonize, and use up their necessary food supply.

For years, I've discussed two research areas where I felt there was tremendous potential to dramatically change the way we prevent and treat disease. Those are stem cells and probiotics research. Professor Tagg's work is just the tip of the iceberg in probiotics research.

What Oral Probiotics Can Do

Based on what I've seen, I believe that Dr. Tagg's product will prove to be a godsend for a variety of problems. Fortunately, it's now available in this country in tablet form. I'll provide sources for K12 in a moment.

For small children, it can offer a wide range of benefits. Along with the Xlear nasal wash, I would highly recommend using it in children with recurrent ear infections and recurrent tonsillitis. The beauty of the tablets is that they can be easily pulverized and given to very young children without any difficulty or objection.

Studies have shown that, in infants who have inner ear infections, treating with this product following antibiotics resulted in a 50 percent reduction of recurring infections. Similar results were found when the product was used for recurrent tonsillitis.

This oral probiotic can also be used in conjunction with antibiotic therapy. Most antibiotics are non-selective in the bacteria they destroy—they tend to wipe out all species, including the beneficial ones. If you use this product immediately after the course of antibiotic therapy, there should be even more open physical sites in the oral cavity for the probiotics to colonize and flourish.

I'd like to see future studies that focus on determining if the product can reduce influenza or common cold infections. I would be very surprised if it didn't.

I'd imagine this product would also be helpful in adults with chronic halitosis or periodontal disease, either without or following antibiotic use.

Prescription mouthwashes are routinely used in periodontal disease, but thought is seldom given to recolonizing the oral cavity with beneficial bacteria afterward. While a few doctors realize the importance of replacing the beneficial bacteria in the colon after antibiotic therapy, doing the same in the oral cavity is practically unheard of. I expect that to change in the future but, as in so many other cases, it may take a decade or longer.

It's important to keep in mind also that most mouthwashes work much like antibiotics, at least in the oral cavity—they're non-selective when it comes to killing bacteria. They provide short-term relief from bad breath, but the odor-forming bacteria quickly re-establish colonies and the problem returns. No mouthwash is able to actually sterilize the oral cavity. If mouthwash is used and then later followed with the oral probiotic (sucking on the lozenge or tablet until it totally dissolves), there will be more sites for the beneficial bacteria to colonize.

At this point, the bacterial flora in the oral cavity is being totally ignored. It amazes me that the connection between oral hygiene, gum health, and cardiovascular disease has been firmly established, yet we have research people like Professor Tagg and a commercially available product that we're not taking advantage of. There's no telling how many deaths occur each year from heart disease that originated from chronic oral infections.

Focusing on oral health should be the focus of every cardiovascular specialist, right alongside diet changes and exercise. If you have cardiovascular problems, stopping the chronic inflammation "leaking" from the oral cavity should be on your list of priorities. This oral probiotic now gives you the opportunity to do so.

KNOCKING DOWN TRIGLYCERIDES

Question: I'm confused about my triglyceride levels. The last few tests indicate that they are elevated. My doctor tells me that I'm consuming too much fat in my diet. However, I've also read that high triglyceride levels are a result of eating too much sugar. Which is it?

—J. Brown
Wilmington, DE

Answer: Consumption of either fat or carbohydrates can increase triglyceride levels.

If you're taking your blood test after fasting (where you haven't had anything to drink or eat for the last 12 hours or so) and your triglycerides are high, then generally it's a result of consuming excess sugar or carbohydrates. This is the way most lipid profile tests are performed, for example cholesterol testing. And, for most individuals, excess carbohydrates from sweets and grains (particularly wheat) are generally the reason for their increased triglyceride levels.

If, however, triglycerides are high when tested within roughly six hours of a meal, then it's generally a result of fats you've consumed. It doesn't really matter what kind of fat you've eaten. It could be saturated, polyunsaturated, monounsaturated, or hydrogenated fats.

Although it's not discussed much, foods that increase blood sugar and fasting triglycerides also increase the dangerous forms of cholesterol: the various small forms of LDL cholesterol. The presence of these small LDL particles is one of the most potent triggers of cardiovascular disease known.

Your body can't store excess carbohydrates, so the liver turns them into triglycerides that are released into the bloodstream attached to VLDL (very low-density lipoprotein) cholesterol. Testing for the smaller, dangerous forms of LDL cholesterol is difficult and expensive. It's easier to remember that your postprandial (after eating) blood sugar level is an indirect, but accurate, gauge of your production of these particles.

In a nutshell, lower your triglycerides and you'll lower your production and levels of the small forms of harmful LDL cholesterol.

These same oral infections present a constant drain on the immune system, making the host far more susceptible to all kinds of diseases and autoimmune problems.

How to Use Oral Probiotics

There are a couple of ways to use the lozenges. Either method will eventually help achieve the same results. The first method is more for those who have a severe, chronic condition that hasn't responded to typical measures.

On the first day of use, the teeth and tongue are brushed thoroughly and then a mouthwash is used to

Eliminate the sweets and high-fructose corn syrup from your diet, as I've discussed before. You may also need to limit your consumption of wheat and wheat products.

For some, alcohol consumption can also be a problem. Even small amounts can elevate triglyceride levels. I haven't seen the research to totally confirm this, but alcohol appears to be more of a problem among individuals with depleted glutathione levels.

Heading Off the Problem

Glutathione plays a key role in the breakdown and detoxification of alcohol in the liver. Chronic alcohol consumption depletes glutathione levels and leads to "fatty liver" or steatosis and liver disease. Taking N-acetylcysteine supplements is one of the most efficient methods of restoring glutathione levels and preventing hangovers, fatty liver problems, elevated triglyceride levels, and the toxicity associated with alcohol consumption. Eating foods that help your body produce more glutathione is also helpful, but, when levels are depleted, it will probably require supplementing with N-acetylcysteine. Beneficial foods include the cruciferous vegetables such as Brussels sprouts, cauliflower, cabbage, kale, and broccoli, along with asparagus, avocados, spinach, and the spice turmeric. Also don't forget whey protein powder, which you can easily incorporate into a healthy breakfast shake.

Increase your consumption of omega-3 fatty acids, particularly fish oil, and take niacin—both of which help block triglyceride formation in the liver. [Editor's note: For a complete program to help regulate your triglycerides, and improve the rest of your lipid profile while you're at it, visit the Subscriber Center of the Alternatives Web site, www.drdauidwilliams.com.]

Most people don't want to hear the news, and refuse to accept the fact that excess consumption of sugar and carbohydrates causes heart disease, obesity, diabetes, and certain kinds of cancer. For many, the sweet life is also the short life.



clear the oral cavity of both the good and bad bacteria. (In the studies, the prescription mouthwash chlorhexidine was used. An over-the-counter mouthwash can be used, but the recolonization time will be slightly longer.) Then at 2-hour intervals for the next 8 hours suck on a lozenge (it should take about 5 minutes to completely dissolve; don't chew it). This is repeated again on days 2 and 3. Then for the next two weeks simply follow your normal morning and evening tooth brushing/flossing and take one lozenge in the morning and one at night but refrain from using any mouthwash. After that, only

one lozenge daily will generally be all that's needed for maintenance. In most cases, beneficial bacteria will begin to recolonize within the first three days.

The other method simply involves taking one lozenge per day after your normal brushing/flossing. Recolonization occurs generally within two to three weeks. One tablet daily is also the maintenance dose with this program.

Overall Immune Support From Bacteria

Professor Tagg was initially looking into the benefits of *S. salivarius* K12 as a method to prevent rheumatic fever in infants. In a small percentage of cases, strep throat infections progress to rheumatic fever, which is an extremely serious, life-threatening condition and very difficult to treat. He discovered that individuals with higher oral levels of *S. salivarius* seemed to never be bothered with colds or other respiratory infections. He also found that, as we age, levels of this beneficial bacteria decline. His hope of finding a way to prevent the rheumatic fever led to the above discoveries. Starting a child on an *S. salivarius* K12 product could be a lifesaving move if they've been diagnosed with strep throat.

Although it hasn't been formally studied, this product is being used by many New Zealanders to treat a cold and/or flu as soon as the first signs and symptoms appear. Many report resolving the problem within 24 hours, if they take 4 lozenges when the first signs appear. Research has demonstrated the product does trigger an elevated immune response, as illustrated by a significant increase in interferon gamma levels.

Unfortunately, at this point no studies have been undertaken to monitor the effects it might have on specific strains of the flu virus. As I mentioned earlier, however, with a surplus of H1N1 vaccines the pharmaceutical companies need to get rid of, publicizing a safe, natural alternative can draw the wrath of the FDA.

S. salivarius K12 is available in a number of products in this country, including Aktiv-K12 lozenges, available from www.therabreath.com or 800-973-7374 and Ear, Nose & Throat Defense, from Healthy Directions, available at www.drdauidwilliams.com or 800-888-1415.

Another Fishy Tale

A few months ago I talked about how many varieties of farmed fish are being fed corn meal and grain products, a practice that has reduced their omega-3 content closer to that of chicken than of healthful fish. I didn't mention the flip-side of the coin, where fishmeal and fish oils are very often a key dietary component not only of farmed

fish but also of chickens and pigs. This is another situation where, through our brilliance and technology, we're probably shooting ourselves in the foot over the long term.

During my many trips to South and Central America, one of the more amazing things I've encountered has been the "factory ships." These huge ships have been converted into complete onboard fish processing plants. They typically move into an area and serve as the "mother ship" where their smaller boats fish the area and return with the catch to be graded, gutted, filleted, flash frozen, and put into storage. Some even have the fishmeal processing capabilities where all the waste material is also processed for later use as animal or fish food. One of the individuals I've traveled extensively with in the area actually help set up these ships off the coast of Peru in the 1970s and '80s to produce fishmeal for feeding Tyson-brand chicken here in the US.

You hear a lot about how we're depleting fish stocks around the world, and the problem will only be getting worse. Most people don't realize that the amount of seafood fed to chicken and pigs worldwide is now twice the amount of seafood consumed by the Japanese population, and six times as much as Americans consume. Seafood is obviously not a natural diet for these animals, and it only contributes to the overfishing problem. Granted, some of the fishmeal comes from carcasses and what would otherwise be waste—but oftentimes it comes from intentional catches just to supply this segment of the market.

From everything I've seen, I don't think the ocean fish are getting a chance to recover. If things continue as is, in a few decades we may actually experience what some have referred to as an "aquacalypse." There's a huge numbers and propaganda game going on to make us think otherwise. We used to see markets full of fish like cod, flounder, halibut, and sole, but those stocks have begun to disappear—and now the fishing fleets are continually moving south toward the Antarctic and to deeper and deeper waters with the blessing and subsidies of the various governments. As the more familiar fish species become depleted, some fish are being renamed to boost their popularity and marketability.

For example, most people weren't interested in eating the slimehead fish, and it was abundant until it was renamed orange roughy. Now it has been overfished and in danger. The same is true for what used to be the Patagonian toothfish, which sells better now as Chilean sea bass. There's the rasphead rockfish now sold as Pacific red snapper and the dogfish, which has become rock salmon, and the witch fish renamed as Torbay sole.

(Fish continued on page 72)



NEWS TO USE FROM AROUND THE WORLD

Insecticides and Autoimmune Diseases

PHILADELPHIA, PENNSYLVANIA—With spring right around the corner, there will be a lot of people breaking out the insecticides to curtail the inevitable re-emergence of various insects in the home, yard, and garden. I hope you're not one of those individuals.

Researchers at Northwestern University have once again confirmed what I've been warning about for years.

After studying 76,861 women age 50 to 79, they found women in homes where insecticides were sprayed at least six times a year had almost two and a half times the risk of developing lupus and rheumatoid arthritis compared to those living where insecticides weren't used. If the insecticides were used in the homes for 20 years or more the risk still doubles, regardless of how many times per year they were used. (*Paper presented at the American College of Rheumatology Scientific Meeting, October 18, 2009, Philadelphia, PA. Presentation 614*)

I don't know when the public will wake up to the dangers these chemicals pose. Studies have found that around three-fourths of all US households reportedly use insecticides in either the home or garden or both. While this particular report focused on lupus and rheumatoid arthritis, others have linked insecticides, pesticides, and herbicides to diseases such as Parkinson's and ALS.

On a related note, many people are now using organic pesticides like rotenone thinking it poses no or little danger. It occurs naturally in the roots and stems of several plants like the jicama. Various indigenous populations have used the extract to poison fish for food, and rotenone is also lethal to insects. It has been thought that rotenone was only mildly toxic to humans, but new research found that the risk of developing Parkinson's disease was 10 times higher in those who had used rotenone than in those who had not. This seems to correlate with other studies that have found there's a higher incidence of Parkinson's among individuals with certain occupations, particularly farmers. I also believe that individuals may have a genetic predisposition to developing the disease or an increased susceptibility to different chemicals. (*J Agromedicine 08;13:37–48*)

There's no doubt that the number of Parkinson's cases is on the rise, but there is also a high rate of misdiagnosis with Parkinson's disease. One recent study from the United Kingdom determined that at least 1 in every 20 patients taking medication for Parkinson's is misdiagnosed, and these individuals have been taking

anti-Parkinson's medications for six years on average. While only roughly two-thirds of Parkinson's patients experience tremors, many doctors immediately associate tremors with Parkinson's and place the patient on these powerful medications. Based on the above research there could easily be over 50,000 individuals here in the US taking these drugs unnecessarily. There are numerous causes for tremors. I've always said that diagnosis is probably the most difficult part of being a doctor, and in this era of "cookbook" medicine and self-diagnosis, based on television drug advertising, this is one area where a second opinion would be highly advisable. (*Mov Disord 09;24:2379–2385*) (*Mov Disord 09;24:500–508*)

Why is it so hard for most people to comprehend that a chemical that destroys the nervous system of an insect can have the same effect on humans?

Cinnamon as an Anti-Aging Tool

SEOUL, SOUTH KOREA—For years I've tried to stay abreast of research into angiogenic activity. Angiogenesis is the formation of new blood vessels. New blood vessel formation occurs in the early years of life—generally through puberty—and after that it normally doesn't happen unless there's an injury. And, if you recall, cancer triggers the formation of new blood vessels to help feed an ever-growing tumor.

Just recently, Korean researchers discovered that cinnamon, which has been used in Chinese medicine to improve circulation, can help induce angiogenesis, or the formation of new blood vessels. (*Int Immunopharmacol 09;9:959–967*)

You may recall that cinnamon is one thing I put into my morning protein shake. It's inexpensive, and one of its other benefits is its ability to help control blood sugar and reduce the need for insulin. (And, it tastes good!)

When your body is given access to the proper raw materials, it innately utilizes them for the best results. I think cinnamon is one of those "undiscovered" jewels that is being under-utilized. As we get older and injuries occur and the natural wear-and-tear takes place, cinnamon's ability to help increase blood vessel repair and formation to needed areas could turn out to be a godsend. And when you combine niacin and/or niacinamide, which will expand blood vessels and improve blood flow, we have two very inexpensive yet effective tools for preventing/treating everything from circulation and heart problems to diabetes, arthritis, injury, and senility.

For those individuals who are dealing with cancer, I don't think the cinnamon would be a problem; numerous other substances that improve blood flow

NEWS TO USE (CONTINUED)

don't seem to be detrimental in cancer. Then again, I haven't seen any studies on the matter. Until we know more, it might be best for them to err on the side of caution and limit their consumption of cinnamon.

Heart-Healthy Exercise

BEDFORD HILLS, NEW YORK—A few years ago I reported on some research data showing that musical conductors enjoyed increased longevity over the general population. This occupational benefit appears to stem from their upper body movements associated with moving the conducting wand. These movements facilitate increased chest movement, lung efficiency, spine mobility, and vascular and lymph circulation. All these factors combined result in increased upper body strength, improved lung and heart function, stress reduction, increased dopamine released by the brain leading to improved cognitive skills, and a longer life.

This is a type of exercise that requires nothing more than some music and a makeshift conducting wand.

Since the time I reported on this research, conductor David Dworkin has come up with a form of exercise he calls "conductorcise." Programs have been developed for various age groups from young children to those 50 and over, and even for individuals with Alzheimer's, stroke, and other health challenges. If you're interested in learning more details about conductorcise, I'd suggest checking out his Web site at www.conductorcise.com. There's even a program where you can become a certified conductorcise conductor and bring this exercise format to your community.

Testosterone and Blood Sugar

BOSTON, MASSACHUSETTS—A new study shows that testosterone is linked to blood sugar levels.

In what started out as a study to make testing for testosterone levels more accurate, researchers have shown that eating sugar cuts a man's level of circulating testosterone significantly.

The study involved 42 men with normal blood sugar, 23 with "pre-diabetic" blood sugar levels, and nine men with newly diagnosed type 2 diabetes.

Each of the men was given a sugary solution to drink and then had their testosterone levels tested.

Regardless of whether they had diabetes or not, blood levels of testosterone dropped by as much as 25 percent and remained low even after a period of two hours. And 15 percent of the 66 men with normal testosterone levels before the test experienced testosterone drops so low that they would be classified as having "hypogonadism," or testosterone

levels low enough that would require taking the hormone. (Paper OR42-2, presented at the 91st Annual Meeting of The Endocrine Society, June 10–13, 2009, Washington, DC)

Test surveys have shown that as many as one out every four men over the age of 30 in this country have lower than normal levels of testosterone. The number is expected to rise because of the ongoing aging of the US population. Symptoms of low testosterone can include a low sex drive, erectile dysfunction, osteoporosis and bone fracture, depression, lethargy, insomnia, heart disease, diabetes, weight gain, muscle loss, and decreased physical performance.

When you look at the above list of symptoms, it's pretty obvious the pharmaceutical industry has already capitalized on a largely unrecognized epidemic of testosterone deficiency. Now that sugar consumption has been found to be a major factor in lowering testosterone levels, it's no wonder that the problem has become so widespread.

By doing nothing else but eliminating sugar from your diet, you can significantly reduce your risk of developing heart disease, diabetes, cancer, hormonal problems, obesity, and practically every major disease of our time.

Protein for Brain Health

BETHESDA, MARYLAND—New research indicates that consuming branched chain amino acids (BCAAs) following a traumatic brain injury can dramatically speed up the recovery time. The name—BCAA—refers to the physical structure of three amino acids: leucine, isoleucine, and valine.

When scientists fed one set of brain-injured mice either plain water or water enriched with protein, they found those getting the protein fared much better. Following a brain injury, it was discovered, levels of these three amino acids, which are necessary for producing compounds that transmit nerve impulses, were low. After only five days, the levels of those on the protein drink returned to normal and resulted in a restoration of cognitive performance. (*Proc Natl Acad Sci USA* 2010;107:366–371.)

I hope this is the type of research that quickly translates into changes in the way brain-injured patients are treated. It's definitely something you'll want to keep in the back of your mind.

For years I've consumed and recommended a whey protein shake for breakfast. And for those of you drinking a daily protein shake, it should also give you some peace of mind knowing you're on the right track for improving brain function.

(Fish continued from page 69)

Personally, I don't know the total answer to the situation. It's a complex, worldwide problem. Just keep in mind that fish and fish oil aren't the only sources of beneficial omega-3 oils. Each have varying content of the numerous fatty acids, but seeds, seed oils, nuts (particularly walnuts), and even grass-fed meat are things you can and, I think, should, include in your diet. Flax and chia are abundant and highly beneficial. This is another case where having a larger variety of foods in your diet will prove to be beneficial in the long term.

Each time you're in the grocery store, pick up a different vegetable and a different fruit to try. If you haven't consumed flax or coconut oil, pick up a small bottle of a quality product and give it a shot. Make a point to eat more nuts and seeds like sesame and chia. And, don't overlook one of my favorite omega-3 sources: the "hobo food," sardines. The more we learn about health, the more it becomes apparent that variety is not only the spice of life but may also be the spark of life.

The Grapefruit Diet Is Back

I can remember as a child my mother's fondness for grapefruit. She's never been overweight, but at the time the grapefruit diet was popular. Surprisingly this is one diet that seems to have stood the test of time. Newer studies show that grapefruit can be an effective fat-loss agent.

Researchers at the University of Western Ontario showed that the flavonoid naringenin in grapefruit could prevent metabolic syndrome in animals.

Mice were fed a high-fat Western diet to induce the symptoms associated with metabolic syndrome. Half of the group was given naringenin. Unlike the others, those getting naringenin didn't experience elevations in triglycerides and cholesterol. It also prevented the development of insulin resistance and completely normalized glucose metabolism. The flavonoid appeared to work by "genetically reprogramming" the liver to burn excess fat rather than store it. Also, those mice who didn't receive the naringenin gained enough weight to be classified

as obese, whereas naringenin completely prevented the obesity. (*Diabetes* 09;58:2198-2210)

An earlier study found that one could lose weight simply by eating half a grapefruit or drinking 8 ounces of grapefruit juice before each meal. Those who followed this program each day for 12 weeks lost an average of almost 4 pounds *without adding any exercise to their normal activities*. (*J Med Food* 06;9:49-54)

Currently, there hasn't been enough research to determine an effective oral dose of naringenin in humans. In nature naringenin is just one of many flavonoids that are present in grapefruits and other citrus fruits. It is also present in tomatoes, and one study found that plasma levels could be increased through the consumption of tomato paste. (*J Nutr* 02;132:3349-3352)

While half a grapefruit or 8 ounces of juice before every meal may not seem like much, it adds up over time. Just keep in mind, however, it can interfere with various medications like statins, certain blood-pressure drugs, HIV medications, antidepressants, oral contraceptives, and anti-seizure drugs.

I don't know of any stand-alone naringenin supplement. Some supplements, like Daily Advantage, contain a blend of citrus bioflavonoids, which I think is the most prudent way to supplement your diet at this time. I also think grapefruit is a healthy and beneficial fruit.

And, if you don't take the medications above, it can certainly be an easy, enjoyable way to help lose some weight and prevent many of the problems associated with metabolic syndrome, which has now become rampant in our society. The particular disorders that define metabolic syndrome (high blood pressure, abdominal obesity, atherosclerosis, and insulin resistance or diabetes) are the major risk factors for cardiovascular disease, the leading cause of death in this country. In that light, eating grapefruit on a regular basis seems like an even better idea.

Take care,

Dr. David Williams

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. 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.

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