

A Surprising Drawback of Green Foods

Like most other areas of the country, we've had a difficult winter here in Texas, with ice and freezing temperatures. Fortunately, in this neck of the woods, any severe cold weather typically lasts only a few days. It's not uncommon to have



Dr. David Williams

a couple days with temps in the 20s immediately followed by 70s. Invariably, these intermittent fluctuations seem to catch a lot of people off guard. Local weather reporters constantly have to remind us to protect our pets, plants, and pipes and ensure that our car's cooling system has adequate antifreeze. Along with

this warning is the caution to keep antifreeze away from pets.

The primary ingredient in antifreeze is ethylene glycol, a colorless, odorless form of alcohol. Domestic and wild animals (and small children) are attracted to its sweet taste, but consuming it can be fatal. The underlying cause of its toxicity isn't so much the ethylene glycol itself, but rather its metabolite, oxalic acid—also called oxalate.

Almost all kidney stones are formed from oxalate and another mineral, typically calcium. When one ingests antifreeze, the glycolic acid is metabolized into oxalic acid, which binds to calcium, forming calcium oxalate crystals. These razor-sharp crystals accumulate in tissues throughout the body, including the brain, bones, lungs, and kidneys. In antifreeze poisoning, the accumulation of oxalate crystals in the kidneys causes severe damage and kidney failure, resulting in death.

Antifreeze poisoning illustrates an extreme situation involving oxalate crystals. And although I'm not worried about you drinking antifreeze, there are a couple of current health fads that can pose

a threat to your health by raising oxalate levels in your body.

The "Green" Craze

Lately there's been a lot of publicity about the so-called health benefits of green smoothies. There are internet blogs and dozens of websites totally devoted to promoting green smoothies as the way to easily lose weight, increase vegetable consumption, and cleanse the body. Even Vitamix, a product I love and use daily, promotes green smoothies on their website. Before you get caught up in the green smoothie craze, there are a few things you should know.

The basis of most green smoothie recipes is spinach and most will include other green vegetables such as kale, arugula, Swiss chard, collard greens, broccoli, celery, or parsley. From there, the sky is the limit. All types of fruits and berries can be on the ingredient list, as well as soy milk.

Unfortunately, as most kidney stone sufferers well know, many of these foods are very high in oxalate and can increase kidney stone formation. In addition to spinach, some of the biggest offenders include chives, purslane, cassava, amaranth, beets (particularly the tops), rhubarb, parsley, sweet potatoes, pokeweed,

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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

leeks, turnips, sugar beets, okra, strawberries, star fruit, lime and lemon peel, pecans, chocolate, tea, instant coffee, toasted wheat germ, dry beans (almost all except lima and green beans), soy protein (including soy milk), peanuts, peanut butter, and black pepper.

You'll notice that many of these foods are healthy and beneficial in moderation. But for individuals who can't process oxalate and are susceptible to kidney stones, they can trigger problems quickly.

According to the National Kidney Foundation, the lifetime risk of kidney stones in men is 19 percent. In women, it's 9 percent. And once you have formed a stone, the likelihood of recurrence is more than 50 percent at five years and 80 percent at 10 years. Roughly 3.5 million people in this country seek medical care for kidney stone removal each year.

Daily oxalate intake in adults averages 69–235 mg per day. In comparison, many green smoothie recipes typically call for two cups of spinach *in addition* to other high-oxalate foods. Two cups of spinach alone contain roughly 1,450 mg of oxalate. Daily oxalate intake skyrockets when you add

other ingredients and/or substitute one or two meals a day with these smoothies.

Oxalates Bad, But Thylakoids Beneficial

Please don't get me wrong. The health benefits of eating greens such as spinach are unquestionable. I have a great crop of spinach growing in my garden right now. But it's not something I eat every-day nor liquefy into a daily green smoothie.

As you know, I'm constantly searching the world for natural remedies and therapies, and not too long ago I learned about an amazing discovery by Charlotte Erlanson-Albertsson, Professor of Medicine and Physiological Chemistry at Lund University in Sweden. She discovered that thylakoids extracted from spinach could have a profound effect on increasing satiety and reducing dietary cravings and hunger. It is one of the most amazing extracts I've seen and I certainly don't want you to confuse the extract (called Appethyl) with raw spinach.

Thylakoids are the membrane sacks or pouches in plant chloroplasts that facilitate photosynthesis. Spinach just happens to be very rich in thylakoids, which work their magic by naturally extending digestion time. Studies

have shown that taking 5 grams in the morning can decrease cravings and hunger and improve digestion throughout the entire day. To be effective, however, the thylakoids have to be extracted from the spinach and consumed with a little bit of fat. Simply eating spinach won't work, since the thylakoids will simply pass through the digestive tract untouched.

Since it is derived from spinach, a daily dose of Appethyl does contain oxalates (in the neighborhood of about 200 mg per 5 gram dosage). However, as long as it's not combined with additional spinach, soy, or other high-oxalate foods, it shouldn't cause any issues.

I'll be talking about the benefits of thylakoids for a long time. I don't want you to discount this compound based on its minimal oxalate content.

Beyond the Kidneys

It's one thing to rotate spinach and other vegetables and foods in your diet. With the exception of soy and processed wheat, all are healthy choices for anyone who doesn't have allergies, gout, or recurring kidney stones.

Consuming them in large quantities day after day, however, could lead to oxalate crystals accumulating in other tissues beyond the kidneys. I suspect there are a lot

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of unresolved health problems that are linked to oxalate crystal deposition. One possible example would be fibromyalgia. Symptoms of fibromyalgia include chronic muscle pain, spasms and stiffness upon waking, fatigue, insomnia, depression, tension headaches, numbness in the face and extremities, urinary urgency or frequency, and reduced tolerance for exercise.

Oxalate crystals could be compared to small shards of broken glass. You can imagine the damage and pain that would occur upon movement when these crystals form in skeletal muscle. Normal movement would be difficult and exercise would only increase the damage and make the pain and disability worse. If you look at therapies for fibromyalgia, the possible connection to oxalate crystals makes sense.

There doesn't seem to be any one cause of fibromyalgia. The symptoms are so varied that only recently was it recognized as a real problem. Treatment recommendations are also all over the map. We do know that diets that include natural anti-inflammatory compounds such as omega-3 fatty acids can help control the pain. And there's a considerable amount of research showing that antifungal therapy can often resolve both fibromyalgia and chronic fatigue syndrome. One of the fungal culprits associated with these problems is *Candida albicans* (candida).

The Candida Connection

Candida is a fungus, a form of yeast, that normally resides in the gastrointestinal tract and aids in digestion. As many as two-thirds of people suffering from fibromyalgia and chronic fatigue are thought to have an overgrowth of candida.

(Keep in mind, an overgrowth of yeast can occur in other places besides the gut, including the toenails, sinuses, lungs, or vagina. Any of these may be an indication of a larger underlying problem/imbalance.)

Yeast feed on sugar. Not surprisingly, the typical high-carbohydrate Western diet sets the perfect stage for candida overgrowth. Combine this with other factors that destroy the beneficial gut bacteria that are necessary to keep candida growth in check (antibiotic and drug overuse, mercury fillings, chlorinated water, low stomach acid, and the lack of probiotic supplements and fermented foods in the diet), and you have the perfect storm.

When you feed sugar to yeast, the byproduct is alcohol. This is exactly how you make wine, beer, and hard liquor. ("Yeast eats sugar, craps alcohol, and farts carbon dioxide," the saying goes.)

"Drunk" Without Drinking

Under ideal circumstances, the alcohol from candida, just like any alcohol you might consume, is converted to acetaldehyde, which is then oxidized to acetic acid and eventually acetyl-CoA, which is used for cellular energy.

Unfortunately, this isn't always the case. The majority of our population is deficient in various nutrients and enzymes necessary to quickly and efficiently make this conversion. Additionally, people who have an overload of candida are constantly subjecting their bodies to alcohol even if they aren't drinking alcoholic beverages. Dr. Keith Eaton, a researcher in the

UK, demonstrated this with blood alcohol tests.

Dr. Eaton performed a baseline blood alcohol test on individuals with chronic fatigue and candida overgrowth. A follow-up test taken two hours later, after these people consumed a glucose-sweetened drink, clearly showed their blood alcohol levels were significantly higher. This helps explain not only why many individuals with a candida overload are very sensitive to the effects of alcohol but also often feel drunk after consuming sugar or highly refined carbohydrates.

The alcohol production is only one part of the problem.

When there is an overabundance of alcohol, or your body lacks the ability to fully convert alcohol, it can result in an excess of acetaldehyde. Alcohol makes you drunk, but it's acetaldehyde that gives you a hangover. Acetaldehyde is over 30 times more toxic than alcohol.

Acetaldehyde is broken down by the enzyme acetaldehyde dehydrogenase. The prefix "de" means "to remove," and the word "hydrogen" comes next. This enzyme removes a hydrogen atom and transforms acetaldehyde into acetic acid. Here are a few interesting facts about alcohol consumption and the enzyme acetaldehyde dehydrogenase...one of the primary enzymes that breaks down alcohol.

- **Women produce less of this enzyme than men.**
- **Many Eastern Asians and American Indians produce a form of this enzyme that is far less effective at breaking down alcohol than Caucasian men. As a result, they become more intoxicated on less alcohol.**

- **As men age, they produce less of the enzyme. But age doesn't affect its production in women.**
- **Individuals with liver damage produce less of the enzyme.**
- **Frequent, heavy drinkers tend to produce more of the enzyme and therefore become less intoxicated on more alcohol.**
- **The anti-drinking drug Antabuse binds to the enzyme and keeps it from breaking down acetaldehyde. As levels build up, symptoms such as headaches, nausea, and vomiting occur. Large quantities of this drug can cause death.**
- **Aspirin taken prior to drinking also blocks the actions of this enzyme.**
- **Cayenne pepper dilates blood vessels and increases the absorption of alcohol. There are now a lot of hot cinnamon and pepper infused or flavored hard liquors on the market. The drinking crowd imbibes them as shots to speed up intoxication. The current favorite among college students seems to be an inexpensive cinnamon whiskey called Fireball. While "generally recognized as safe" by the FDA, Fireball's manufacturer, Sazerac, uses propylene glycol as an ingredient in the drink. Propylene glycol is a less toxic alternative to the ethylene glycol found in antifreeze. Because of this ingredient, Sweden, Finland, and Norway have banned sales of the product.**
- **Alcohol mixed with diet soda, as opposed to regular soda, leads to quicker intoxication.**

Acetaldehyde (closely related to formaldehyde) is what that causes liver disease and pancreatic damage from alcohol abuse. Individuals who have problems breaking down acetaldehyde also have a greater risk of developing Alzheimer's disease. Acetaldehyde is classified as a probable human carcinogen, a neurotoxin, and is toxic to the respiratory, immune, and endocrine systems. It

impairs the transport of oxygen by blood hemoglobin molecules and severely compromises brain neuron activity and function.

Acetaldehyde is also one of the components of cigarette smoke, vehicle exhaust fumes, and industrial smog, and is a compound widely used in manufacturing. It is one of the "off gases" of plastics, dyes, fabrics, adhesives, fuels, plywood, particle board, carpet, insulating foams, preservatives, and fragrances.

The pervasiveness of acetaldehyde further explains why individuals with candida overgrowth can be so sensitive to their environment. Their inability to break down any excess acetaldehyde can often cause even the most trivial exposure to wreak havoc on their body.

Eliminating Mild Candida

The obvious solution for candida overgrowth is to reestablish the beneficial gut bacteria that keep it in check. In milder cases, this can be done with the proper pre- and probiotics, fermented foods (sauerkraut), and the elimination of sugar, white flour, and other refined carbohydrates. There are many variations of candida diets but in all, the removal of sugar, alcohol, and refined foods are essential to starve candida of its preferred food source.

You can find many of these diets online. How drastically you will have to change your diet depends on the condition of your digestive tract. I typically like more of what is called a Paleo low-FODMAP diet, taken from work done at Monash University in Australia in dealing with irritable bowel syndrome (IBS) patients. If you Google this diet, you can get lots

of details and learn about the various food options available.

Severe Cases of Candida

In more severe cases, the candida has become so entrenched that its numbers have to be reduced significantly before other beneficial microbes can gain the upper hand and keep it in check. Diet alone generally won't fix the problem. It also requires the use of natural antifungals (grapefruit seed and olive leaf extracts, coconut oil, oregano oil, garlic, d-Limonene, malic acid, Pau D'Arco, turmeric, etc.).

For example, in addition to dietary changes, a sample program might include a tablespoon of coconut oil, 2 or 3 cups of Pau D'Arco tea, and three capsules of an extract or oil mentioned above each day. In the toughest cases, I've found that rotating the various products every three days is even more effective. So for three days, take oregano oil. The next three days, take olive leaf extract. Then for the next three days, take grapefruit seed extract and keep repeating this rotation for about six weeks. Not everyone will respond the same way. This is why I recommend enlisting the help of a health practitioner who is familiar with candida overgrowth and gut microflora.

You can't (and shouldn't) completely destroy or remove candida from the system. That's not the overall goal. Like other yeast, bacteria, and even some viruses, it plays a role in our digestive and immune systems and overall health. And like many of the other microorganisms, it only becomes a problem when its numbers get out of balance.

Here are several techniques that I have found to be the most helpful

in severe and chronic candida overgrowth cases.

In past issues I've talked about biofilms that develop in the gut, particularly in the large intestine. These are complex gelatinous matrices created by microorganisms that afford them protection while helping them to adhere to the intestinal walls and crevices. You could think of them as a sticky, flexible glue produced by candida colonies. (Dentists refer to biofilm as plaque.) The inability to penetrate these biofilms is why many candida therapies fail to work. Natural enzymes and specific foods can be used to disperse these films and are often a key component in dealing with the problem.

Many species of bacteria form biofilms in response to antibiotics to help them survive an attack. This was just considered a stress-response from the bacteria and one of the unfortunate side effects of antibiotics. New research, however, shows that some antibiotics themselves stimulate the formation of biofilms regardless of any ability they may have to destroy bacteria. (*Proc Natl Acad Sci U S A* 2015 Feb 23. pii: 201414272)

In simple terms, this means that as antibiotics are becoming less and less effective at killing bacteria, they are actively promoting the creation of biofilms in the body. Pathogenic bacteria hide and flourish in these protective biofilm structures.

Products such as Digestive Enzyme Advantage include a wide variety of enzymes that break down the polysaccharides, proteins, and other compounds that form the matrix of biofilms. Other natural supplements that can help

include papain (from papaya), bromelain (from pineapple), and nattokinase (from fermented soybeans). The fermentation negates the problems typically associated with soy.

With severe, chronic cases of candida overgrowth, many people experience a flood of toxins as the yeast dies off. This is referred to as the Herxheimer reaction, with symptoms similar to those of a flu. I have found that *food grade* diatomaceous earth (as opposed to that used in swimming pools) can help remove these toxins and ease that burden. A teaspoon daily mixed with water, taken with meals for about two months, is the general recommendation.

When the candida population has been reduced and stabilized, it's important that you continue to take a quality probiotic, eat the proper foods, de-stress, etc.

Back to Acetaldehyde...

Coping with the toxicity of acetaldehyde requires that it be metabolized, detoxified, and cleared from the body. The chemical pathways in the body that accomplish this require certain minerals (calcium citrate) and nutrients. Many of these are deficient in our diet.

Adequate amounts of vitamins C, A, and the B-vitamin family, including B1 (thiamine), B2 (riboflavin), B3 (niacin), B5 (pantothenic acid), B6 (pyridoxine), and folic acid, are essential in this process.

It's interesting to note that when animals were given the equivalent of a daily human dosage of 15,000 IU of vitamin A, it helped prevent the deposition of oxalate crystals in their kidneys. However, when the vitamin A was given after the

oxalate, there was no protection. (*Ann Urol* 1994;28(3):128-31)

This is one of the primary reasons I stress the importance of taking a quality multivitamin/mineral supplement every single day. I strongly believe it's critical that you make sure your body always has a supply of protective compounds. You never know when there will be an exposure to some pathogen or toxin, an assault of free radicals, or mutation of DNA. It's the difference between preventing disease or trying to cure disease after the fact.

Sulfur-containing amino acids such as cysteine are also necessary in dealing with acetaldehyde. Cysteine is one of the amino acids that make up glutathione, a compound that I've written about many times in the past. It is one of the most powerful free-radical scavengers and one of the very reasons I made sure to include it in my daily vitamin/mineral formulation. I've also included molybdenum, a little-known and under-appreciated trace mineral. The metabolic pathways that metabolize acetaldehyde are dependent on molybdenum.

The formation of excess acetaldehyde isn't the only problem resulting from an imbalance of microorganisms in the body and an overgrowth of candida.

The hydroxide (HO) portion of the alcohol, created by candida, attaches to minerals like calcium and forms even more oxalate crystals.

As I mentioned earlier, the symptoms and health problems associated with oxalate crystals depends on where the accumulation occurs. And this can be just about anywhere in the body. Small amounts

of oxalates can cause headaches, pain and twitching in muscles, and cramps. Larger doses have led to weak, irregular heartbeat, drops in blood pressure, and even signs of heart failure.

If you have a recurring or chronic problem that you can't seem to resolve by other techniques, oxalate crystal accumulation might just be a contributing or causative factor.

I've noticed this to be the case in vegetarians, vegans, and individuals who have restricted their meat intake in favor of salads and soy as

their main protein source. It's not uncommon to find them consuming a generous helping of sautéed spinach or a spinach salad every day or several times a week. (And keep in mind, cooking doesn't reduce the oxalates in spinach or other foods.)

Green leafy vegetables can and should be part of almost everyone's diet. However, green smoothies on a regular basis could create some real nightmares. If you feel the need for a regular green drink, I

would suggest either wheat grass or raw cultured vegetable juice.

When it comes to health, there are two recurring principles—variety and moderation.

By increasing the variety of vegetables (and other foods) in our diet, we get a greater array of health-promoting microorganisms, antioxidants, phytonutrients, minerals, and vitamins. And when it comes to moderation, nobody explained that better than Oscar Wilde, who has been credited with saying, "Everything in moderation, including moderation." ■

The Rise of ADHD and "Legalized Speed"

In one of the more disturbing reports I've read lately, researchers examined data from interviews conducted with the parents of 17,000 children. They found that 7.5 percent of children aged 6–17 were taking prescription medication for emotional or behavioral problems.

It's no surprise that the very large majority (more than 81 percent) of these kids had been diagnosed with attention deficit hyperactivity disorder (ADHD). Other diagnoses included anxiety and depression. It shouldn't be surprising, either, that more boys are being medicated than girls...9.7 percent and 5.2 percent, respectively.

White children were most likely to be on medication (9.2 percent), followed by black (7.4 percent) and Hispanic (4.5 percent). Think about that for a moment...close to 10 percent of all white children in this country are on "legalized speed."

The data from the Centers for Disease Control and Prevention

(CDC) are even worse than reported in this study. They report that the rate of ADHD diagnosis has increased an average of 5 percent per year from 2003 to 2011. And 11 percent of all children in the United States between 4–17 years of age have been diagnosed with ADHD. (In Kentucky, that number is 18.7 percent.)

A Catch-All Diagnosis

ADHD seems to have become the catch-all diagnosis for dealing with any behavioral problem. Dr. Edward Hallowell, co-author of *Driven to Distraction*, summed it up pretty well: "ADHD has become a seductive diagnosis that is unfortunately easy to confuse with symptoms of everyday life."

It gives children an excuse for their behaviors, it relieves parents of any responsibility, and it provides counselors and psychiatrists an acceptable cookbook diagnosis and treatment solution. Most importantly, it gives the pharmaceutical

industry another way to legally print money at the expense of the public.

It's interesting to also note that significantly more children on Medicaid or the Children's Health Insurance Program were on medication (9.7 percent) compared to children on private insurance (6.7 percent) and children with no insurance (2.7 percent). Apparently, children whose insurance will pay for the drugs have more behavioral problems. Maybe insurance is the problem?

You have to wonder just how far our society has fallen that it's now become necessary to medicate one out of every 13 children in this country with addictive amphetamines such as Adderall, Ritalin, and Concerta (a longer-lasting form of Ritalin). Doctors prescribe these drugs to children as young as 3.

Besides the creative marketing jargon of the pharmaceutical companies, there's really very little difference in these drugs and the

methamphetamines or speed being sold by illegal drug dealers.

Lack of Discipline

Attention deficit disorder (ADD) first came about in the mid-1980s, and then it was refined or broadened to ADHD in 1987. This also happened around the same time the pharmaceutical companies began to heavily market Ritalin and other “solutions.”

Although there are numerous factors at play here, for many children, part of the problem has to do with a lack of discipline and accountability. For example, never in my lifetime have I ever seen more cursing, disrespect, and even physical confrontation in our school classrooms. Sadly, rather than correcting these students’ behaviors, as happened in early times, most are now simply labeled as ADHD and started on a lifetime of drugs.

Overstimulation Causes

Although I have no doubt that a lack of discipline and personal responsibility play a role, in some cases, there is a more serious underlying problem occurring with ADHD. Studies have repeatedly shown that there can be distinct physical and chemical changes in the brains of children diagnosed with ADHD. (*Arch Gen Psychiatry* 2006 Jul;63(7):795–807)

Many of these changes appear to be the brain’s way of adapting to overstimulation. I’ve talked repeatedly in the past about resistance... insulin resistance, leptin resistance, etc. Resistance develops because the body is innately programmed to always restore homeostasis (balance) whenever our

internal environment is disturbed. For example, whenever a nerve receptor is constantly bombarded, the body will tune it out or make it less sensitive to the stimulus. It becomes resistant to whatever is continually trying to stimulate it. It’s a protective mechanism that allows our bodies to keep functioning in other areas.

With ADHD, brain neurons have been stimulated to the point that it takes a stronger and stronger stimulus to function. There are numerous factors that can cause this resistance, which often lead to the ADHD label. Here’s an abbreviated list.

- **Drugs.** It doesn’t matter if the drugs are illegal, over the counter, or prescription. They are all directly or indirectly disruptive to the nervous system. Among hundreds of other side effects, we know they wreak long-term havoc in the digestive system by altering microflora. Painkillers, antihistamines, and antibiotics are given to kids like candy now.
- **Toxins.** These can be from chronic exposure to pesticides, herbicides, or other chemicals used around the home, food additives (such as MSG), or plastic compounds leached from packaging. Allergies to certain foods or compounds can also be a contributing factor. (Gluten comes to mind.)
- **Sugar, high-fructose corn syrup, and other refined carbohydrates.** These are undoubtedly the greatest sources of stimulants in our society. Children with ADHD almost 100 percent of the time suffer from blood sugar handling issues such as weak adrenals and hypoglycemia. The inability to stabilize blood sugar is one of the primary triggers of ADHD symptoms. Blood sugar must be normalized and controlled to eliminate ADHD, and this can be done with the proper diet and nutritional supplementation.

- **Stress.** Unresolved stress leads to chronically high levels of cortisol and inflammation throughout the body. (Physical exercise, something many kids lack these days, is one of the very best methods to help counteract the effects of stress.)

Stress also lowers brain dopamine levels, which is one of the hallmarks of ADHD. Dopamine is a neurotransmitter linked to movement, sleep, mood, attention, and learning. It’s probably best known for its strong links to pleasure centers in the brain. Drugs such as heroin, cocaine, and nicotine cause the body to release as much as 10 times the amount of dopamine that natural rewards would. They also do it more quickly and more reliably. That’s what makes these drugs so addictive.

And again, as a protective measure, brain receptors start to get overwhelmed and become more resistant. That’s why, in time, it takes more and more of these drugs to trigger that pleasure sensation. It just so happens that Ritalin also increases dopamine levels through the same mechanisms as cocaine. And like cocaine, as the body develops a resistance, dosages have to be increased. But because the increase takes longer (60 minutes when given in pill form), it is considered safe for children and less addictive. (For the record, to avoid the 60-minute wait, Ritalin is snorted just like cocaine by those who abuse the drug.)

Adderall acts a little differently on the brain than Ritalin. Adderall’s actions resemble that of methamphetamines or crystal meth. Ritalin and Adderall are classified as Schedule II substances under the Controlled Substances Act. Other Schedule II drugs include opium, cocaine, and methamphetamine. These drugs are addictive and dangerous, and giving them to children is absurd. The human brain doesn’t stop developing until we’re in our mid-20s. Unnecessarily using drugs to flood

it with dopamine during childhood can alter development. The brain can become desensitized to natural rewards like food, romance, and social interactions, leading to depression, addictive personalities, and God only knows what else.

- **Nutritional deficiencies.** Children with ADHD routinely have an imbalance in their omega-3/omega-6 fatty acid ratio. That's why so many research studies have shown dramatic behavior improvement when kids supplement with fish oil and eliminate omega-6-rich foods such as vegetable oils, salad dressings, mayonnaise, French fries, nuggets, cookies, pastries, margarine, and other processed foods. (*Prostaglandins Leukot Essent Fatty Acids* 2013 Jun;88(6):419–29) (*J Child Health Care* 2011 Dec;15(4):299–311)

Another study found that 84 percent of ADHD children were low in iron compared to 18 percent of non-ADHD children. (*Arch Pediatr Adolesc Med* 2004 Dec;158(12):1113–5)

Other studies have seen an association between the incidence of ADHD and magnesium, vitamin B6, zinc, and selenium. These are many of the same deficiencies we see throughout our population, which are directly related to our Western diet. From a specific nutritional standpoint, I recommend a daily multivitamin, fish oil, probiotics, whey protein powder, and lecithin granules (non-GMO sunflower-sourced, which can be mixed in a shake with the whey protein powder).

I'm not giving specific dosages because they will vary depending on the child's weight. Probiotics are the exception; kids can take the same dose as an adult. A ballpark estimate for children's doses would be to take the recommended adult dose, and for children between 50–100 pounds, halve the adult dose. If the child weighs 25–50 pounds, then use 1/4 of the adult dosage.

Wake Up, Parents!

The phrase “attention deficit” is confusing because it implies the person can't be attentive. In reality, ADHD children can be very attentive...for a short time. Their real problem is staying focused. For instance, a child with ADHD can play a video game for hours...as long as it is highly stimulating. Their brain has become resistant to normal levels of stimuli, and this results in easily becoming bored. Overcoming this requires greater and greater levels of stimuli to keep their attention.

History one day will show that ADHD has been grossly over-diagnosed and over-treated. I can't help but wonder why more parents don't ask their doctors how they can *cure* this problem. It appears that most have concluded that diseases actually can't be cured anymore. They've accepted the premise that diseases are actually drug deficiencies. As a result, we are raising generations of children on legalized, addictive stimulants.

ADHD drugs have quickly become a \$10 billion-a-year cash cow for the pharmaceutical industry. ADHD drugs are so plentiful that they are now being easily diverted for recreational use in colleges and on the streets. The pharmaceutical industry, government, psychiatric profession, and insurance companies have no incentive to stop this madness. We can only hope that parents wake up and realize what's happening to their children.

Until next month,

Dr. David Williams

This Month Online



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