



The Aztec Secret to Health

irst, I want to thank you again for allowing me to do what I enjoy most. Your support over the last 20-plus years has given me the opportunity to investigate and report on a long list of unknown or underutilized remedies for all types of health problems.

Dr. David G. Williams all types of health problems. As a reader of *Alternatives*, you obviously share some of the same concerns.

One of the primary concerns is that, when it comes to health and health care, the majority of people in this country are headed down the wrong path. This is a nobrainer for you and me, but most people (or "sheeple," I should say) in today's society are blindly following the herd over the cliff while trusting that the medical establishment, the pharmaceutical industry, or the government regulatory agencies will come to their rescue.

One of the most valuable things in life is our health. As such, you would think it would always be at the top of our society's priority list. I think people in the future will look back on this time period in utter amazement at how our overall health could take such a serious downturn during a period of such great discovery and technological achievement. With all of the discoveries in anti-aging, genetics, nutrition, human physiology, emergency health care, and other technologies, it would only be reasonable to assume that our overall health as a society has improved dramatically. Unfortunately, nothing could be further from the truth.

As a society we are living longer lives—but not necessarily healthier ones. Most efforts have been focused on ways to live with disease rather than prevent it. By neglecting our diet and health habits, in just the last couple of generations we have managed to saddle our infants and children with a long list of diseases that were before seen only in elderly adults—and rarely even then. Thanks to technological and medical breakthroughs, we're now able to pharmaceutically "treat" our grade-schoolers at the first sign of their obesity, heart disease, high blood pressure, diabetes, or psychological disorder.

When I first started *Alternatives*, I imagined that within a period of eight or ten years alternative treatments would no longer be "alternative." I honestly thought mainstream medicine would become focused on proper diet, exercise, nutrition, and natural therapies, and the use of drugs and surgeries would be on the decline and considered a last resort. Man, was I wrong.

I'm telling you all of this for a couple of reasons. First, I think the health situation of our society will continue to deteriorate for quite some time. Even if we were to make extremely drastic changes in the right direction, it would take at least two generations before we started to see significant improvements. A situation like the one we've gotten ourselves into simply can't be reversed overnight. And second, the current worldwide economic and political situation will begin to shift much of the focus away from health issues to other priorities.

My focus has been and always will be to provide you with the most effective, safe, and inexpensive ways to preserve and/or regain your health. Knowing exactly how to access and use these tools and techniques will be a true godsend in both good times and bad.

In This Issue

The Aztec Secret to Health65	
News to Use: Wine With Dinner; Barrett's Esophagus69	
Pay No Attention to That Man in theExpensive Suit	

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

Common Things Bring Uncommon Good

A few months ago I wrote about the product XPC from Diamond V Mills. I hope you now have a small stockpile for yourself and your family. [*Editor's note: See Vol. 12, No. 3 for more information about XPC.*] Elsewhere in this issue I discuss the importance of probiotics in our world of ever-increasing antibiotic-resistant strains of bacteria, possible flu pandemics, biological weapons, et cetera. I hope you've learned how easy, inexpensive, and enjoyable it is to make your own high-probiotic, fermented foods like sauerkraut and yogurt, and the importance of taking a good probiotic supplement.

Another item you'll want to have on hand is chia seed. I can vividly remember watching late-night commercials in the 1980s and hearing "*Ch-ch-ch-chia!*" as sprouts were shown growing out of a funky terra-cotta Chia Pet. At the time, the last thing that would have crossed my mind was eating chia seeds as a food. Little did I know.

For decades, I've traveled extensively throughout Mexico and Central and South America in my investigations (in fact, my last trip into Mexico was less than a month ago). One of my favorite areas is the southern part of Mexico next to Guatemala, which also happens to be where chia (*Salvia hispanica*) was first cultivated.

Chia has a long history of use among the Aztec and Mayan cultures. To the Aztecs it was an integral part of their diet, as well as a key component in their religious ceremonies. Their warriors also utilized it as a survival ration. When the Spanish Conquistadors under Cortez invaded the area they almost totally destroyed chia crops in their efforts to conquer the Aztecs.

Historical records indicate that chia has been used as a food as far back as 2500 BC. Up until a couple of decades ago it was grown only on small family plots, but it's now being grown commercially in various Latin American countries. Chia's resurgence is in large part due to the research of Dr. Wayne Coates, a retired research professor who was with the Office of Arid Lands Studies at the University of Arizona in Tucson. In 1991, Dr. Coates actually took seeds from Mexico and planted the first crops in Argentina. Since that time, he has helped develop the growing, harvesting, and processing methods that are in use today. Dr. Coates, along with Ricardo Ayerza Jr., has written the definitive text on the subject of chia, called *Chia: Rediscovering a Forgotten Crop of the Aztecs.*

Dr. Coates has spent the last 17 years working to make the health benefits of chia available to the general public. It couldn't have happened at a better time.

Chia Compared to Other Foods

Oil from chia has the highest proportion of omega-3 fatty acids of any plant known. I've outlined the dangers of omega-3 deficiencies and the imbalance of omega-3 oils to omega-6 oils in our diet for years. Until chia became available, the oils from flaxseed, fish, and marine algae were considered to be the only other viable sources of dietary omega-3s. And each of these have their own problems and drawbacks.

Special varieties of flaxseed had to be developed to remove certain toxins inherent in native varieties. With flaxseed, which I've used and recommended for years, you have to be careful to avoid problems with preservation. To be digested, flaxseed has to be ground—which increases the risk of oxidation and rancidity if you don't consume it right away. All omega-3 oils are highly reactive and subject to oxidation, and flaxseed and fish oils don't contain naturally high levels of protective antioxidants—which is why fish oil capsules often contain added antioxidants such as vitamin E and rosemary.

Fish oil can be another excellent source of omega-3 fatty acids, but I guess you could say it has its own set of issues. A lot of people simply won't eat fish. And, for those of us who do, we have the problem of mercury contamination due to the increased pollution in our waters. Unfortunately, mercury is probably only the tip of the iceberg when it comes to contamination. The increase in other toxins, pesticides, herbicides, and even human pharmaceuticals and hormones in our waterways will eventually find their way into our wild fish stock.



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Dr. Williams works closely with Mountain Home Nutritionals, a division of Doctors' Preferred, LLC and subsidiary of Healthy Directions, LLC, developing his unique formulations that supply many of the hard-to-find nutrients he recommends. Dr. Williams is compensated by Doctors' Preferred, LLC on the sales of these nutritional supplements and health products, which allows him to continue devoting his life to worldwide research and the development of innovative, effective health solutions.

Alternatives

Fish farming has been presented as a solution, but that leads to further contamination. Near-shore waters where fish farms are located are simply dirtier than the off-shore waters where deep-sea fish are caught. And fish raised in a farmed environment live lives that don't allow for the normal excretion of toxins.

Reputable companies test their fish before offering it for sale as either fresh or canned product, but in the years to come it will become more and more difficult to locate untainted sources of fish. You don't need to stop eating a food as beneficial as fish, but you do want to stick with wild-caught fish whenever possible, and look for younger, smaller fish—ones that haven't yet lived long enough to accumulate high levels of toxic compounds.

What many people don't understand is that if you want omega-3s in the flesh of a fish, what the fish eats must contain omega-3s. Wild fish get their omega-3s by eating algae and smaller fish. Farmed fish have to be fed either flaxseed, chia, or fish meal made from other fish in order to raise their omega-3 content.

We're beginning to see that the demand for fish is overwhelming the supply. It may not be a renewable resource. High-quality fish oil is becoming more and more expensive, and I don't think it will be long before the cost will put it out of reach for most people.

Chia overcomes these problems naturally. It's naturally high in omega-3—the highest plant source. It isn't contaminated. It's naturally pest-free, so it doesn't require the use of pesticides or herbicides for growing. It's a totally renewable resource. It contains a naturally high level of antioxidants—including caffeic acid, chlorogenic acid, and quercetin—that protect it from rancidity.

Chia's Many Benefits

Chia has several other amazing attributes that no doubt supported the Aztecs' belief that it could provide mystical and supernatural benefits.

Chia is a good source of protein and calcium, low in sodium, lower in net carbs than other grains, and an excellent source of both soluble and insoluble fiber. Chia is 16 percent protein, 31 percent fat, and 44 percent carbohydrate—of which 38 percent is fiber. (The balance is water and what's known as "ash," a measure of the mineral content.) Most of chia's omega-3 content is in the form of the essential fatty acid alpha-linolenic acid or ALA.

Chia has been used as food for thousands of years without any problems. It stores without refrigeration or special care. It digests easily without having to be ground. (Although the Aztecs also ground the seeds into flour for baking.) And, unlike other grains, there are no reports of allergic reactions. There's nothing *not* to like about chia unless you're trying to sell fish/marine oil or flaxseed.

(Don't get me wrong, I still love flax and the proven benefits of fish oil. And, I'll continue to eat fish and recommend that you add fish to your diet. I do, however, think that chia will be the logical replacement, and I intend to start adding chia to my daily regimen and cut back a little on my use of flax and fish oil.)

The research on chia is very impressive, but limited. Research is expensive, particularly on humans, and there's little financial incentive to spend millions of dollars to investigate a common grain that can't be patented.

Heart Disease

From all indications and research, chia works just as well as fish oil when it comes to lowering levels of triglycerides and LDL cholesterol, while raising beneficial HDL cholesterol. (*Nutr Res 05;25:995–1003*) (2005 *Proceedings of the XI Congreso latinoamericano de Grasas y Aceites, Buenos Aires y Rosario, pp.352–353*)

Another six-month study involved 11 men and nine women, type 2 diabetes patients who were already on a diet and/or medication to control their disease. Daily use of chia resulted in a very significant decrease in blood pressure—a drop of 10 points in the systolic pressure (the top number) and a drop of 5 points in the diastolic pressure (the bottom number). C-reactive protein (CRP), a marker of inflammation in the body linked to increased cardiovascular disease, was reduced by 37 percent. And fibrogenic factors, which can abnormally increase blood clotting and impair circulation, were also reduced without increasing bleeding time.

I found this study particularly interesting considering these results were achieved in patients whose condition had already been stabilized through diet and medication. (*Diabetes Care 07;30(11):2804–2810*)

Another recent study found that chia consumption not only raised HDL cholesterol levels, but also effectively improved the overall omega-3 to omega-6 ratio. (*Ann Nutr Metab 07;51:27–34*)

Diabetes

In addition to the above study, in which the adverse cardiovascular factors associated with diabetes were decreased, there are numerous reports of how the daily use of chia can help stabilize blood sugar levels and even allow some individuals to decrease the amount of insulin they require. Considering chia's high fiber content, its positive effects on blood sugar are not surprising.

There are two types of fiber: insoluble and soluble. Neither is digested or absorbed into the bloodstream. Insoluble fiber is more like a scrubbing agent. It helps the bowels move efficiently and normalizes the pH in the bowel. Both effects help remove and neutralize toxins.

On the other hand, soluble fiber forms a gel when mixed with a liquid. It binds with certain fats and cholesterol compounds, reducing their absorption into the bloodstream. It also slows the emptying of the stomach, resulting in a slower, more controlled release of sugar which is very important in diabetics.

Additional Benefits

The fiber in chia absorbs as much as seven to nine times its weight in water. This added bulk can help one overcome constipation (assuming enough water is consumed) with the added benefit of giving the feeling of "fullness" that helps many people who are trying to lose weight. (*Actualizacion en Nutricion 06;7(1):23–25*)

In addition to both having the highest fiber content of any food and being one of the best sources of omega-3 fatty acids, chia is an excellent source of dietary calcium. A daily serving (about 2 tablespoons) contains about 125 mg of calcium, more than 7 grams of fiber, and more than 3 grams of omega-3 fatty acids.

Chia helps restore the omega-3 to omega-6 balance that has become so lopsided from our diets. Omega-3 oils, as you recall, are anti-inflammatory in nature, and excess omega-6s promote inflammation. Chia consumption can help with most types of arthritis, joint pain, and stiffness, along with conditions such as ulcerative colitis.

Chia's ALA gets converted into DHA, which has been shown to be beneficial in the treatment of depression, bipolar disorder, and schizophrenia, and even to improve some cases of Alzheimer's. DHA makes up between 15 and 20 percent of the cerebral cortex and anywhere from 30 to 60 percent of the retina. Deficiencies of this fatty acid can have profound effects on both brain and eye function and development.

As you can see from the following chart, chia gives you a lot of "bang for your buck."

Omega-3 Content per 100 Grams

Omega-3 content
3.7 grams
1.7 grams
22.8 grams
24.3 grams
1.6 grams

If you do a little research on chia you'll find there is an amazing amount of information, particularly on the Internet. Unfortunately, much of it is pure bull.

Sorting Out the Claims

Some sellers claim the best way to take chia is to consume it only after it has been soaked in water. Some companies claim to sell only certified organic chia, which they claim is better. And there's a chia product called Salba, which is white-colored chia. The Canadian company selling Salba claims their product is superior to generic chia. In my discussions with Dr. Coates, I asked him about these statements and claims.

Soaking the seeds in water does nothing but release the soluble fiber, turning the liquid into a gel-like compound. It has no real benefit. Neither does grinding the seeds. Unlike flaxseed, chia seeds are easily digested without grinding. If you want to grind the seeds, there's no problem in doing so, but Dr. Coates thinks that this, too, is a waste of time and doesn't improve digestibility.

On the organic issue, Dr. Coates explained that there is no such thing as *certified* organic chia. As I mentioned earlier, no pesticides are used or needed on chia because insects aren't attracted to it. Dr. Coates also explained that the grain is harvested mechanically using conventional combines and processed mechanically, so there is never any use of solvents, irradiation, et cetera. As a result, all chia available is of comparable purity.

As for the Salba product, Dr. Coates is very familiar with both Salba and the people promoting it. Dr. Coates was the one who actually planted the first seed in Peru where the Salba product is now grown. It's nothing more than white chia, and attempting to differentiate it from "ordinary" chia is basically a marketing ploy. Chia produces both white and black seeds. If you separate and plant the black seeds you get black chia. If you plant the white seeds you get white chia.

The composition and content of the two are practically identical. Dr. Coates explained that any content differences in chia, particularly the fatty acid content, are determined by the climate where the product is grown. Higher elevations and colder temperatures tend to increase the omega-3 content. Without going into everything he told me, suffice it to say that, based on our in-depth conversations and a review of the research, it's my opinion that paying the extra cost for Salba would be a total waste of money. The Salba company has done an excellent job of marketing their product, and even some food processors are beginning to include the Salba-branded chia in their food products. But for your personal use, don't waste your money. Generic chia costs about \$6 a pound, but Salbabranded chia can run between \$20 and \$30 a pound.

(Chia continued on page 70)



NEWS TO USE FROM AROUND THE WORLD

Raise a Glass at Dinner

BEER-SHEVA, ISRAEL—Researchers at the Ben-Gurion University of the Negev found that fasting plasma glucose levels decreased from 139.6 mg/dL to 118.0 mg/dL in diabetic patients who drank 150 mL of wine a day for three months.

The consumption of the alcohol didn't raise the patients' postprandial (after-meal) glucose levels, nor were there any other adverse effects noted. In fact, those patients drinking the wine reported an improvement in their ability to fall asleep. Additionally, those in the wine-consuming group showed a significantly greater reduction in their waist circumference and their LDL cholesterol levels when compared to the control group. (*Diabetes Care 07;30:3011–3016*)

This isn't the first study to find that one or two glasses of wine with the evening meal doesn't seem to be detrimental to individuals with type 2 diabetes. A couple of points should be noted. In the studies I've seen, the wine was consumed with the meal (usually the evening meal) and the intake was never more than one or two glasses (generally 120 to 240 mL).

I wouldn't suggest that someone start drinking wine solely for health reasons, but if that's something they already enjoy, then it's nice to know it's not harmful and does provide some health benefits when done in moderation. Like most things in life, moderation seems to be the key. Of course that's something most of our mothers already told us a long time ago.

A Healthy Diet Saves Your Throat

OAKLAND, CALIFORNIA—Researchers with Kaiser Permanente have "discovered" that a healthy diet reduces your risk of developing a precancerous condition known as Barrett's esophagus—in which the lining of the esophagus is being eaten away by constant exposure to acidic gastric juices. The study matched three groups of patients:

- 296 who had GERD (gastroesophageal reflux disease, once called just "heartburn") plus Barrett's esophagus;
- 308 who had GERD only; and
- 309 who had neither condition.

The investigators then used a questionnaire to assess the eating habits of all the subjects.

The results weren't at all surprising. Those who ate a predominantly "health-conscious" diet consisting of high amounts of fruits, vegetables, and non-fried fish reduced their risk of developing Barrett's by 65 percent compared to those who ate a mostly "Western" diet that included high amounts of meat and fast food. (*Am J Epidemiol 08;Jan 23 E-pub ahead of print*) A number of studies over the years have shown that having Barrett's esophagus increases your risk of esophageal cancer by up to 10 times, and the risk of adenocarcinoma (cancerous changes that are limited to the epithelial layer of a structure) by a factor of nearly 30. GERD by itself apparently has little effect on the cancer risk. Having Barrett's esophagus also increases your risk of death from all causes other than esophageal cancer. (*Gut 04;53:1070–1074*)(*Am J Gastroenterol 05;100:2616–2621*)

The progression is fairly obvious. Nearly all of us have had occasional heartburn, after eating a meal that didn't agree with us or just eating too much of something we couldn't resist. Some people develop more persistent heartburn ("GERD" or "acid reflux"). These individuals make up the group that is most susceptible to advertisements for antacids, acid blockers, and other "anti-ulcer" drugs.

Of those individuals who have GERD, some go on to develop Barrett's—about 700,000 patients in this country currently—and then esophageal cancer. There aren't many new cases of esophageal cancer annually, but the condition is particularly deadly, and the incidence is rising. The National Cancer Institute estimates that in 2007 there were about 15,500 new cases, and nearly 14,000 deaths. The annual incidence has increased by 570 percent over the last 25 years.

There are few symptoms of Barrett's, other than the same ones that carry over from GERD. The condition, and esophageal cancer as well, appear more often in older white males, particularly those who have higher incomes.

Some time ago I reported on a link between esophageal cancer and the consumption of soft drinks. The disease is on the rise in countries where soda intake is greater than 10 gallons per person per year. Countries where intake is lower than that amount (India, Eastern Europe, the Far East) aren't seeing such an increase.

While there are certainly many causes for GERD beyond just drinking sodas, I would doubt that many people ask for a water at the fast food drive-through. Soft drinks are a major component of the "Western" diet, so the results above make perfect sense to me.

The most sensible course is to prevent and/or treat heartburn before it becomes a more serious health concern. The primary causes of persistent heartburn are poor diet, the use of certain medications, or a hiatal hernia. I've written several times before about treatments for hiatal hernia. [Editor's note: See Vol. 11, No. 6 for a quick, easy treatment for hiatal hernia. If you don't have a paper copy of that issue, you can read it in the Subscriber Center of the Alternatives Web site, www. drdavidwilliams.com.]

(Chia continued from page 68) Making Good Use of Chia

Another issue that comes up in chia discussions concerns the conversion of chia's primary essential fatty acid, ALA, into DHA. If you recall, the primary essential fatty acids in fish oil are EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid). The ALA (alphalinolenic acid) can be converted in the body to both EPA and DHA. A couple of questions come to mind. First, how much of the ALA in chia is converted to DHA and EPA. And second, some studies suggest that as we get older it becomes more difficult for this conversion to take place. (*Am J Clin Nutr 91;54:438–463*)(*Am J Health-System Pharm 99;56:719–720*)

I'm not sure these questions have been fully answered yet. Dr. Coates seems to feel that the amount converted depends on the individual, and the body only converts the amount it needs at the time. Some of the animal studies he's been involved with seem to support this idea, but more work definitely needs to be done. I think it will be a while before we know the answers to these questions, and that's why I'm not recommending that we totally abandon fish oil at this point.

Dr. Coates retired from the University of Arizona a few months ago and is now concentrating his full research efforts on chia (improving growing methods, increasing oil content, and making it more widely available in the US). He imports chia seed by the shipping container–load, so he is able to sell it at a very reasonable price. A 1.5-pound bag costs \$9, and a 55-pound bag runs \$220. (While 55 pounds might seem like a large amount, chia stores very well as long as you keep it dry. You also might want to get a large bag and split it among friends or family members.) They sell other sizes and chia-based products as well. In fact, if you're deadset on white chia, he also sells that for \$9 a pound.

His Web site is a wealth of information about chia, and contains numerous research papers and presentations that help debunk much of the misinformation and marketing tactics being used to sell chia. If you have access to the Internet, I highly recommend taking a look at *www.arizonachia.com*.

Orders for chia can be placed through the Web site, or you can call them toll free at 877-660-2442. The company, Arizona Chia Inc., is located at 3266 Highway 82, Suite 4, Sonoita, Arizona 85637.

The recommended daily amount is two tablespoons a day for adults and one tablespoon for children. The easiest way to use it is to simply sprinkle it in salads, over vegetables, or on top of other foods. I expect to see more about chia and chia-related products, particularly as our supplies of fish oil become more suspect and the prices predictably rise. More and more benefits of chia will become apparent as its use becomes more widespread. In addition to all the benefits I've outlined, the fact that it is non-allergenic, non-GMO, very low in net carbohydrates, and doesn't contain gluten, will make it a very valuable and versatile food for millions of individuals...like you and me.

Pay No Attention to That Man in the Expensive Suit

By now you've probably heard or read about the classaction lawsuit that has been filed against Dannon for health claims the company made for its probioticfortified yogurts. Lawyers handling the case have stated that if the suit is settled they expect as much as \$300 million. It's hard to imagine how any number of people could "suffer" \$300 million in damages from eating a probiotic-enhanced yogurt.

Dannon has been selling yogurt with added probiotic cultures in Europe for years, and just recently introduced brands in the US. They claim to have research showing regular consumption of the products helps strengthen the body's defense system (the immune system).

As you know, I'm a very strong advocate of increasing our consumption of beneficial probiotic cultures (friendly bacteria). I haven't studied Dannon's claims and supporting research in depth, so I can't make any judgments in that area—but I suspect they've taken steps to ensure that these yogurt products do contain higher amounts of "live" probiotic organisms than most yogurts on the market. Still, eating commercial yogurt doesn't seem like the most cost-effective method of getting your probiotics.

Establishing and nourishing the growth of beneficial bacteria in your digestive tract is one of the most underrated and neglected tools that can be used to regain and preserve health. I'm fearful that lawsuits like this one and the possible negative fallout may trivialize the tremendous health benefits of probiotics. In the 1980s, there was a good deal of research on oat bran, particularly regarding its effects on cholesterol. This was followed by a great deal of overzealous and overstated advertising claims, which eventually caused any serious interest in oat bran to fizzle. This is unfortunate, considering that oats are one of the least expensive, most readily available, and most unsung heroes of our time. [*Editor's note: For more about the benefits of eating oats, visit the* Alternatives *Subscriber Center*, www.drdavidwilliams.com] Don't let this Dannon lawsuit or any of the surrounding publicity dampen your enthusiasm for probiotics. It would be a huge mistake. I believe that research over the next decade will further confirm that many of our most debilitating health problems could be prevented through the use of probiotic-rich foods and probiotic supplements. Keeping the beneficial bacteria in your digestive system at optimal levels should be one of your top priorities.

The Benefits of Bugs

Over the last few decades we've seen significant, steady increases in numerous diseases that were before practically unheard of. Alzheimer's, Parkinson's, dementia, depression, ALS, heart disease, diabetes, et cetera are all on the rise. Granted, each of these problems can have multiple causative factors. Dietary changes and deficiencies, increased exposure to environmental toxins, and increased stress levels all play a role. Very little concern, however, has been focused on the changes that have disrupted the beneficial bacterial flora, particularly in our lower intestines.

Our food supply has rapidly become more "sterile." In efforts to increase shelf life and reduce the ill effects of contamination, manufacturers have subjected most of our food to high temperature, gas, microwave radiation, herbicides, pesticides, and/or various other disinfectants or chemicals. These efforts to reduce or destroy any harmful pathogens have also eliminated any beneficial strains of bacteria that happened to be along for the ride.

Over the last few decades our society has also embraced the routine use of drugs from cradle to grave. Some of the most popular drugs these days are acid blockers used to treat heartburn. By blocking the production of stomach acid, these drugs not only impair digestion, they also allow acid-sensitive pathogens to survive and enter your system. Digestive enzymes work better than acid blockers—and without the side effects.

Defending the Defenders

The fact that antibiotics destroy beneficial bacteria in our system is well known. What isn't as well known is that many other medications do the same thing.

Just look at our drug-contaminated, heavily chlorinated water supply. I've been deeply concerned about it for years, and, as I predicted, it just keeps getting worse. Most municipal water, if not all, contains—in addition to various pesticides, herbicides, and toxic metals synthetic chemicals from dozens of medications. All the blood pressure, diabetes, antidepressant, hormone, and other medicines that pass through the urinary tracts of your neighbors eventually end up in the water supply. If that weren't enough, consider all the chemicals from shampoo, body cream, perfume, and household, pet, and toilet cleaners.

Our municipal water purification plants aren't equipped to deal with these thousands of chemicals. Trust me, if it goes down the drain, it sneaks past the filters. The reproductive problems being seen in men, fish, and wildlife have already been directly linked to one family of over 120 chemicals called phthalates. These compounds are commonly used to make plastics flexible, and at present US manufacturers aren't required to list phthalates on product labels if one is used as a component or ingredient.

Fears are that phthalates can now cause developmental problems as well as reproductive difficulties. It appears that the use of baby lotion, shampoo, and powder transfers the chemicals into a baby's system. When soiled diapers of 163 infants ages 2 to 28 months were checked, all contained traces of at least one phthalate, and 81 percent of the samples contained seven or more phthalates. (*Pediatrics online Feb. 2008*)

Parabens, another chemical family used as preservatives in cosmetics, are known hormone disrupters and have strong links to breast cancer.

The list of contaminants in our drinking water that destroy the protective bacterial flora in our gut and invade the body would fill this entire newsletter. It's absurd at this point, but the official word still seems to be that the concentrations of these chemicals in our drinking water are probably too low to be of any concern. And no one even mentions the idea that a daily "cocktail" containing dozens of these chemicals could be far more dangerous than just one single chemical on its own.

Immune Support

I've explained this before, but your intestinal tract (from your mouth to your anus) is constantly exposed to the outside environment and all the pathogens it harbors. It is the dozens of strains of bacteria that live on the surface of your intestinal tract that protect you against constant invasion, infection, and disease from these toxins, viruses, fungi, and bacterial pathogens. These bacteria are your first line of defense. Once pathogens break through this barrier, other areas of your immune system must come into play.

There's been a great deal of emphasis placed on ways to enhance or strengthen one's immune system. Reducing the assault on your immune system by strengthening the numbers and quality of beneficial bacteria at the entry barrier, however, is often overlooked. It's an oversight that can prove to be disastrous, if not deadly. I think researchers are just beginning to understand how far-reaching the effects really are. And, to be honest, most haven't connected the dots and probably won't for years to come.

Most medical research is performed over a short period of time: months, not years. That's why it's difficult for some people to even fathom how the quality and quantity of beneficial bacteria in your bowel could have an influence on your long-term health.

For example, we know it probably takes a couple of decades for a cancer in the breast to develop to the point where it's detectable. With poor bacterial flora in the lower bowel, constipation is a very common symptom. The absorbed toxins from chronic constipation place an extra detoxification burden on the liver, which impairs its capacity to break down excess estrogen in the system. Over a period of time the excess estrogen and resulting hormone imbalance could contribute to the development of breast cancer.

It's becoming more accepted that poor colon health (a lack of beneficial, protective bacteria) can result in inflammation of the colon walls and "leaky gut syndrome," in which foreign proteins, bacteria, toxins, and the like can leak through the colon wall and find their way into the bloodstream—wreaking havoc and causing inflammatory reactions throughout the body (arthritis, allergies, skin disease, autoimmune diseases, et cetera). The connection is there. The host of beneficial bacteria in your bowel is your first line of defense against the outside world.

They Must Be Kidding

I read what was considered "ground-breaking" research the other day where researchers reported antibiotic resistance was more common in individuals who had a history of heavy antibiotic use in the past...duh. (My four-year-old asked me yesterday what "duh" meant. The easiest way I could define it, so he would understand, was to say "duh" meant, "Are you stupid?" And that's exactly what I thought when I read the results of this study...are they stupid?)

Bacteria, viruses, and other pathogens mutate. It's one of their survival mechanisms. The organisms that aren't destroyed by antibiotics and other chemicals pass their capabilities on to the next generation. Keep in mind that antibiotics kill bacteria: good bacteria, bad bacteria, all bacteria. The regular use of antibiotics destroys the beneficial bacteria in your system and turns your body into a training ground for antibiotic-resistant bacteria. And, when you continually knock out your first line of defense with antibiotics, you are naturally going to be more susceptible to any type of pathogen.

Don't let the Dannon lawsuit or surrounding publicity fool you regarding the need for adding beneficial bacteria to your system. Granted, there will be lots of questionable-and even worthless-products introduced claiming to supply beneficial bacteria (probiotics, "good bugs," et cetera). When it comes to probiotics, it definitely pays to stay with a reputable product. And oftentimes the best probiotics are those you make yourself. It's hard to beat the beneficial bacteria in homemade sauerkraut, yogurt, and kefir. As you may know, I try to keep a homemade batch of sauerkraut going at all times, as well as take a daily probiotic supplement.

Probiotic supplements and foods are undoubtedly some of the finest tools one can use to ward off health problems. They can help with everything from stopping allergies to preventing the next cold or flu. Research is revealing that the bacteria in the bowel can be a determining factor in whether one develops cancer, diabetes, arthritis, autoimmune diseases, and even some mental diseases later in life. And I have no doubt that research will one day discover that the integrity of the bacterial flora in your lower bowel is a major factor in predicting survival in the next flu pandemic or global outbreak.

I don't look at probiotic foods and supplements as an emergency medicine. It's every-day medicine. It's one of the easiest ways I know of "keeping your guard up."

Take care,

Dr. David Will

If you have questions or comments for Dr. Here's how you can reach us:

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 . To sign a friend up for Alternatives, call subject of your interest.

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