

A New Edge in the Race

Against Thoroughbred Bugs



Dr. David G. Williams

s you probably know, I've been spending a considerable amount of time over the last five or six years in Australia. And as anyone who has spent any time there will tell you, thoroughbred horse racing is an extremely large part of the country's history

and culture. Fortunately, the national abundance of thoroughbred racehorses has provided me with an effective means of testing various herbs and nutrients.

Additionally, I have had the opportunity to learn a little about the various steps that top breeders use to build their racing teams. The process of mating horses with desirable traits, while culling others with obvious flaws, is an exacting science that can produce amazing results. Unfortunately, it parallels another breeding program we're inadvertently conducting in the microscopic world of bacteria.

Breeding Brawny Bacteria

Antibiotic-resistant bacteria are something I first reported on over a decade ago. And from the reports I receive, the problem is continuing to get worse. As you probably know, the problem stems from the misuse (abuse) of antibiotics in both humans and farm animals. The way that this antibiotic abuse produces super-strains of bacteria reminds me of the old saying, "If it doesn't kill you, it will make you stronger."

Whenever an antibiotic agent is used to stop a bacterial infection, some bacteria invariably survive the attack because of natural resistance to the agent being used. Like horses selected for their strong running abilities, these bacteria have been "selected" to breed and reproduce their antibiotic-resistant characteristics. Future generations of the bacteria will exhibit these characteristics in greater measure with each antibiotic exposure, quickly becoming immune to the antibiotic being used.

After decades of antibiotic overuse, we are now seeing selectively bred strains of bacteria that are totally resistant to all of our present antibiotics. If you become infected with one of these bacteria strains, there's not much that modern medicine can do to help. (Publisher's note: In the October 1996 issue of ALTERNATIVES, Dr. Williams explained how a grapefruit seed product has been used successfully to treat antibioticresistant bacterial infections. The December 1994 issue describes an aloe extract you can also use for this purpose.)

You would think that we would learn from our past mistakes, but that doesn't seem to be the case. Antibiotic use continues at an unprecedented pace. Antibiotics are still being given routinely at the first sign of a flu or cold, even though research has shown most of these illnesses to be of viral origin, and antibiotics to



—Benjamin Franklin

November 2000

the last major countries that still allows the addition of antibiotics to animal feeds, simply for the purpose of maximizing weight gain.

If that isn't bad enough, hand and body soaps are now being reformulated to change their function. Historically, they have protected us by washing bacteria away without necessarily killing them. Now, the goal is to kill bacteria with antibacterial compounds.

The Soap and Detergent Association reports that approximately 45 percent of the hand and body wash products today contain anti-bacterial compounds like triclosan or triclocarban. Researchers at Beth Israel Deaconess Medical Center in Boston investigated 295 national brand liquid soaps and 733 bar soaps. Seventy-five percent of the liquid soaps and almost 30 percent of the bar soaps contained anti-bacterial compounds. These compounds produce bacterial selective breeding in the same way antibiotics do.

But while research scientists around the world are feverishly working to create the next generation of antibiotics to eliminate these superbugs, it appears that we may already have the tools to deal with the problem.

If You Can't Kill 'Em, Flush 'Em

Natural, safe compounds may prove to be the answer. Instead of killing bacteria, certain simple

sugars act like a traditional soap and simply flush them away. By dislodging bacteria or keeping them from adhering to places like urinary tract walls, the intestines, mucus membranes, etc., these sugars deny bacteria a foothold in the body. In this way, infections can be prevented rather than partially destroyed.

Some of you might be confused by the positive way I discuss these sugars after writing that "sugar is slow suicide" in the August issue of *ALTERNATIVES*. But as you'll see, comparing the sugars I discussed in the August issue with the ones I'll discuss here is like comparing apples and oranges. They're very different in how common they are in the standard American diet, and in their effects on the body.

What I'm going to share with you in the next few pages is information practically unknown to the majority of doctors and medical professionals in this country. And it will probably be decades before this information becomes accepted or acted upon. Safe, natural, inexpensive, readily available medicines that work better than prescription antibiotics are not something that drug companies want to publicize. But, for your own sake, don't discount the effectiveness of these compounds until you've tried them yourself.

For just a few dollars, you can put an end to chronic infections of the kidneys, bladder,

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sinuses, and inner ear. The compounds I'll discuss can even help eliminate allergy problems if used diligently. In fact, in many cases, these compounds can totally eliminate asthma and the need for bronchial inhalers and drugs like Albuterol. This is definitely the kind of information you won't read anywhere but in *ALTERNATIVES*.

Simple Sugars for Complex Problems

rinary tract infections can be a serious problem for women, and sometimes for men, too. Antibiotics are standard procedure for dealing with them, so antibioticresistant infections are now common.

Years ago, I reported on the use of a common, inexpensive product that can be used to effectively cure these infections without antibiotics or their side effects. That product is cranberry juice (or cranberry extract). Since that time, dozens of such products have come to the marketplace. Cranberry juice deals with these infections by keeping the *Escherichia coli* (*E. coli*) bacteria from attaching to the walls of the urinary tract. At first, we thought that the acid in the cranberry juice was responsible for this action. Further study, however, has revealed that the sugar (fructose) in the cranberries is the substance that removes the bacteria and prevents or stops infections. (*Carbohydr Res 83;120:235-49*)

I've worked with cranberry juice and cranberry extract numerous times in the past, and for the most part they worked very well. As with most therapies, they didn't eliminate the problem in every case, but they certainly did the trick most of the time. My main complaint, however, was that they sometimes seemed to take a little too long to work, and the problem could recur if the cranberry was stopped too quickly.

The problem with the infection coming back shouldn't have surprised me, however, since the cranberry products weren't actually killing the bacteria, but only keeping it from building up on the walls of the urinary tract. If the source of the infection was elsewhere, then obviously that problem would have to be dealt with to actually cure the problem.

After I figured this out, I always recommended using yogurt vaginally and products like lactic acid yeast or acidophilus orally to re-establish the beneficial bacteria throughout the body. This would almost always keep the urinary tract infections from recurring.

As an interesting side note, research has shown that orange juice and pineapple juice can also inhibit the adherence of bacteria in the urinary tract. Again, this action is attributed to their fructose content. Cranberry juice remains the better choice, how-ever, because it contains more of another important component called D-mannose.

A Sugar Everyone Can Appreciate

D-mannose is a naturally occurring, simple sugar that is found in fruits like cranberries and pine-apples. When you ingest D-mannose, it is quickly absorbed in the upper portion of

the gastrointestinal tract, but very little of the sugar is actually metabolized. Because of this fact, D-mannose doesn't affect blood sugar levels—which makes it safe for everyone, including diabetics.

Research has shown us a very important fact about D-mannose. It is 10 times more active than the fructose in cranberries when it comes to inhibiting the adherence of the E. coli bacteria in the urinary tract. If you can keep this form of bacteria from establishing itself in the urinary tract, the majority of infections can be eliminated.

E. coli can be a very nasty form of bacteria. A few years ago, a mutant form of this bacteria contaminated hamburger meat and caused several deaths on the West Coast. And though *E. coli* is com-



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monly found in the human intestinal tract, where it is harmless, the bacteria causes problems in the urinary tract.

In fact, *E. coli* entering the urinary tract causes 80 percent of all urinary tract infections. In almost every case, the infection begins when bacteria originating in the vagina enter the urethra and move up into the bladder. This explains why urinary infections are 50 times more common in women than in men. It also helps explain why many women experience bladder infections every time they have sex.

Avoiding Another Antibiotic Complication

Bladder infections, or "cystitis," are now commonplace in millions of girls and women. In some instances the bacteria continue to work their way up from the bladder, and eventually reach the kidneys. There, it can lead to infection, kidney damage, and ultimately kidney failure and the need for a transplant.

Using antibiotics to treat these infections hasn't been the ideal solution. In addition to contributing to the problem of creating antibiotic-resistant bacteria, as I mentioned earlier, antibiotic treatment often turns simple urinary tract infections into a recurring nightmare.

Under ideal circumstances, the beneficial bacterial flora in the intestines and vaginal area keep harmful bacteria from getting a foothold and causing infections. Using antibiotics kills all bacteria, friendly and unfriendly, setting the individual up for the likelihood of more infections in the future. But treating the infection with the D-mannose sidesteps these problems.

Once D-mannose is absorbed, it is quickly filtered out of the system by the kidneys and then flushed out of the body in the urine. In the process, the sugar dislodges any *E. coli* bacteria present in the kidneys, bladder, and urethra. And since the bacteria can't congregate and colonize in the urinary tract, infections can't take place.

What to Do

As I mentioned earlier, D-mannose doesn't interfere with blood sugar regulation, making it safe for diabetics. Being a harmless natural sugar, it is also safe for small children and pregnant women. It simply flushes bacteria out of the system rather than killing it, which avoids the many pitfalls associated with antibiotics. And since it is absorbed in the upper part of the gastrointestinal tract and never reaches the intestines, it doesn't disrupt the normal bacterial growth in that area.

While D-mannose is safe for long-term use, it rarely needs to be taken for more than a few days. The normal therapeutic dosage of D-mannose is ½ teaspoon (2 grams) at a time.

For bladder and urinary tract infections, it is generally recommended that ¹/₂ teaspoon be taken every two to three hours. Within 24 to 48 hours, there should be either very significant improvement or a total resolution of the problem.

For bladder infections that occur after sex, the recommended dosage is $\frac{1}{2}$ teaspoon one hour before and $\frac{1}{2}$ teaspoon after sexual relations.

Severe kidney infections can take two or three days to clear up, and in some instances require a daily maintenance dose of ½ teaspoon or so. As I mentioned earlier, for long-term relief, one needs to properly re-establish the body's natural bacterial flora in both the colon and vagina. This can be accomplished with products like yogurt, buttermilk, kefer, acidophilus, and/or lactic acid yeast wafers.

(Publisher's note: For a more in-depth discussion of proper bacterial flora, see the July and August 1989 issues of ALTERNATIVES.)

D-mannose is available as a powder, and being a sugar it has a mild, sweet, inoffensive taste. It can be mixed with juice, milk, or water. However, it is simplest to just take the powder plain.

It is available through the mail from Bio-Tech Pharmacal at 800-345-1199 or Progressive Laboratories at 800-527-9512. A 50-gram bottle normally costs \$35 from both companies. However, they will give you a discount if you mention that you are an *ALTERNATIVES* reader. Bio-Tech offers 10 percent off and Progressive Laboratories, 25 percent. Shipping and handling is \$5 for Bio-Tech Pharmacal and \$4 for Progressive Labs.

Another Effective Sugar

The finding that bacteria can't cause an infection when it's unable to adhere to an area isn't new. We've known it for decades. As I mentioned earlier, it's the main premise behind using soap.

In the mid-1800s, a doctor named Ignaz Semmelweis began to promote the idea of doctors washing their hands before examining pregnant women. He found that the practice helped prevent "childbed fever" and caused infant mortality to drop sharply. Now, not only is it common practice for doctors to wash their hands between examinations, the lay public knows that regular hand washing can prevent food poisoning and even the spread of common viral infections like colds and flu. (As we enter the cold and flu season, keep in mind that you generally catch these infections because they are introduced into your nasal or oral cavities. To help prevent these infections, it's a good idea to keep your hands away from these areas and wash your hands regularly.)

You can realize several benefits from this same concept of bacterial cleansing action by using another "simple" sugar called xylitol. Like D-mannose, xylitol has had a limited amount of exposure in the medical press. Xylitol was discovered in the 1800s, at about the same time, by French and German researchers. One of the first commercial sources for the sugar was birch trees in Finland. As a result, Finland is the world's largest producer of xylitol, and most of the current research on xylitol is performed in Finland.

The Gum a Mother Can Love

Xylitol's most notable use has been as a sweetener in chewing gum. This type of gum actually helps prevent tooth decay and cavities.

Tooth decay is caused primarily by the action of the bacteria, *Streptococcus mutans* (*S. mutans*). *S. mutans* is a common type of bacteria that resides in the plaque that routinely builds up on our teeth. The bacteria takes sugar from our food and ferments it. One of the by-products of this fermentation process is an acid that erodes away the enamel of the teeth and forms cavities.

However, researchers discovered that *S. mutans* wasn't able to properly digest xylitol, so no fermentation occurred. As the bacteria were given more xylitol over time, not only did their numbers decrease, they became less virulent as well. In other words, when individuals used more xylitol in place of sugar, the bacteria levels in their mouths dropped and they experienced far less dental decay and/or cavities. In addition, the researchers began to note that children using xylitol also experienced fewer ear infections than children using regular sugar.

With further study, researchers discovered that xylitol acted much the same as D-mannose. Instead of killing bacteria, it simply impaired its adhesion ability. After "eating" xylitol, the bacteria couldn't hold on to the plaque and/or mucus membranes lining the mouth, nose, and throat. They were shed into the saliva, washed down the throat, and destroyed by the various enzymes and acids in the stomach.

Thanks to an innovative doctor from my neck of the woods, we can now use xylitol to wash away the bacteria from our oral and nasal cavities as well. This simple and inexpensive technique demonstrates a revolutionary new approach to preventing and treating some of the most common health complaints of our time. Tragically, this is the type of therapy that often gets overlooked, criticized by orthodox medicine, or simply ignored—not because it doesn't work, but because it's hard to commercialize, it's inexpensive, and it works better than the pharmaceutical alternatives.

Respiratory Help from Tornado Alley

Growing up, I spent most of my time in the small Texas panhandle town of Friona (population 3,200). Just down the road was the town of Hale Center (population 2,300). It seems like every town likes to have its own "claim to fame." Friona had the "longest country elevator in world." I don't recall what Hale Center's official claim to fame was, but panhandle residents remember it best for being practically wiped off the map by tornadoes on more than one occasion.

If you're not that familiar with the panhandle of Texas, it just happens to lie in what has been referred to as "tornado alley." In addition to tornadoes, residents there experience some of the wildest snowstorms, dirt-storms, hailstorms, and wind on the planet. I can tell you from personal experience that there are some hardy souls living in that part of the world. They learn early on how to adapt to adverse situations, and become quite innovative in the process.

Dr. Lon Jones, with Hale Center's Hi Plains Hospital, certainly falls into the above category. And he has brought his "let's-get-it-done" philosophy to bear on the problem of respiratory infections. If common sense prevails, Dr. Jones' patented nasal spray product will revolutionize the treatment and prevention of many common problems like middle ear infections, sinus infections, bronchitis, pneumonia, and asthma.

Dr. Jones was aware of the Finnish research on xylitol chewing gum and dental decay. But it was xylitol's ability to reduce childhood ear infections that first piqued his interest. Ear infections are the most common infection in children, which also makes them the most common reason for pediatric office visits. As a result, they are one of the primary reasons antibiotics are prescribed in this country. These ear infections, along with upper respiratory problems—and often even asthma—begin in the nose.

More Than You Ever Wanted to Know About Your Nose

Among other things, your nose is basically your body's air 1) warmer, 2) humidifier, and 3) filter. The surface area inside the nose and its chambers is roughly 160 square centimeters. By the time the air you breathe reaches your trachea, its temperature has been raised to within 1 degree Fahrenheit of your body temperature. It has also been humidified to within 2 to 3 percent of full saturation. The filtration process, however, is the most amazing function it performs.

Inside the nose are protruding structures, called "turbinates" because they cause turbulence in the incoming air. The turbulence of the air causes it to hit the nasal walls, the septum, and other mucus-lined structures. As the air passes on toward the trachea and lungs, any small particles (dust, pollution, bacteria, viruses, etc.) it carries are forced into the mucus and become entrapped. The system is so efficient that few particles larger than 6 micrometers in diameter (which is smaller than a red blood cell) ever enter the lungs through the nose. By the time the air passes through the bronchial tubes and into the lungs, most particles down to 0.5 micrometers have been removed. (Unfortunately, particles of cigarette smoke are about 0.3 micrometers in diameter and they do reach the lungs.)

Unlike my kids, our noses are self-cleaning. The nose normally makes about 1 gram of mucus every minute (a great tidbit that will impress everyone at your next dinner party). This mucus is constantly being moved from front to back by microscopic hairs, called cilia. The cilia move 10 to 20 times a second, pushing the mucus toward the opening of the throat. To move from the front of the nose to the throat, where the mucus is either swallowed or coughed up, takes about 15 minutes. As such, you could say that your nose is constantly washing itself. The process is generally very efficient, except when dehydration or irritation to the nasal cavity occurs. During dehydration, less mucus is produced, which can allow larger particles to enter the bronchial tubes and lungs. Also, the air becomes drier. Both events can lead to lung crusting and infections.

When the nasal cavity is irritated by an allergen, bacteria, chemical irritant, or virus, your immune system immediately responds. Histamine is released, which opens the small blood vessels, which in turn allows a greater amount of plasma or fluid leakage, so mucus production increases. Together, these actions result in nasal congestion and postnasal drip, or a runny nose.

The Other Problem with Kids' Ears

Children are particularly prone to upper respiratory and ear infections because of their immature auditory, or Eustachian, tube. This is a small tube that connects the middle ear with the throat. It is responsible for equalizing the pressure on both sides of the eardrum. The popping sound that you hear when changing altitude during flying or driving through hills comes from the auditory tube equalizing pressure. It normally remains shut except during swallowing or yawning.

In adults, the tube goes "uphill" from the throat to the middle ear. In young children, not only is the tube shorter than an adult's, it's almost horizontal—which allows easier entry to bacteria-laden mucus from the throat and nasal cavity. Detailed endoscopic examinations by Japanese researchers found that in children with a history of middle ear infections (*otitis media*), mucus and bacteria were drawn into the tube each time they chewed or yawned. All of these factors help explain the higher incidence of middle ear infections in small children.

The routine medical answer is more or less a shotgun approach. Antihistamines and decongestants are used to dry up the nose and stop the extra fluid and mucus production. Antibiotics are given to kill any possible bacteria that might be present. Lately, a more popular form of treatment involves the use of steroids in an attempt to block the body's immune-system response altogether.

Welcome Help for Childhood Ear Infections

However, almost twenty years after discovering that xylitol could prevent cavities, the Finns uncovered another benefit of xylitol. They discovered that children who chewed 8 pieces of gum a day (containing a total of 10 grams of xylitol), experienced 40 percent fewer ear infections that those who didn't take xylitol. (*J Dent Res* 96;(11):1892-900)

Further research found that, apparently, enough xylitol from the gum was getting into the nasal cavity to decrease the numbers of *Streptococcus pneumoniae* (*S. pneumo*) there by 68 percent. There are three bacteria that live only in the nose and result in practically all upper respiratory infections. *S. pneumo* is one, and the others are *Haemophilus influensae* and *Moraxella catarrhalis*.

When Dr. Jones' 9-month-old granddaughter came home with her fifth ear infection, he knew that it was time to try xylitol. But he also knew that she was too young to chew gum, so he'd have to find another way to get xylitol into her nasal and oral passages. That's when he developed a xylitol/saline nasal spray solution. He found that by delivering the xylitol directly to the nasal passages, even more bacteria could be flushed from the upper respiratory tract than with the gum. He also found that the successful treatment of ear infections was only the tip of the iceberg. By flushing out the bacteria, all types of upper respiratory infections and related problems began to respond favorably. Dr. Jones' spray has been used to clear up chronic sinus infections and allergic reactions, prevent bronchitis, and totally eliminate asthma.

When Dr. Jones realized how many people his spray could help, he went to the FDA and tried to get it approved for therapeutic use. However, the FDA has classified xylitol as a food or sweetener, so Dr. Jones was prevented from telling the world his findings. Although he has a patent on the spray, it can be sold only as a nasal wash. Obviously, not too many people are in the market for a nasal wash. I suspect that will change once the word gets out on exactly what it can do.

In reality, the xylitol/saline spray really is just a wash—a bacterial wash. It simply helps the nose and immune system do what they would naturally do on their own. When allergens, pollutants, or bacteria invade the nose, our immune system tries to flush out the irritants. Asthma might be a similar response by the body. By blocking the airways, it stops more irritants from entering the lungs and respiratory passages. Drugs like antihistamines and decongestants inhibit this natural process of elimination. In the long run, they might do more harm than good. It wouldn't surprise me if we learn in the next few years that the unprecedented increase in the number of asthma and allergy cases is directly linked to the increased availability and sale of these over-the-counter and prescription drugs.

How to Xlear Up Respiratory Problems

Dr. Jones' nasal wash is sold under the name Xlear. I thought the name was a little unusual until I asked about it. He has studied the Greek and Russian languages, and "x" in those languages is pronounced like a "c" in English. So the "x" stands for xylitol and Xlear is pronounced "clear."

Xlear is available from Xlear, Inc., P.O. Box 970911, Orem, Utah 84097-0911. They can also be reached by calling toll-free 877-599-5327. There are roughly 1,000 sprays in each 2-ounce bottle (easily a five- or six-month supply), which sells for \$10.95. If you mention that you're an *ALTERNATIVES* subscriber, and purchase two or more bottles of Xlear, you'll get free shipping and handling for your order. If you're interested in purchasing xylitol gum, Xlear, Inc. is looking into carrying that product, too, and might be offering it by the time you read this article.

For most allergies and mild asthma, the following is generally recommended. Three or four times a day, spray each nostril twice. Dr. Jones likes to say "when you spray your nose, look at your toes." In other words, tilt your head down and on the first spray aim the bottle towards the back of your head. On the second spray aim the bottle toward the top of your head. Remember to keep your head tilted down when you spray. You can cut back on this dosage after a few days.

In severe asthma conditions like those requiring a bronchodilator or Albuterol, follow the above spraying procedure every 1 or 2 hours for the first three days, and then you can try cutting back to 2 or 3 times a day. For small children, you can use each diaper change as a reminder to spray the child's nose.

Practically everyone I've talked to who has used the spray reports fantastic results. Childhood middle-ear infections have been completely stopped. Even the most severe asthma problems begin to abate in the first day or so, and can be kept at bay using only a couple of sprays a day. Allergies, even from animal dander, can be eliminated with daily use.

There have only been a couple of minor side effects noted with the nasal wash. A few people initially experience a slight burning sensation. This is to be expected if the nasal passages are raw, since the salt in the saline solution can create a slight burning. This minor irritation should subside as the tissue begins to heal.

Others, particularly those with long-standing asthma or allergy problems, may experience a "cleansing episode." After 3 days to a week of using the spray, some individuals either cough up or even vomit large amounts of mucus. As far as I know, this happens only once, and the cleansing seems to accelerate the benefits of the Xlear.

Like D-mannose, xylitol is a safe, simple sugar. It is already present in many fruits and vegetables, and our bodies make about 10 grams of xylitol a day. (One plum contains about ¹/₂ gram of xylitol.) It doesn't raise blood sugar levels or require insulin for digestion. Further, it can be used safely by children of all ages and pregnant women. Taking 8 to 10 grams or more of xylitol a day has produced stomachaches and diarrhea in some children. Keep in mind, however, when you're using the spray you're getting very small amounts of xylitol. Two sprays per nostril twice a day works out to only about 40 milligrams of xylitol per day.

Not Perfect—But Well Worth Trying

Simple sugars like xylitol and D-mannose are certainly not cure-alls, nor are they 100 percent effective. For example, xylitol doesn't appear to have any effect on viruses. While it could certainly help prevent a secondary bacterial infection during influenza, it obviously isn't the cure for the flu (which I am working on, and hope to tell you about next month). And D-mannose works on only the bacteria strains that cause about 80 percent of all urinary tract infections. As a result, 20 percent of urinary infections probably won't benefit from its use. Even with these shortcomings, if you can call them that, these simple sugars are extremely powerful healing tools.

I don't have to tell you that medical care is becoming ever more complex and expensive. Just a few years ago, I honestly felt that an offshoot of the skyrocketing cost of health care would be increased research into more economical forms of healing. Now, I'm not so sure.

Our society increasingly expects instant gratification in our personal lives and instant relief from our health problems, regardless of the longterm consequences. This expectation supports the use of drugs, which often provide instant relief. But a mindset like that doesn't provide an incentive to support research efforts on low-cost, low-margin therapies like xylitol and D-mannose. As a result, I doubt you'll be hearing much about these products. But, whatever you do, don't discount their effectiveness until you've had a chance to try them for yourself. They are true miracle workers.

You should definitely keep these two simple sugars stocked in your medicine cabinet and learn to use them. They are two of the safest, least expensive, and most effective alternatives to antibiotics that I have uncovered thus far.

Take care,

Dr. David Willia

We Hope to Hear From You!

Dr. Williams greatly appreciates hearing from you, and gears his research to the concerns you express to him in your letters. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or email, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest. Here's how you can reach us:

- To send in Mailbox questions or Health Hints, write to P.O. Box 829, Ingram, TX 78025 or mailbox@drdavidwilliams.com
- For Customer Service matters such as address changes, call 800-527-3044 or write to custsvc@drdavidwilliams.com
- To get important information between issues, sign up for email dispatches at www.drdavidwilliams.com
- To order nutritional supplements from Mountain Home Nutritionals, call 800-888-1415 or visit www.drdavidwilliams.com
- To order back issues or reports, call 800-718-8293
- To sign a friend up for *Alternatives*, call 800-219-8591 Let us hear from you soon! —The *Alternatives* Customer Service Team