



Dr. David G. Williams circa 1985

tic than you can imagine—so it's best to be prepared. My thoughts and prayers are with all those people along the Gulf Coast who have suffered from the effects of Hurricane Katrina. Now, on to this month's letter.

It's estimated that somewhere between 10 and 20 percent of the US population suffers from the condition called irritable bowel syndrome (IBS). Unfortunately, an estimated 70 percent of the people with IBS don't seek any medical attention. Still, the condition prompts 40 percent of all referrals to gastroenterologists, and is their most commonly made diagnosis. (*Gastroenterology 02;123:2108–2131*) I've discussed IBS in bits and pieces in the past, but it's time to revisit the problem in light of some comprehensive therapies I've uncovered.

Being able to diagnose IBS still seems to be a problem for most doctors. The medical profession is more comfortable with diseases that present a consistent set of symptoms. However, roughly a third of those who suffer from IBS experience diarrhea, another third have constipation problems, and the remaining third alternate between the two.

If you have the problem, you likely experience abdominal pain or discomfort that is:

- relieved with defecation,
- associated with a change in frequency of stool, or

When Good Guts Go Bad

Dear Reader,

As I began writing to you this month I was pulled away by the horrible events in Louisiana, Mississippi, and Alabama. They are a reminder that the unexpected can undo your life in ways more dras-

- associated with a change in the form or appearance of the stool.
 Other symptoms also support a diagnosis of IBS:
- abnormal stool formation—either hard and lumpy or loose and watery,
- abnormal stool frequency—either more than three bowel movements a day or fewer than three a week,
- abnormal stool passage—straining, extreme urgency (in the case of diarrhea), or the feeling of not being able to completely evacuate,
- passage of mucus in the stool, or
- bloating or the feeling of bloating.

Several factors can trigger or contribute to the development of IBS.

Antibiotic Use

For many people IBS first shows up after an infection (often one in the gastrointestinal tract), particularly when a long course of treatment or potent antibiotics have been used to address the infection. Antibiotics disrupt the normal bacterial flora in the gut, and this imbalance can lead to IBS.

Food Intolerance

Intolerance to certain foods is one of the primary triggers of BS. Many people incorrectly

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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 refer to food intolerances as food "allergies," but ingesting the offending foods doesn't trigger a reaction from the immune system the way a true allergy does. Studies have shown that patients with IBS can usually correct their problem by following a diet that eliminates offending foods.

One representative study involved 21 patients with IBS. Symptoms in 14 of the patients disappeared completely after one week on a strict diet consisting of only one type of meat, a single type of fruit, and distilled or spring water. Various foods were then added to the diet—either orally or through a tube (so the patients wouldn't know what was being eaten—which could affect the results). The following symptom-evoking foods were found (number of cases in parentheses): wheat (9), corn (5), dairy products (4), coffee (4), tea (3), and citrus fruits (2). (*Lancet 82;2:1115–1117*)

Fructose Ingestion

One recent study suggests that fructose alone may be responsible for 30 to 60 percent of all cases of IBS.

Dr. Choi Young, at the University of Iowa Carver College of Medicine, tested the effects of fructose ingestion on 183 individuals over a two-year period. He consistently found that each of the symptoms associated with IBS could be triggered with increased ingestion of fructose, and that symptoms could be eliminated by avoiding fructose intake. (*Am J Gastroenterol* 03;98(6):1348–1353)

The most common source of fructose in the American diet nowadays is high-fructose corn syrup (HFCS). I've written about the dangers of HFCS several times in the past, and I'm sorry to say there's more bad news to let you know about. [See "Weight Loss Saboteur," on the back page.]

Poor Digestive Capability

A decrease in digestive juices and/or enzymes results in the incomplete breakdown

of various foods. Undigested proteins, fats, and carbohydrates can all create havoc in the intestinal tract. Protein fractions can be absorbed into the bloodstream from the small intestine and cause reactions that mimic allergies, locally as well as throughout the body. Undigested fats can ferment in warm cavities of the lower bowel and create gas or flatulence, resulting in bloating, distension, and pain. And, as I'll explain later, undigested carbohydrates can pass to the lower bowel and provide the ideal food for the growth and replication of pathogenic and disease-causing bacteria, fungi, and yeast.

As we age, our ability to produce hydrochloric acid in the stomach is reduced—which reduces our ability to break down proteins. Sluggish bile and gallbladder problems prevent many people from properly breaking down fats in the diet. Surgical removal of the gallbladder without supplementing the diet with bile salts probably increases the difficulty a hundredfold or more. And the overconsumption of various sugars and sweeteners such as HFCS floods the bowel with undigested carbohydrates.

Other factors that can trigger IBS include: genetics, drugs, radiation therapy, smoking, alcohol use or abuse, carbonated beverages, lack of sleep and exercise, surgical trauma or injury to the bowel, eating disorders, and use of hormones (particularly oral contraceptives or hormone replacement therapy).

Conventional (Lack of) Wisdom

Oddly enough, even after a patient has been through dozens of testing procedures to rule out conditions such as cancer and thyroid trouble, and has finally received a diagnosis of IBS, the therapies used by most doctors fail to correct the problem.

Conventional treatment typically consists of drugs and changes in the diet—specifically more fruits, vegetables, and high-fiber foods. Drugs are



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.



prescribed to slow the motility of the bowel (in cases of diarrhea) or increase the frequency of the stools (in cases of constipation). Sadly, many doctors lump chronic IBS together with Crohn's disease and inflammatory bowel disease (IBD), and prescribe the steroid prednisone. Unlike IBS, Crohn's and IBD produce inflammation and actual damage to the bowel and rectal walls. And while prednisone might bring temporary relief to people with IBS, the long-term side effects can be worse than the condition itself.

Of course, as you know, conventional therapies rarely, if ever, address the true underlying problems.

Bugs to the Rescue

Based on what I have discussed thus far, you should have some idea as to whether or not you have IBS. If there's still some doubt, there are several other problems you can check that may be related to IBS. The techniques I'll cover can also help minimize or even reverse these problems as well:

- Food allergies
- Fungal infections
- Yeast infections
- Decreased immune function
- Cancer spreading (metastasis) through the lymph system
- Vitamin deficiency, particularly the B vitamins and the fat-soluble vitamins
- Joint pain
- Eczema
- Recurring vaginal and/or bladder infections
- Itching—particularly around the anal region
- Unexplained weight gain or loss
- Craving for carbohydrates
- Chronic fatigue

While these conditions may exist independently, they are often caused by chronic IBS and/or other related bowel problems such as Crohn's, IBD, spastic colon, chronic diarrhea, severe constipation, ulcerative colitis, et cetera.

To successfully treat IBS and other bowel disturbances, you need to look at the bigger picture rather than concentrate on eliminating each of the individual symptoms. You must first have a brief understanding of the environment in your gut, and then ask what could be causing a disruption in the normal movement and overall health of the bowel. It's estimated that anywhere from 300 to 500 different species of bacteria live in your colon. We have a symbiotic relationship with these bacteria (where neither we nor they are harmed) that has evolved over millions of years. These bacteria help develop our intestinal immune system. In fact, researchers are now calling the intestine the primary immune organ in the body due to the abundance of lymph tissue and all the beneficial bacteria in the area—which are essential in helping process vitamins and minerals and in protecting us against rapid colonization by intestinal pathogens. (Science 01;292(5519): 1115–1118) (Trends Microbiol 04;12(3):129–134) (Am J Clin Nutr 03;78(4):675–683)

If you expect to achieve optimum health and healing capacity, it's imperative to have a robust and healthy colonization of bacteria in your bowel.

Numerous studies and decades of clinical use have proven that the use of probiotics alone will often result in significant improvement or even resolution of many bowel problems. In one clinical trial, probiotics provided relief in 77 percent of patients with ulcerative colitis. Of the 34 individuals treated, 26 experienced improvement, with most of those experiencing complete remission. Only three patients found their condition worsened. (*Am J Gastroenterol* 05;100(7):1539–1546)

Basic Steps

It's difficult to make specific suggestions for bowel problems, since practically every case will be different. I'll start with my recommendations for everyone—regardless of whether they have a bowel problem or not. Oftentimes these simple changes and recommendations will not only prevent problems but also solve many existing conditions. For situations that aren't resolved, the recommendations will become increasingly more involved.

The first step for dealing with IBS and other bowel problems is to add fermented food and/or a probiotic supplement to your daily regimen. Research and clinical work has shown that anywhere from 50 to 75 percent of those who make this change will notice a significant difference in their health.

Probiotics are live micro-organisms that, when administered in adequate amounts, provide a health benefit to the host by engaging and neutralizing toxic compounds. It's a constant battle for control, and beneficial bacteria are often sacrificed in the process. While commercial supplements are the first thought that comes to mind when you mention probiotics, naturally fermented, "live" foods have been around since the beginning of mankind. Fermented vegetables, fermented milk products (clabber, yogurt, cheese, buttermilk), kefir, fermented soy products (natto, miso, tempeh, soy sauce, fermented tofu), and even naturally fermented, unpasteurized beers are some of the most complete probiotics available. I highly recommend you include foods like these regularly in your diet.

My favorite fermented food (besides unpasteurized beer, of course) is homemade sauerkraut. I keep a fresh batch going almost constantly, and some already made in the fridge at all times. It provides one of the widest varieties of beneficial bacteria that are known to protect against everything from bowel troubles to cancer. It's inexpensive and easy to make and keep. A little salt, cabbage, and a crock are all that's needed.

During those times when you're not home or don't have access to homemade sauerkraut or other fermented foods, I recommend the use of a commercial probiotic product. Look for one that can maintain viability without refrigeration, available in health food stores and over the Internet.

If, for some reason, you can't take any of the fermented foods I've mentioned, I would recommend trying the product called Lactic Acid Yeast Wafers from Standard Process Laboratories. A couple of wafers with each meal will start to work wonders at reestablishing the friendly flora in the bowel. The product is generally sold only through doctors, so you'll have to check for someone who handles the product in your area (chiropractors are a good source)—or you can search the Internet for suppliers such as *www.CostLessSupplements.com* at 800-578-5939.

I would venture to say that adding probiotics to the diet (and eliminating products that contain HFCS) would eliminate 75 to 80 percent of all cases of IBS, maybe even more.

Beyond the Basics for In-Depth Help

When a probiotic won't do the trick by itself, you'll have to get more strict with your diet. I would first try eliminating all foods with gluten—wheat, barley, and rye products. A gluten allergy is sometimes called celiac disease (see Vol. 10, No. 11).

In addition to eliminating gluten, you might want to try an elimination diet (much like the one I mentioned earlier in this article) to see if your IBS or bowel problems are linked to an intolerance of a particular food or foods that could be eliminated from your diet and re-introduced later.

The next step is more involved, and could be referred to as the "weed and feed" program. The idea is to first cleanse the bowels of any harmful or large numbers of undesirable bacteria, fungi, veast, and parasites; heal any damage that has taken place; and then re-establish a healthy population of beneficial bacteria. Overall it's roughly a two-week program that begins with a 24-hour fast, where ideally nothing would be consumed except purified water. (Chlorinated water is not recommended, because it is not particular about which bacteria it kills—even the beneficial types in the bowel.) If one can't fast on water alone for 24 hours, a homemade vegetable broth or the low-sodium version of V8 juice can be included, but under no circumstances should you add any fruit, juices, or other foods or drinks.

After the first 24 hours, steamed vegetables and light salads can be gradually added to the diet. (Yeast products, sugar, and starchy foods such as potatoes and rice are not allowed.) Days 2 and 3 begin the "weeding" of your colon as "broad spectrum" natural antimicrobials are added to the regimen. The standard antimicrobial is garlic, preferably fresh—which has been proven effective against eliminating an extremely wide variety of harmful bacteria, fungi, yeast, and viruses while at the same time sparing the beneficial forms of bacteria. You can achieve these effects by simply consuming two crushed garlic cloves twice daily with your meals.

(Some medical advisors recommend the use of enteric-coated garlic tablets. The reasoning is the garlic will pass through the stomach undigested, for release in the bowel where it can be more effective. I have concerns about this product because some studies suggest the enteric-coated form can be very irritating and destructive to the bowel wall. Thus, I would recommend sticking to fresh garlic. [J Nutr 01;131:101098–10113S])

Other natural antimicrobials can be used either in conjunction with garlic or by themselves during Days 2 and 3. One that I've had success with is food-grade hydrogen peroxide, which can be taken three times a day as two drops of 3 percent hydrogen peroxide mixed with eight ounces of purified or distilled water. (You need to be very careful with hydrogen peroxide. The 35 percent strength is extremely caustic, and will cause serious burns to the skin, eyes, or mucous membranes. Stick with the 3 percent food-grade variety.)

Beginning on Day 4, and through the remaining two weeks, you need to heal any damage to the bowel and re-establish the growth and dominance of the beneficial bacteria. In addition to adding specific supplements (such as a good probiotic), you can now gradually begin to introduce more and more fresh foods into your diet.

Coming Back to Life

During this period it is important not to consume sugar, alcohol, caffeine, wheat products, or high starch foods such as bread, potatoes, and rice. Steamed or stir-fried vegetables are highly recommended-particularly high-sulfur foods such as cabbage, broccoli, bok choy, Brussels sprouts, cauliflower, cress, kale, mustard, radish, and turnip. Cabbage is one of the most researched (and also one of my favorites)-steamed, stir-fried, or fermented as sauerkraut. Onions, asparagus, and artichokes are also good choices. Legumes (beans and peas) may also be introduced. Keep in mind, too, that these last few items are higher in fiber-which will be beneficial for IBS and other bowel problems, but may need to be introduced later if diarrhea is an issue. The timing of when and how much can be eaten will vary from individual to individual.

Meat can also be gradually added (begin with chicken, fish, or lamb), and it is generally easier and best to do so in the form of broths, stews, or soups. Slow-cooked (not instant) oatmeal is a good addition at this point. Dairy products may also be included. Again start with the fermented ones first (such as yogurt). (A large percentage of the population has difficulty breaking down the lactose sugar in milk. For those individuals, ingesting milk can result in indigestion, diarrhea, or constipation. After age 15, many people lose the ability to produce the necessary enzyme called lactase. If that's your situation, you can buy lactose-free milk or add a couple of drops of lactase to regular milk. LACTAID is the best-known lactase product and can be found in most drugstores or by calling 800-LAC-TAID.)

As you begin to re-introduce different foods, be alert to any changes in bowel symptoms. You may have to discontinue certain foods and add them back later when your bowels are in better shape.

Helpful Additions

During this period, it's also important to include items that will help heal any damage to the mucosal lining of the bowels. One of the most timetested products is slippery elm powder—a favorite topical remedy of Native Americans for wounds, burns, and boils. It was also used internally for ulcers and to soothe an irritated intestinal system. Slippery elm is very safe, and it's actually a very nutritious product—particularly for debilitated individuals and babies. (Two useful side notes about slippery elm: It will often provide instant relief from acid reflux; and when mixed with a banana and powdered marshmallow—the herb, not the candy—it can effectively stop diarrhea.)

You can purchase slippery elm in bulk or in capsules (I prefer the bulk product) in most health food stores or from companies such as Penn Herb, 10601 Decatur Road, Suite 2, Philadelphia, Pennsylvania 19154 at 800-523-9971 or on the Web at *www.PennHerb.com*, or from Kalyx.com, P.O. Box 417, Camden, New York 13316 at 315-245-3000 or from their Web site at *www.Kalyx.com*. They both sell a pound of slippery elm inner bark powder for just under \$40.

The slippery elm drink can be made by adding a heaping teaspoon of the powder to a little cold water to make a paste, and then pouring on a cup of boiling water while constantly stirring the mixture. Let it cool and then drink it, three times a day. For a slight variation you can use boiling milk instead of water and flavor the mixture with cinnamon or nutmeg. (If you ever want to use slippery elm as a poultice or to treat boils, wounds, et cetera, just make the initial paste.)

If you take slippery elm, I suggest 2 capsules (400 or 500 mg each) three or four times daily.

An alternative to slippery elm is a product called Sialex from Ecological Formulas. It contains a extract of mucin (the main component of mucus) that re-establishes the protective mucus layer in the bowel and provides a lubricating action. You shouldn't need Sialex if you use slippery elm, but I wanted you to know about it because it is helpful in healing the most stubborn cases, particularly ulcerations in the stomach and small intestine. The recommended dosage is 1 to 3 capsules with meals. It can be purchased on the Web from *www. Netriceuticals.com* at 3225 S. McLeod Drive, Suite 100, Las Vegas, Nevada 89121 or call 888-852-4993. The Test of Time Tip from Vol. 3, December 1990 200th

Here in the U.S., we're often quick to embrace home remedies. Just as quickly, however, we tend to dismiss remedies from other cultures—even remedies that have been used successfully for thousands of years.

Green and black teas are good examples of this shortsightedness. They contain compounds called catechins, bioflavonoids that are currently being underutilized. Like many other bioflavonoids, they have been used successfully to treat liver diseases, especially hepatitis.

Catechins have been particularly effective in patients with food allergies. By blocking the formation of histamine in the stomach tissue, the administration of catechin before meals can very often prevent allergic reactions and urticaria (skin wheals or hives). (*Acta Pharm (Suppl.)* 80;313:23)

Catechins also have strong antiviral effects, particularly against the herpes simplex virus. (*Prog Clin Biol Res 86;213:521–536*) Thorne

In addition to the slippery elm, now would be a good time to begin drinking green tea. I've expounded on the many benefits of green tea for years. (*Editor's note: see "The Test of Time" above.*) However, most people still don't realize that green tea can have a very positive effect on the bowel flora. Not only does it have antimicrobial properties and inhibit the growth of many pathogenic bacteria, it encourages growth of the beneficial lactobacilli bacteria at the same time.

The Diet of Last Resort

Rarely does someone not see significant improvement or resolution of their bowel problems during this two-week weed-and-feed period. In some cases it might be necessary to repeat the protocol for another cycle. If your bowel problems haven't resolved following any of the above suggestions, there's another program that I have found to be very helpful. I'll admit it takes far more discipline and a continuing commitment, but it will work.

The program is called the Specific Carbohydrate Diet, developed by Dr. Sidney Haas and described in his book, *The Management of Celiac Disease*. It was then refined in the 1950s by a woman named Research is one of the few places selling straight catechin products, and they sell only to licensed physicians. There are other ways however, that you can increase the amount of catechins in your diet.

The green and black teas common to Asia and India contain as many as four different catechins. Furthermore, researchers in Japan, France, Russia, and Canada have reported that these same catechins work as powerful antioxidants. As such, they have been using them medicinally to protect against blood vessel damage and to suppress cancer. (Mutation Res 85;150:127–132) (Annual Report of Shizuoka Women's College 81;29:49–93) (Chem Pharm Bull 84;32(5):2011–2014)

Maybe it's time we discovered why these common drinks can produce relaxation, drop blood pressure, lower blood sugar, protect against heart disease, decrease harmful blood fats, prevent cancer, and even lengthen lifespans.

Elaine Gottschall to help her young daughter, who suffered from severe chronic ulcerative colitis.

In her search for a way to save her daughter, Elaine met Dr. Haas when he was 92 years old, after learning that he had developed a nutritional approach for healing the intestines. At that time, very few doctors felt diet had anything to do with ulcerative colitis, and the only treatments offered were drugs and surgery. After years of medical failures and continuous searching for alternatives, Elaine decided to place her daughter on Dr. Haas's program. Almost immediately they began to see a dramatic improvement in her daughter.

Unfortunately, Dr. Haas passed away two years later, but Elaine continued to refine and successfully use his program. After Dr. Haas' death she feared his research and work would follow him to his grave—and deprive thousands of suffering people of a cure. She decided that she would spread the word to other doctors and suffering patients, but she would have to further her education to develop credibility. She subsequently started college at age 47 and earned degrees in biology, nutritional biochemistry, and cellular biology—all in an effort to better understand Dr. Haas' findings and research. After her daughter was saved by the diet, Elaine wrote *Breaking the Vicious Cycle* (now in its 11th printing), which explains the program in detail, presents the scientific rationale, and outlines which foods are "legal" and which are "illegal" in the diet. The program from her book has been a godsend to thousands, and I've recommended it for years.

The diet is based on foods that people ate before agriculture began, when complex sugars, additives, refined grains, and breads weren't available. These complex carbohydrates are difficult to digest and when they reach the intestines in an undigested state they, in turn, feed harmful bacteria and allow them to flourish—creating byproducts that inflame and damage the intestinal walls. The Specific Carbohydrate Diet starves the harmful bacterial and helps restore the balance of bacterial flora in the gut.

Her program involves some significant changes in the way most people eat but the results speak for its success. Some of her recommendations conflict with what I've suggested above. For example, she feels slippery elm and other mucilaginous herbs contain starches that feed pathogens in the bowels. Most of what I've recommended, however, doesn't conflict with her program. As I said before, if the regimen and program I first outlined doesn't work for you then I highly recommend following the Specific Carbohydrate Diet.

You can find her book in stores, online at Amazon.com, or from the publisher: Kirkton Press Ltd. in Canada at 905-349-3443. She also has a Web site filled with information and links to support groups along with the list of "legal" and "illegal" foods. If you don't have Internet access, ask your local librarian to access the site for you at *www.BreakingTheViciousCycle.info*. There are several other support groups linked to her site that will be very helpful. One such site is at *www.SCDiet.org*.

When Your Gut Gets on Your Nerves

There's another point you should be aware of that doesn't receive much attention in most medical circles. It's the connection between bowel problems and the nervous system. If you read many of the testimonials concerning the Specific Carbohydrate Diet, you'll find that many individuals have seen a dramatic improvement or even complete reversal in such problems as schizophrenia. The same is true when bowel problems are corrected with probiotics or any of the other programs I've outlined here. Generally, those in conventional medical circles haven't been able to grasp the connection between toxins in the bowels and neurological disease. (Most still believe the cause of IBS, ulcerative colitis, and similar bowel problems is totally unknown.)

Between 60 and 70 percent of our immune system is located in the digestive tract, which makes sense when you realize it's one of only three direct connections our body has to the outside world (our skin and respiratory tract are the others)—making it one of the places we are most exposed and vulnerable.

A breach in the gut wall—common in individuals with IBS, Crohn's, IBD, and chronic constipation or diarrhea—is commonly referred to as "leakygut" syndrome. This state allows toxins, bacteria, yeast, fungi, viruses, and incompletely digested foods to enter the bloodstream. An excess of these pathogens creates additional acids, fermentation byproducts, waste, and toxins that eventually overcomes our gut's defenses.

Although much of my focus has been on IBS, maintaining bowel health is vitally important to everyone. It's one of the most effective methods of improving your overall immune function. It can help prevent or reverse many of the neurological diseases on the rise in both children and adults.

Once these toxins and other particles breach our body's protective barriers, they cause inflammation throughout the body and can often cross the blood/brain barrier where they then interfere with the circulation and flow of nutrients to the brain which in turn impairs consciousness, speech, cognition, and behavior. It shouldn't come as any surprise that digestive and bowel problems are one of the principal complaints of people of all ages with depression, "brain fog," irritability, schizophrenia, and seizures-even children with autism. It also should be no surprise to see these problems resolved when the bowel problems are corrected. If you or your loved ones suffer from one of these neurological problems, restoring the bowels to normal is one thing you don't want to overlook.

The use of probiotics is preventive medicine at its best. For this very reason it's important to constantly replenish your body's supply of these important life-sustaining organisms, which you can do easily with a daily probiotic supplement. And to that you can add my favorite—a nice daily helping of homemade sauerkraut, washed down with some living, unpasteurized beer from your local micro-brewery.

Weight Loss Saboteur

veryone alive today is participating in one of the greatest health experiments in human history, whether they choose to or not.

As I've said previously, there have been more changes to our food supply in just the last few decades than in all of history. Some changes certainly seem to be significant improvements, but the jury is still out (and may be out for decades) on the ultimate consequences of others.

The entire matter is further complicated by the fact that so many changes are occurring at the same time. Food processing techniques are changing constantly. Chemical additives are being incorporated to improve shelf-life, enhance color, perfect texture (known in the trade as "mouth-feel"), and enrich flavors. Additionally, new artificial sweeteners are introduced to the marketplace every few years and are quickly blended with natural sweeteners or used alone in everything from soft drinks to pancake batter.

Even if someone wanted to track the long-term safety of one of these compounds, it would be almost impossible because of all the other components and processing factors taking place. And it boggles the mind to even consider the idea that combining these different additives, preservatives, artificial colors and sweeteners, et cetera, might have a separate, cumulative effect.

Getting Garbled Messages

Just as we've done with over-the-counter and prescription medicines, we seem to have taken a shortsighted approach when it comes to our food supply. These changes are implemented and assumed to be safe if they don't cause any immediate, obvious problems. Unfortunately, though, we often don't discover the ill effects until years later—after the damage has been done (much the same as with many of the drugs so commonly prescribed). I've touched on one of these additives/sweeteners in the past: high-fructose corn syrup (HFCS). The introduction and widespread use of HFCS follows the trend we've been seeing of increased obesity and cases of diabetes. The more research that becomes available on this sweetener, the more dangerous it seems to be.

Introduced to the US market in 1966, HFCS is now the number-one sweetener in this country with sales of over \$4.5 *billion* dollars a year. The average American consumes over 62 pounds of HFCS a year. And your body processes it much differently than it does common sugar.

When sugar is ingested the pancreas releases insulin, which helps move the sugar from the bloodstream into cells. The insulin also causes fat cells to release the compound leptin, which results in the feeling of "fullness" and, at the same time, prevents the release of a compound from the stomach called ghrelin which makes a person feel hungry. Fructose doesn't trigger the release of leptin from fat cells, or suppress the release of ghrelin.

Additionally, fructose, more so than glucose, is converted by the liver into triglycerides. High triglyceride levels tend to increase levels of LDL cholesterol (the harmful form) and lower levels of HDL cholesterol (the beneficial form). In simple terms, consuming foods and drinks with HFCS increases your hunger, causes you to eat more than you normally would, and raises your risk of heart disease.

You'll have to be somewhat of a detective to eliminate HFCS from your diet. Obviously sodas and other sweetened drinks will contain this sweetener, but it is also found in ketchup, relish, cookies, applesauce, sweetened yogurts, breakfast cereals, jelly, syrups, baked goods, fruits, desserts, and hundreds of other foods.

Take Care,

Dr. David William

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or 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:

- For Customer Service matters such as address changes, call **800-527-3044** or write to **<u>custsvc@drdavidwilliams.com</u>**.
- To order nutritional supplements from Mountain Home Nutritionals (MHN), call 800-888-1415 or visit **drdavidwilliams.com**.
- If you are a licensed health professional and would like to learn how to begin reselling MHN supplements to your patients, please send an e-mail to practitionerinquiries@davidwilliamsmail.com.
- To order back issues or reports, call 800-718-8293.
- To sign a friend up for Alternatives, call 800-219-8591.
- Sign up for free e-mail dispatches at drdavidwilliams.com.

