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Dr. David G. Williams
circa 1985

Every Season Is Flu Season

Since we've more or less passed the time that's usually considered the flu season, many people feel we've dodged the avian flu "bullet"—at least until next winter. As I've stated before, though, flu outbreaks originate in animals—most often from birds. As for the current "bird flu,"

infected migrating birds should now be reaching Alaska from Asia and then continue their spread to the lower 48 states in the next few months. Hopefully, the virus will remain within the bird population and start to weaken rather than mutate into a form that can be transmitted from human to human. Thus, the question is not when the next flu outbreak will occur, but where it will happen and just how virulent the strain will be.

While various states have continued to work on quarantine plans, and pharmaceutical companies continue to develop questionable vaccines and antiviral medications, those in the field of natural medicine have been busy working to address the problem as well. One of the benefits natural therapies have over pharmaceuticals is that they don't have to be specifically formulated for the various strains of flu virus. Instead, they tend to work against many different types of viruses—including flu.

It's been over ten years since I began warning about the dangers of fast-spreading flu viruses and explaining methods you could use to protect yourself. [Editor's note: see Vol. 6, No. 5] At that time, *Alternatives* readers were the first to learn about the virus-fighting ability of black elderberry extract (sold under the name Sambucol).

When Dr. Madeleine Mumcuoglu was testing her formula, the nature of the various flu strains used in testing didn't seem important. Now that one of those strains has become infamous as the bird flu, it bears repeating

that elderberry extract was effective against every strain tested—including bird flu.

Just recently Dr. Mumcuoglu asked one of the world's top experts on influenza viruses, Dr. John Oxford at Retroscreen Virology in London, to test the extract against this latest avian flu virus (H5N1). He recently reported that it was 99 percent effective in neutralizing the invasiveness of the virus in cell cultures.

Even with these latest results, however, Dr. Mumcuoglu isn't suggesting that the product is a cure or treatment for bird flu. Human studies would have to be undertaken and, based on the virulence of this strain of influenza and the current political climate, she obviously won't be allowed to do this type of work. Instead, she has already begun animal testing using ferrets, which exhibit flu symptoms similar to those of humans.

I continue to recommend that you keep a fresh supply of a high-quality elderberry extract on hand (a couple of bottles per person). It has a shelf life of about two years. Over the years I have used it numerous times on myself and my family (from infants to parents), and I've been

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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

very pleased with the results. When taken early enough, it can stop flu and cold symptoms dead in their tracks. Even when taken later, it can dramatically reduce the symptoms and cut the duration of the illness in half.

Since my initial article, there have been numerous companies marketing copycat elderberry extracts, but I doubt they work. Dr. Mumcuoglu explained to me that her initial challenges included not only determining the active ingredient in elderberry but, just as importantly, finding a way to extract and process the berries so this specific ingredient remained intact and active in the final product. As far as I know, only products made according to her method have been able to do this. The Israel-based company that makes Sambucol, Razei Bar Industries, has tested several of the products that don't use her method and found they contained *none* of the active ingredient.

Learning from History

In the coming years, as we face such health threats as the avian flu, keep in mind that we often already have the methods available to deal with them. A product that was effective against the flu ten years ago, such as Sambucol, should still work today—or even 20 years from now. Unlike the pharmaceutical crowd, natural medicine doesn't have to come up with a new silver bullet for every pathogen or bug that comes our way. Don't get caught up in the mindset that only drugs can save the day. Past history and current research indicate that antiviral medications and vaccinations have only marginal benefits, if any. Their use is definitely a high-risk gamble. Improving immune function and using natural remedies is a far safer and more effective option.

As an interesting side note, the Koreans have reported that their fermented cabbage dish called *kimchi* is effective in treating chickens infected with bird flu. Eleven of 13 infected chickens fed the juice from kimchi survived, but none of 13 other chickens fed regular rations survived. It's been reported that kimchi sales have increased dramatically—and its close cousin, sauerkraut, has regained new popularity in Europe with the release of this information. Knowing how effective it

can be at boosting the immune system, it wouldn't surprise me if sauerkraut worked as well. I'm probably one of sauerkraut's biggest fans and, though I wouldn't rely on it as my sole source of therapy, I still highly recommend eating it on a regular basis to boost the immune system. (Just be sure that you're eating the real thing, with live cultures. The canned varieties in brine won't do you much good.)

Synthetic medicines have only been around since the 1900s—and only really became prominent in the 1940s. Natural medicine has been used in humans and animals for over 50,000 years. It has a long track record of safety and effectiveness, without dangerous side effects. Reports are that over 300,000 people in this country die each year from the effects of "appropriate" use of over-the-counter and prescription drugs. I'm certain that number is actually in the millions, but the connection between long-term drug use and death is rarely made.

Having said all this, I also want to mention that elderberry extract (or the other items I'll mention later) are not "cure-alls" either. There are many factors involved: existing health problems, lack of exercise, advancing age, obesity, poor nutrition, stress, poor genetics, et cetera.

All of these factors place a burden on your ability to respond to pathogens. Even if you do everything right, an extremely virulent pathogen may prove to be too much for your body to overcome. Unfortunately, there are no guarantees—that's just a fact of life.

C Gets an A-Plus

Another remedy that has been overlooked in almost every discussion of avian flu is high doses of vitamin C. Dr. Robert Cathcart of Los Altos, California, a pioneer and long-time advocate of high-dose vitamin C, feels the vitamin could be used successfully to treat avian flu—except that the dosage needed might be significantly higher than with other types of flu. He feels that it might require as much as *150 to 300 grams* of vitamin C a day (which contrasts with his recommended daily dose for severe cold of 60 to 100 grams a day, and 100 to 150 grams for most influenza cases). This amount is



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HIGH-DENSITY HELP

My doctor has been closely monitoring my cholesterol levels for several years. Although, when it comes to the blood work, he focuses on my LDL, HDL, and total cholesterol levels. It seems like all the supplements and treatment options are focused on reducing the LDL levels. What can I do specifically to increase my HDL levels?

Jonathan T.
Blauvelt, New York

One of the best and least expensive tools to use is niacin, which has been largely overlooked by doctors of all types. The research shows that adding high doses of niacin (working up to two to four grams a day) can raise HDL levels as much as 35 percent—which is higher than any of the more popular drugs being used today, such as the statins.

If you smoke, your HDL levels will generally rise an average of about four percent if you quit. And, for

every kilogram of body weight you lose, you can expect an increase of HDL of about 0.35 mg/dL.

Overall, the research indicates that for every mg/dL increase of HDL you achieve, you cut your risk of suffering a fatal heart attack by three percent. (*N Engl J Med* 05;353(12):1252–1260)

While we're on the topic, you might be interested in the cholesterol-lowering power of various nuts. Most people still mistakenly avoid them because of their high fat content. However, they can be very effective in the overall plan of improving your cholesterol picture.

By eating one and a half ounces per day for a period of four weeks, you can expect the following reductions in LDL cholesterol levels: peanuts, 6.4 percent; walnuts, 7.5 percent; almonds, 7.85 percent; and pecans, 13.4 percent.



obviously a massive dose in anyone's book—and far more than most individuals ever dreamed of taking. Ideally, it would be administered intravenously (in the form of sodium ascorbate) by a doctor familiar with such treatment. This intravenous dosage would be continued until the acute phase is over. The patient would then be started on oral ascorbic acid at "bowel tolerance." Unfortunately, in a time of crisis both the vitamin C and a doctor to administer it might be hard to locate.

If it was necessary to take the treatment orally (using ascorbic acid), Dr. Cathcart recommends starting as quickly as possible taking 12 grams of vitamin C every 15 minutes until diarrhea is produced. The dosage could then be reduced to 9–10 grams every 15 minutes to normalize the stool just below the amount that causes diarrhea (this is the point of "bowel tolerance"). It should be increased again if symptoms of the flu begin to return. Since the avian flu virus targets the lungs first, it's important that the dosage be kept high enough to avoid the commonly associated respiratory difficulties. (One of the best sources for bulk vitamin C powder is Wholesale Nutrition, at 800-325-2664 or www.nutri.com.)

It's interesting to note that the symptoms of avian flu are the ones associated with clinical scurvy (ascorbate or vitamin C deficiency). Avian flu depletes vitamin C very rapidly, causing the breakdown of arterial blood flow and vessels—which results in internal hemorrhaging of the lungs and sinus cavities.

Almost all animals (including birds) produce ascorbate. The exceptions are humans, other primates, fruit bats, and guinea pigs. Animals that naturally produce more ascorbate are less vulnerable to the avian flu virus. Wild birds such as ducks produce more than domesticated birds such as chickens—which explains why migrating ducks are unharmed by the virus but domesticated chickens are so much more susceptible to the pathogen.

Further Flu Solutions

If you've been a subscriber for a while, I'm sure you're familiar with another product that I think is imperative to have on hand to combat the threat of influenza—the nasal wash Xlear. I've written about it extensively, so I won't go into the details again, but it is certainly something you don't want to overlook.

I've also stressed the importance of the trace mineral selenium in viral infections. I've been talking about the general deficiency of selenium for decades—a deficiency that greatly affects one's overall health. More research is now showing that selenium can stop the replication of viruses. Some very convincing arguments have been made that help illustrate how selenium supplementation can increase resistance to the avian flu virus in both bird and human populations. Eating a handful of Brazil nuts, the food source highest in selenium, could be the determining factor as to whether or not you contract a viral infection such as the avian flu.

If you're not convinced of the importance of selenium in your diet, I would suggest reading the book *What Really Causes AIDS*, by Harold D. Foster. In a nutshell (no pun intended), Foster shows how current pandemics caused by HIV-1, HIV-2, hepatitis B and C, and Coxsackie B viruses are all linked to the development of deficiencies in selenium over the last 50 years. As each of these viruses replicate, they rapidly deplete the body of selenium. On the flip side, selenium levels rebound in people who recover from these problems.

HIV infection also depletes the host of three additional nutrients: cysteine, glutamine, and tryptophan. All of these (plus selenium) are necessary for the body to produce glutathione peroxidase, the enzyme that stops viral replication. In a very limited trial, AIDS patients saw a complete remission of their symptoms when their diet was supplemented with the above four items. (While the selenium doses required to stop viral replication were several times the commonly recommended daily allowance for the first month, Foster supports the safety of these dosages with ample research data.) Additionally, in April of this year, clinical reports from Zambia, Uganda, and South Africa further support Foster's work through early indications that AIDS may be stopped using these four nutritional supplements. (*Orthomolecular Medicine News Service*, April 26, 2006)

As you might expect, over the years I've received information on hundreds, if not thousands, of reported cures for AIDS. Most are either absurd or based on some amazingly convoluted theory. Foster's research and work, however, is different. I strongly recommend reading his book. It will be a godsend to anyone infected with HIV. A complete copy of the book is available for free if you download it yourself from Foster's Web site at www.HDFoster.com. (Harold Foster has spent an enormous amount of time and effort to research this area, and to provide it to those who need it for free is a remarkable and selfless gesture.) If you'd rather have a physical copy of the book, you can order it from Trafford Publishing for \$22 at www.trafford.com or 888-232-4444.

On another front, there is also new research from Italy showing that resveratrol, the "longevity" compound found in grapes, can eliminate the flu virus.

Resveratrol was first tested in cell cultures, where it proved to be 90 percent effective at stopping the virus from replicating. Then it was tested in mice infected with the influenza virus. The amount of flu virus in the animals' lungs was reduced by 98 percent when compared to those treated with a placebo. Additionally, the normal 20 percent survival rate of those animals infected with the

virus doubled to 40 percent after they were given resveratrol. (*J Infect Dis* 05;191(10):1719-1729)

The replication of viruses is a complex, multi-step process. The beauty of the therapies I've mentioned is that they each work by interrupting different phases of the viral replication process. In other words, they can be used individually or in combination to increase their effectiveness even more. They are available today and relatively inexpensive. Personally, I keep a supply of each of these on hand at all times. In fact, most are supplements I recommend and use on a regular basis. Having your own stash of these anti-viral supplements, or knowing where and how to order them at the first sign of a widespread flu epidemic, could turn out to be a lifesaver.

Sugar and Spice, Everything's Nice

Years ago, Dr. Richard Anderson explained to me how a polyphenol in cinnamon called methylhydroxy chalcone polymer (MHCP) can improve the glucose metabolism in fat cells by as much as twentyfold. Since that time, I've reported further on the use of cinnamon to help prevent or delay type 2 diabetes. It's an effective and inexpensive way to help stabilize blood sugar.

As I understand it, Dr. Anderson's discovery of cinnamon's effects on blood sugar was purely accidental. They were looking at the effect that apple pie had on blood sugar. They thought it would dramatically raise blood glucose levels but discovered instead that it lowered them. The effect was from the cinnamon in the pie filling.

I've been adding cinnamon powder to my morning protein shakes for some time now (about ¼ teaspoon or roughly 500 milligrams). There's been some question lately as to whether cinnamon is toxic. The concerns or questions of toxicity arose because cinnamon bark contains numerous oil-based compounds—as well as such water-soluble ones as MHCP. It's true that some of the oil compounds are known to be toxic, but *only if taken at higher doses consistently for very long periods of time*. And cinnamon powder has already had much of the essential oils removed during processing, so I really don't believe it's a problem.

However, to neutralize the possibility of toxicity and get the best effect, use a water-soluble form of cinnamon. You can also add the cinnamon to a hot liquid such as coffee or tea to make it more of an extract. Using cinnamon sticks to make tea or adding cinnamon powder to coffee beans before grinding are other methods being recommended to achieve the same effects.

Taking ¼ teaspoon twice daily has been shown to lower blood sugar levels 18 to 29 percent, triglycerides as much as 30 percent, and total cholesterol 12 to 26 percent—after just 40 days, and without any toxicity problems. I don't know of any pharmaceutical agents that can achieve results like this—particularly with few or no side effects. (*Diabetes Care* 03;26:3215–3218)

Doubling that dosage to ½ teaspoon twice a day may be necessary for some individuals, but this can be verified by monitoring blood sugar levels (as most diabetics are required to do anyway). This is one case where more isn't always better, though. Individuals taking more than ½ teaspoon twice daily didn't seem to have any better results than those on the lower dosages.

Keeping Glucose in Mind

Currently, additional studies are underway that so far support cinnamon's ability to reduce inflammation. I wouldn't be the least bit surprised to discover over the next few years that cinnamon can also be used to help prevent inflammatory arthritic conditions, cardiovascular disease, and possibly even Alzheimer's.

Some of the very latest research, which is bound to cause a great deal of controversy, reveals that Alzheimer's disease may be another form of diabetes. A study from Brown University involved the autopsy of the brain tissue of 45 patients diagnosed with varying degrees of Alzheimer's. The tissue was compared to that of individuals with no history of the disease. In every case researchers found insulin-related abnormalities normally associated with advanced stages of diabetes. When all the findings were compiled and analyzed, the researchers felt that Alzheimer's is possibly a new form of diabetes and began to refer to it as "type 3 diabetes." If the researchers are correct, it would explain why the incidence of Alzheimer's has increased along with that of type 2 diabetes over the last couple of decades. The incidence of type 2 diabetes has risen by more than 33 percent in just the last decade. (*J Alzheimers Dis* 06;9(1):13–33)

It should be a resounding wake-up call for everyone to take their diet and blood sugar levels seriously.

An Aromatic Answer

At the latest Experimental Biology meeting in April, there were reports from another study providing evidence that cloves, too, can improve insulin function and lower glucose levels—along with reducing levels of total cholesterol and triglycerides.

Dr. Alam Khan of Pakistan studied the blood-sugar effects of cloves on 36 individuals with type 2 diabetes.

The individuals took capsules containing either 0, 1, 2, or 3 grams of cloves for a 30-day period. Regardless of the dosage, all of those who took cloves showed significant changes. There were no changes among those who didn't take the cloves.

Those on the cloves had an average decrease in glucose from 225 to 150 mg/dL, a decrease in triglycerides from 235 to 203 mg/dL, a decrease in total cholesterol from 273 to 239 mg/dL and a decrease in LDL cholesterol from 175 to 145 mg/dL. The HDL cholesterol levels remained the same.

To achieve these results, we're talking about just a few cloves a day (or one-half to one teaspoon of the ground spice). Considering the fact that there is no known toxicity with cloves, this is another inexpensive, yet effective, method one can use to help control blood sugar levels.

I love cinnamon, but I haven't used cloves very much thus far. Given this news, I could learn to like them (or at least appreciate them). If you're trying to control type 2 diabetes and want to avoid the next step of disease progression—namely, insulin injections—cinnamon and cloves are definitely something to discuss with your doctor.

You've Got Some Gall

If you ask most doctors about bile, the common response would be that it's simply a digestive fluid put out by the liver that aids in the absorption of fats and fat-soluble vitamins. New research from the Baylor College of Medicine indicates that your body's ability to regenerate liver tissue depends on signals that indicate there is an imbalance in bile levels. (*Science* 06;312(5771):233–6)

While bile is made in the liver, it is stored and concentrated in the gallbladder—another component that most doctors feel patients can easily live without. As a result, over half a million people in the US alone lose their gallbladder to surgery each year and are still being told there will be few, if any, long-term negative consequences. It should be a crime.

Bile acids are produced from cholesterol in your liver and then flow into your gallbladder where they are stored and concentrated as much as fivefold. As your body senses the movement of fat into the small intestine, the gallbladder releases the bile to emulsify the fat—making it easier to absorb. As the bile continues through the digestive tract, 90 to 95 percent of it is reabsorbed from the large intestine and returned to the liver, where it is reused as many as twenty times.

With a healthy gallbladder, proper amounts of bile are released into the digestive tract as needed. Without a

gallbladder, there is a continuous trickle of bile into your system regardless of the presence or absence of fat. The failure to match bile output to fat presence jeopardizes one's ability to properly digest fat and, eventually, leads to deficiencies in fat-soluble vitamins and essential fatty acids, poor cholesterol metabolism, and the absorption of improperly digested fat globules. I've previously discussed the many diseases and problems that result from improper fat digestion. [See "The Test of Time" on page 95.]

This latest research has shown that exposure to higher relative amounts of bile acids triggers regeneration in damaged portions of the liver—which helps explain why *individuals who take drugs that sequester bile acids, such as cholesterol-lowering drugs, can't regenerate liver tissue.*

Animals that were bred with the inability to regenerate their liver—due to a lack of ability to recognize increased bile acid levels—regained the power of regeneration when they were given bile acids in their diet.

This is another prime example that illustrates the long-term consequences of unnecessary surgery and drug use. Continuing to take cholesterol-lowering medication in the presence of liver disease could be disastrous. Example conditions, as indicated by deteriorating liver function tests, include hepatitis, cirrhosis, cysts, Reye's syndrome, liver cancer, sarcoidosis, Wilson's disease, and hemochromatosis.

An Imbalance of Bile Can Unbalance Your Scale

On a related front, researchers have demonstrated that an imbalance of bile acids might be contributing to the current pandemic of obesity in the Western world.

As I stated before, the classical role of bile acid is thought to be one of enhancing fat absorption in the intestine. Just recently in France, however, researchers clearly demonstrated that bile acids also regulate the metabolism of fat by *stimulating the production of active thyroid hormone within fat cells.* When animals were given bile acids, their metabolism in brown fat tissue increased. The intake of the bile acids also prevented obesity and insulin resistance. (*Nature* 06;439(7075):484–489)

Many scientists now feel that bile acids, through natural metabolic stimulation and fat breakdown, may be one of the safer and more effective tools to increase fat loss and help control body weight. When you put the number of people who have hypothyroidism together with the ability of bile acids to increase thyroid hormone production, it makes perfect sense. (Dr. Broda Barnes estimated in the 1970s that as many as 40 percent of the adult population suffered from hypothyroidism.

Personally, I think that was a *conservative* estimate, and the numbers haven't gone down any since.) Research has also shown that anything you can do to improve thyroid function will decrease your risk of cardiovascular disease, improve energy levels, improve cholesterol and triglyceride levels, and provide a long list of other benefits. (*Trends Endocrinol Metab* 04;15(4):154–157)

I strongly suggest that you check your current multivitamin/mineral supplement and make sure it contains bile as one of its ingredients. Bile supplementation is particularly crucial if you take cholesterol-lowering drugs, no longer have your gallbladder, and/or have problems digesting fatty foods.

Beets Can't Be Beat

When talking about the need for bile acids, vegetarians often express their reluctance to use supplements that contain ox bile. Unfortunately, it is often the true vegetarians who demonstrate the greatest need for additional bile acids. I suspect this situation is due in part to the fact that their diet generally includes more fiber, which tends to bind with the bile salts and causes them to be excreted rather than reabsorbed. Diets like these require an increase in the production of bile salts.

Beets and beet juice are often used as substitutes for bile supplementation. While beets may be very beneficial for your health, they are not a substitute for bile acids and salts. Beets are rich in betaine, which stimulates liver cell function and provides a protective effect for the liver and bile ducts. One recent study found that ingesting beets can have a significant tumor-inhibiting effect and help prevent cancer. (*Cancer Lett* 96;100(1–2):211–214)

One of the betaine benefits that has recently come to light is its ability to reduce homocysteine levels. Homocysteine, you'll recall, is the toxic amino acid that increases your risk of cardiovascular disease.

Betaine, also known as trimethylglycine (TMG), is a minor "mood enhancer." Through a series of events, it increases serotonin levels and can be used to help relieve many cases of depression. Beets (cooked, raw, or juiced) are highly underutilized in this country as a medicinal food—and it seems that hardly anyone praises the benefits of the leaves of the beet plant. Beets belong to the same plant family as spinach, and they are just as nutritious, even though they have never received the positive publicity that spinach received because of the old Popeye the Sailor Man character.

By the time EC Segar created Popeye in the 1920s in his "Thimble Theatre" comic strip, spinach had already

(Bile Acids continued on page 96)

The Test of Time: *Bile Salts*

20
Anniversary

When your body produces inadequate amounts of bile salts to digest fat properly, it will instinctively develop a dislike for fats. Answer the following questions sincerely to determine how well your digestive process is taking place:

1. Do you like fatty meats?
2. Do you like sausages?
3. If fatty meats are not something you like, do you like items such as crisp-cooked bacon or a snack such as pork skins?
4. Do you like lamb?
5. Do you like salmon?
6. Do you like fish only if it isn't oily or "fishy"?
7. Do you like flax oil?
8. Do you like nuts and/or seeds?

If you answered "yes" to the first few questions (and don't have gas, bloating, or indigestion when you eat those foods), you're probably producing adequate amounts of bile salts. The further down the list before you answer "yes," the more likely it is that you're having problems digesting fats, and there will probably be several indicative signs:

- Tartar formation on your teeth;
- Dry eyes;
- Cataract formation;
- Small "blister" formation after exposure to the sun;
- Bitter taste in the mouth;
- Occasional blinding flashes of light in your vision;
- Oily skin in the head, neck, and facial regions;
- Nausea when smelling cooking oils or fatty foods;
- Indigestion, bloating, and gas twenty minutes to an hour after a meal (particularly a fatty meal); and
- Chronic exhaustion and lack of energy.

How Bile Affects Your Smile

In the early 1900s, Dr. John Waters noticed that patients with diabetes, cancer, and chronic diseases had a heavy buildup of tartar and evidence of gum disease. He also found that at least 90 percent of those who had tartar problems hated the taste of fatty meat. Chronic problems with tartar buildup may also translate into an increased rate of heart attack and cancer.

Most people don't realize that the liver gets rid of wastes by dumping them in the bile. After aiding in the digestion of fats, the bile is reabsorbed from the small intestine, while the toxins and other poisons

continue through the intestinal tract and exit the body in the stool.

Because bile plays such an important role in your overall health, problems with bile production, storage, concentration, or movement can lead to serious problems. First, when we aren't getting enough B vitamins, magnesium, and lecithin in the diet, our bodies have a difficult time producing adequate amounts of quality bile. And the situation only worsens with practically every baked product on the shelf now containing trans fatty acids, which inhibit the production of bile salts in addition to raising LDL cholesterol and lowering HDL cholesterol.

Second, bile contains alkaline salts that are often absorbed to help maintain the proper pH of the blood (which is slightly alkaline at 7.4). Since the Standard American Diet emphasizes more meats and refined foods at the expense of raw unrefined vegetables (resulting in acidic blood), the absorption of alkaline salts from the gallbladder is required to help bring the pH back into balance.

When salts are removed from the bile, it becomes thicker. In turn, thicker bile makes the removal of cholesterol from the gallbladder more difficult—leading to the formation of gallstones. To make matters worse, the common treatment for gallstones is to remove the gallbladder, which will further impede the digestion of fat and result in deficiencies of fat-soluble vitamins and essential fatty acids to eventually cause heart attacks, cardiovascular problems, and cancer.

People who have had their gallbladder removed need to take bile salts for the rest of their lives. Anyone who has experienced the indicative signs I listed should also supplement with bile salts for at least three to six months accompanied by a more raw, natural diet. You can judge your continuing need for bile salts by monitoring the return of the symptoms mentioned above and/or the formation of dental tartar.

There are several bile salt products on the market, and many can be found in your local health food store. I use the product called Cholacol from Standard Process. I recommend taking two tablets immediately before a meal. It's available from the Village Green Apothecary at 800-869-9159.

Tip from Vol. 8, June 2001

(*Bile Acids continued from page 94*)

become a growing favorite among the health crowd. He picked the vegetable as Popeye's secret for strength—a view that was reinforced by Max Fleisher's Popeye cartoons in the 1930s—and beet leaves subsequently fell by the wayside. If you juice, definitely try a mixture of beets and carrots, and use the beet leaves as you would spinach. Just don't expect to get the same results as Popeye . . . unless you include the bile acids in your daily routine.

Low-Tech Answers to High-Profile Problems

I recently received a report from the African country of Tanzania describing a method being used to purify water for drinking. I hope it's something you'll never have to utilize, but I think it's worth sharing to illustrate that there are often simple solutions to complex problems.

Tanzania is one of the poorest areas on the planet. Water supplies there are sporadic, and often come from contaminated springs or small reservoirs. The result is often such water-borne diseases as cholera, dysentery, and typhoid fever. The official policy is to boil the water before drinking, but this is obviously an inconvenience and not always practical. In one area of the country, they've started filling used, clear plastic bottles (like the disposable soda and water bottles in this country) and placing them on black roofs. A combination of the heat and the ultraviolet rays destroy the bacteria over an eight-hour period. If the water reaches a temperature of 50 degrees C for an hour, then the water is also ready.

(I realize this isn't the ideal purification method, and there's always the issue of compounds from the heated plastic leaching into the water. However, considering the alternative, it's actually a very useful process.)

From Hot to Cold

Another innovative low-tech solution I recently ran across involved what is called the Pot-in-Pot, which is an efficient method of "refrigeration."

Being utilized in Northern Nigeria, the Pot-in-Pot consists of one small clay pot placed inside a larger pot with the space between filled with sand. Water is poured on the sand and, as the water evaporates, the inner pot is cooled. Eggplants that used to last for three days now last 27 days. Spinach now keeps for 12 days instead of spoiling after one day, and tomatoes and peppers last for as long as three weeks. Medical providers even recommend it to patients to keep medications cool.

Although this method may seem low-tech in many parts of the world, it has dramatically changed the way of life in that country. Farmers have longer to sell their produce, and the demand for pots is booming. Even enrollment in primary schools has increased considerably since young girls are free to attend school instead of peddling food every day.

The Pot-in-Pot reminds me of two other "refrigeration" devices that seem to have disappeared over the last few decades. When I was growing up on the farm, there was a canvas water bag with a cork stopper on every tractor and on the outside mirror of every truck. The water gradually seeped through the canvas and the evaporation cooled the water inside. A cool drink was hard to beat on those 100-degree summer days. I haven't been able to find one of those bags for quite some time now, but again that was when gasoline was 19 cents a gallon—and I haven't been able to find that either.

In Northern Australia, I was also introduced to what was called a Coolgardie safe. There were several variations, but the ones I saw consisted of a galvanized or wooden chest with wire mesh doors and sides. It was covered with a wet burlap blanket that provided the evaporative cooling effect. It was primarily used in the gold-mining towns before the arrival of electrical refrigeration. When placed in the shade and in the presence of a breeze, they can keep food fresh for days and keep butter from melting in 100 degree-plus heat.

Take care,

Dr. David Williams

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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- If you are a licensed health professional and would like to learn how to begin reselling MHN supplements to your patients, please e-mail practitionerinquiries@davidwilliamsmail.com.
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