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Dr. David G. Williams

Strong Circulation: Cure for a Thousand Ills

One of the most important and valuable lessons I've learned over the many years I've been practicing medicine is that no vitamin, drug, or doctor can heal the body of a disease. The body has an innate ability to heal itself. The best we can hope to do is facilitate this process by providing our bodies with the proper environment (physical, emotional, and spiritual), all the essential raw materials necessary for building and repair, and help with getting rid of waste materials.

I've discussed the first of these factors, the matter of personal environment, at considerable length in many past issues. This month, I'd like to focus on the element of the body responsible for supplying raw materials to and removing waste materials from the cells. That element is our blood supply. It provides the basic transportation system to and from each and every cell in the body. Staying alive or even healthy without proper circulation is impossible. Besides the obvious fact that heart and vascular disease is now the leading cause of death, dozens of the most common health problems we face today show remarkable improvement when proper circulation can be restored.

In the early days, health pioneers often recommended saunas, massage, and soaking in hot springs, all of which increase circulation. We now know the enormously beneficial effects that regular exercise can have on improving circulation flow, and on helping to build collateral paths of blood flow as well. Nutritional supplements can also help. Some of the most beneficial "all around" include niacin, ginkgo, and various herbs that expand blood vessels to improve blood flow.

Products like aspirin, heparin, and Coumadin (warfarin) have become essential tools of conventional medicine for "thinning" the blood and increasing blood flow. When the blood flow becomes drastically impaired, or actually stops from a clot, conventional medicine has resorted to the ultra-expensive "clot-busting" drugs like streptokinase, Activase, and urokinase. When all else fails, blood vessels from other parts of the body are sewn in place in order to "bypass" the blockage.

Unfortunately, most individuals nowadays learn to live with varying degrees of impaired circulation. Since the clogging of blood vessels is normally a slow, gradual process, the detrimental effects also come on gradually. The process can be so slow and drawn out that most people simply adapt to any new circulation-related limitation and accept it as just another sign of getting older. (In contrast, some people experience the ill effects of decreased circulation rather quickly. I'll talk about that situation later, when I explain why some individuals end up with a chronic illness while others, exposed to the same pathogens, quickly get over the problem.)

In This Issue

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

Like most health problems, impaired circulation can result from dozens of factors. The overall problem is like a giant jigsaw puzzle. Gradually, as more research data becomes available, more pieces of the puzzle are available.

Treating the problem with "blood thinners"—natural or otherwise—may provide relief, but they're really not the "cure." If you want to stop the problem of impaired circulation in its tracks, you have to treat it at a much deeper level. When I'm searching the world for "cures," I always have to ask myself the same question. Is this therapy or product a true cure or is it just something that treats a symptom? Obviously, I'm always hoping to find a true cure, but that's not always the case. I'm happy if I just uncover a technique or product that will allow someone to regain their health and live a more normal life. Although I continue to believe, and work under the assumption, that there is a cure out there for every problem, many have yet to be uncovered. And until just recently, we were somewhat limited in the tools we had for treating circulation problems.

The Japanese Secret to Prevent Heart Disease

I personally consume, and still highly recommend that you also take, lecithin granules on a daily basis. It helps lower the melting point of cholesterol and can help minimize blockages in arteries. It is also beneficial in the formation of cell membranes and nervous tissue. I also recommend the use of various vitamins, minerals, and herbs that can act as antioxidants and help prevent damage to blood vessels and other tissue from free radicals, toxins, and pathogens. Not only have I carefully formulated products to provide these compounds, but I've also recommended excellent formulas like the Tibetan medicine Padma Basic. Over the last year or so, however, I've been researching and investigating another unique product that appears to get closer to the root of many problems associated with impaired circulation. The product is from Japan.

Japan has one of the highest rates of fish consumption in the world and some of the lowest rates of depression, homicide, and suicide. For years, their health statistics have been used as an example of the benefits of fish consumption. Historically, the Japanese have also experienced less prostate and breast cancer, less heart disease, and greater longevity. No doubt, these benefits can be attributed to their higher fish and seafood consumption, but they also have one of the highest consumption rates for various soybean products. After a closer look at the research data, it appears that consumption of a particular soybean food called natto may be a very strong contributor to their high degree of health.

"Vegetable Cheese" to Clean Your Arteries

Natto is a soybean-based traditional food of Japan. It has been used in Japan at least for the last 1,000 years, and maybe even twice that long. Natto has been referred to as "vegetable cheese" because many people believe it tastes like cheese. It is a fermented product made by adding the spores of the beneficial bacteria *Bacillus natto* to boiled soybeans.

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Originally, natto was utilized as a folk remedy for heart and vascular diseases, beriberi, and fatigue. Even before its medicinal attributes were well known, it was popular as an inexpensive food. Currently, the average per capita consumption of natto in Japan is about 2.2 kilograms or roughly 4½ pounds annually. Natto consumption has not been associated with any ill side effects, nor have I seen any reports of it causing any allergic reactions. It is considered a very safe and beneficial food.

In 1980, Doctor Hiroyuki Sumi was working as a researcher and completing his chemistry degree at Chicago University Medical School. He was searching for a natural compound that could help dissolve the blood clots that can lodge in arteries and cause heart attacks or stroke. He tested 173 different foods, and found that natto exhibited the strongest thrombocytic activity.

On further investigation, he found that natto contained a very potent enzyme that had the ability to not only prevent fibrous clot formation, but also dissolve fibrous blood clots that had already formed. He named the enzyme nattokinase ("enzyme in natto").

Since 1980, additional research has been done on natto and nattokinase, and the results have been very exciting, to say the least. During that same period of time, serious questions were raised regarding the role that fibrin (the strands of protein that develop into clots) plays in the occurrence of many common diseases. As a clearer picture of fibrin's role slowly unraveled, it became increasingly clear that the use of natto and/or nattokinase could turn out to be one of the most significant breakthroughs in the treatment of a long list of diseases.

To fully understand the benefits of natto and nattokinase, you have to have a basic understanding of how and why clots, or fibrin deposits, are formed.

Your body produces numerous compounds for the sole purpose of making blood clots, or thrombi, as they are often called. Your ability to quickly form blood clots keeps you from bleeding to death when cut, and is essential to stop excess blood loss after trauma or injury. The process of clotting is complex and can occur in varying degrees.

In addition to trauma and injury, pathogens (bacteria, viruses, fungi, etc.) and toxins trigger the formation and release of the compound thrombin. Thrombin begins the chain of events that results in fibrin production. Then fibrin, made up of sticky protein fibers, can either accumulate and stick to the interior walls of blood vessels or continue to circulate within the blood stream. Fibrin slows blood flow and forms the supporting matrix for blood clots.

We often think of a clot as something like a lump or plug that completely stops blood from flowing through a vessel, and that is often true. When these clots occur within vessels of the heart, the heart muscle is starved of needed oxygen and quickly begins to die, resulting in either angina or heart attacks. A similar situation occurs when clots either migrate from the heart to the brain or form in the blood vessels supplying brain tissue. Blocking blood flow in these blood vessels results in nerve cell death, which manifests as senility and/or stroke. Researchers are beginning to learn, however, that in the absence of or preceding a full clot, fibrin is deposited, creating a condition of hyper-coagulation or "clogging" within the blood vessels.

When a person's blood has a tendency to coagulate or thicken more than normal, an outright clot and complete blockage might not form immediately. Instead, the blood flow might simply begin to slow down. When that happens, the fibrin strands begin to stick to arterial walls and slow the blood flow even more. Over time, blood flow in the smallest vessels, the capillaries, slows to just a trickle. The surrounding tissue begins to starve for oxygen while increasing amounts of toxins and waste material accumulate.

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Author: Dr. David Williams;
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As I mentioned earlier, your body makes several compounds to promote clotting (or thrombi), but primarily produces only one enzyme to dissolve and break down the fibrin foundation in blood clots. That thrombolytic, or "clot-busting," enzyme is called plasmin. Plasmin is normally produced in the endothelial cells, which are the cells that line the interior walls of arteries, veins, and lymph vessels. To be able to both control excess bleeding and increase blood flow when necessary, your body must produce a proper *balance* of these enzymes. *In a very large segment of the population, these enzymes are not in balance.* Thrombolytic enzymes, the ones that reduce blood clots and hyper-coagulation, are in short supply. Various factors contribute to this imbalance.

Why the Circulation Slows Down

Enzyme production requires a wide variety of various vitamins and minerals that are often lacking in today's diet. In addition, there's a certain percentage of the population that has genetic defects that inhibit the production of plasmin and other enzymes needed to prevent hyper-coagulation and/or clotting. *(Blood Coagulation & Fibrinolysis 99;10:1-4) (Genetics In Medicine May 2002)*

Other factors can contribute to or trigger the hyper-coagulation of blood, including:

Aging: As we get older, our blood vessels become less elastic. With each heart beat, a surge of pressure travels through the entire circulatory system. This surge expands and stretches the arteries. After the surge, the stretched arteries return to their normal size and in the process help push the blood along its path. This rebound effect lessens as the blood vessels become more stiff and rigid. As a result, blood flow moves more slowly through the tiny capillaries, increasing its tendency to coagulate.

Sedentary Lifestyle: Exercise promotes the development of collateral blood vessels and helps maintain the elasticity of blood vessels. During periods of exertion, the higher blood pressures and increased muscle contractions increase the speed and volume of blood flushing through the tissues. The fact that we've become a society of exercise spectators instead of participants has greatly contributed to poor circulation problems.

Low Antioxidant Levels: As a subscriber to *Alternatives*, you're probably aware of the benefits of antioxidants, and you probably take a good multi-vitamin/mineral on a *regular* basis.

The benefits of antioxidants could fill volumes. When it comes to hyper-coagulation, antioxidants can scavenge the free radicals that, left unchecked, inflame the endothelial cells lining blood vessels and cause the release of clot-promoting enzymes. Antioxidants also protect a prostaglandin called prostacyclin that helps thin the blood.

Nature provides a rich supply of antioxidants in fruits and vegetables. Unfortunately, due to changes in farming methods and food processing techniques, antioxidant levels have dropped. As a result, the necessity of using supplemental antioxidants to prevent problems like hyper-coagulation becomes even more important. It's not a well-publicized fact, but scientists have shown that the antioxidant levels in foods in the U.S. have fallen by 50 percent in just the last 25 years. *(Nutr Res 96;16)* Findings like this make it even more important that you take your antioxidant vitamins with your largest meals, and that you do so on a regular basis.

Consumption of Improper Fats: In earlier issues, I've discussed the enormous benefits of including more unsaturated fatty acids in your diet. Not only are they essential components for the formation of nervous tissue, they are also an integral component of every cell wall and membrane in the body. They form one of the first lines of defense against various pathogens and toxins trying to invade your cells. When the correct fatty acids are deficient, your body is required to use other, inferior fats for building and repair. Fragile or weak arterial cell walls are more susceptible to damage, which, in turn, triggers the release of blood clotting enzymes.

Toxins: We are being bombarded daily with pesticides, herbicides, industrial chemicals, household cleaners, sprays, off-gassing from building materials, toxic metals, vaccinations, and air, water, and food contamination, and many other toxins. These toxins are fat-soluble, fat-loving molecules that have been shown to selectively bind to the fatty barriers in the cell membrane of endothelial cells. They quickly dissolve in fatty tissue, which enables them to quickly set up a home in the nerves, brain, liver, and kidneys. Once these "neurotoxins" become established, they disrupt cell-to-cell communication and your body's ability to protect and repair itself.

When neurotoxins disrupt the endothelial cell membrane, inflammation results, along with hyper-coagulation and impaired circulation. Neurotoxins and hyper-coagulation have been linked to many of the multi-symptom "syndromes" that are so difficult to properly diagnose and treat. These include problems like chronic fatigue syndrome, fibromyalgia, multiple sclerosis, Lyme disease, toxic building syndrome, infertility, depression, heavy metal toxicity, rheumatoid arthritis, and optic neuritis.

More Virulent Pathogen Exposure: Due to the overuse of antibiotics and the resulting resistant strains that have emerged, we're being exposed to more and more dangerous forms of bacteria. At the same time, researchers have discovered that mutations are occurring at an alarming rate among numerous strains of viruses, molds, and fungi, making them far more virulent. Most, if not all, of these pathogens directly assault the endothelial cells, eventually causing the formation of more fibrin, which in turn contributes to hyper-coagulation.

Most of the bacterial pathogens are also anaerobic. In other words, to survive and replicate they require a low-oxygen environment. By triggering inflammation and other processes that impede circulation and increase fibrin production, they insure their survival. Hyper-coagulation and fibrin deposits help make the ideal breeding grounds for these disease-causing pathogens. Under normal circumstances, plasmin and other fibrolytic ("fibrin cutting") enzymes rush to the scene and clear up the mess and open up circulation.

The Threat from Fibrin

For an increasing number of people, however, this doesn't happen. Instead, they end up with a chronic illness that becomes almost impossible to get rid of. Their bodies produce large amounts of fibrin very quickly, which is deposited on top of the infected cells and the bacteria. This seals the bacteria off from the immune system. It also shuts off or greatly decreases the blood supply to the area. The pathogens no longer have to worry about oxygen levels getting too high or white blood cells from the immune system reaching them.

Other individuals, due to a lack of enzymes, do not have the ability to break down and remove the fibrin deposits. These bacteria-laden deposits can wreak all kinds of local havoc, depending on their location, in addition to constantly taxing the immune system with toxins and "leaking" bacteria. If the deposits form in muscle, they become constantly sore and inflamed (fibromyalgia). If the fibrin deposit occurs in the uterus, pregnancy might be impossible, and it's not uncommon to experience constant pain and other problems in that area. The deposit could be in the liver, the brain, or practically anywhere in the body. That's why the correction of hyper-coagulation can be beneficial in so many different and difficult cases.

Hyper-coagulation is one of the pieces of the puzzle that helps explain why one person develops a chronic illness while someone else, exposed to the same pathogen, quickly gets over the problem. This breakthrough in the way we look at chronic illnesses actually came about through simple observation (which, in my opinion, is one of the most "scientific" methods of discovery. Unfortunately, the ability "to observe" has become somewhat of a lost art when it comes to the field of medicine.)

Researchers noted that many individuals suffering from chronic illness benefited almost immediately after they were being given various forms of anticoagulant drugs (heparin, warfarin, etc.). Further investigation revealed that these individuals had genetic defects that kept them from properly regulating the coagulation of their blood. *(J Lab Clin Med 97;130:540-43)*

Following that discovery, reports began to surface showing that the majority of individuals with chronic fatigue syndrome and fibromyalgia could also be helped with anticoagulant therapy. *(Blood Coagulation & Fibrinolysis 99;(10):1-4)*

Clot-busters that Really Work

As I mentioned before, using anticoagulant drugs—or even natural "blood thinners"—is only treating the surface of the problem. Thinning and making the blood cells less "sticky" *temporarily* allows more blood to flow through an area with blockages. That's why warfarin, nitroglycerin tablets, and even aspirin have found favor with the medical profession.

The real solution, however, is to actually remove the fibrin deposit or clot. That brings us full circle—back to drugs like urokinase, streptokinase, Activase, etc. While each of these drugs has attained a degree of success, they all come with their own set of problems. For one, they are extremely expensive. So expensive, in fact, that not all clinics and hos-

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Making Natto

by Kazuo Shiroki

There are various methods for making natto, but the method here will focus on the one that uses the natto bacteria (*Bacillus natto*) available in the United States and Canada.

It is essential to sterilize the utensils being used to make natto, to reduce the chance of contamination by harmful germs. It is also essential to maintain a temperature of approximately 104° F for successful fermentation of natto. The large ovens built into most North American homes are ideal for both purposes.

I strongly recommend you use the spores of *Bacillus natto* instead of a commercial package of natto as the natto bacteria base. *Bacillus natto* spores are more economical and reduce the risk of contamination by harmful microbes. You can obtain *Bacillus natto* spores from several vendors in North America, including Gold Mine Natural Foods, 800-475-3663, and Gem Cultures, 707-964-2922 (a very small company). The spores can be kept in the refrigerator for a long time. If you are going to use commercially-produced natto instead of natto bacteria, substitute one pack of natto for 0.0035 oz. (0.1 g) of natto bacteria in the recipe below.

Ingredients (makes 2.6 lbs. of natto):

- 17.5 oz. soybeans (The smaller their size, the better, as smaller beans will ferment all the way to the center more easily.)
- 0.1 g *Bacillus natto* bacteria
- 1/4 tsp. salt (natural salt, if possible) Salt increases stickiness and improves flavor.
- 1/2 tsp. sugar (brown sugar or molasses, if possible). Sugar aids activation of natto bacteria spores and helps fermentation.

Utensils:

- One bowl to immerse soybeans
- One sieve to drain soybeans
- One steamer (you can boil soy beans instead of steaming, but the nutrition and flavor will escape, and the natto may become soggy)
- Two casserole pans, about 10 in. in diameter and 2 in. deep
- Two sheets of aluminum foil (should be large enough to cover the casserole pans)
- Two deep plates to hold water, 8–12 in. in diameter
- One thermometer
- One family-sized oven
- One work lamp or lamp stand without its shade. (Optional, but very helpful.)
- One 40W and one 60W light bulb
- One each heat-resistant cup, teaspoon, and spatula
- One pair of clean rubber gloves (should be used as much as possible to prevent food contamination/poisoning.)

Preparation Method:

1. Wash 17.5 oz. of soybeans thoroughly, and soak them in more than three times as much water (by volume) twelve hours at room temperature.
2. When the soaked soybeans have swollen to twice their dry size, put them into the large steamer pot and steam them for 6 hours. They're finished steaming when they can be easily mashed between two fingers. (As with any other legume, you shouldn't cook soybeans in a pressure cooker.)
3. Two hours before the soybeans are finished steaming, cover the empty casserole pans with the sheets of aluminum foil, make air holes with a pointed object, such as a chopstick, and place them on the top oven rack. Half fill the deep plates with water, and place them on the middle oven rack. The water will keep the natto from drying out. Also put the heat-resistant cup and teaspoon in the oven. Heat the oven to 250° F to sterilize the utensils and warm the water. When the oven has been adequately heated, turn off the switch and allow it to cool naturally. Before using the rubber gloves to mix the natto, disinfect them in hot water.

   ***NOTE:* Work quickly from this point on to prevent introduction of harmful bacteria.**
4. When you have finished steaming the soybeans, strain out the water by keeping the lid in place while tipping the steamer.
5. Remove the lid and the steamer, leaving the soybeans in the pot. Put the lid back quickly so as not to contaminate the soybeans and lose the heat.
6. Pour 2 tsp. of pre-boiled water into a cup, and mix in salt, sugar and 0.1 g of natto bacteria (See the note below in this section). Natto bacteria spores are very resistant to heat. It will take one hour at 285° F to kill all the natto bacteria. But make sure the water temperature is below 175° F.

   Also, if it is hard to handle the small volume of 2 tsp. of pre-boiled water, increase the amount by two- or three-fold. The amount of water will affect the stickiness and sogginess of the natto, so experiment with it.

   When you have become accustomed to this preparation method, you will be able to make good natto with a smaller amount of natto bacteria.
7. Remove the lid from the pot, sprinkle the solution of salt, sugar, and natto bacteria over the soybeans, and stir to evenly distribute the natto bacteria.
8. Take the aluminum foil off the casserole pans and spread the soybeans to an-inch thick layer. (Ideally the soybeans should be no more than three beans deep.) Put the aluminum covers back on again. The beans are cov-

ered with aluminum foil, but if there is not enough air circulation, natto may become bitter. With too much air circulation, its surface may become dry.

9. Make sure the oven is turned off first. Then put the aluminum foil-covered pans on the top oven rack. Leave the plates filled with water on the middle rack. The water should have cooled down to around 105° F.

   Place the work lamp, fitted with a 40W bulb, in the lower part of the oven. You may use the built-in light in the oven, but it does not warm the oven evenly.

   Place the thermometer on the upper rack and close the door.

10. Check the temperature after a few hours. In order to keep the temperature between 100°–107° F, you may have to change to a light bulb of a different wattage, or you may need to keep the oven door propped open a crack. After a few adjustments, it will become easier to maintain the proper temperature, that is between 100°–107°.

11. The natto will be ready in 20–24 hours. After that period of time, switch off the lamp and wait a few hours until the natto becomes cool, stopping the fermentation. When the aluminum foil is removed, you may see that the surface of the soybeans has turned partially white, and smell that the kitchen is full of the aroma of natto. Some smell of ammonia is normal, but if it is too strong, undesirable germs may have flourished.

    The natto is very sensitive to air circulation, temperature, etc., so this can affect the outcome of the fermentation. Observe the outcome of your natto making, and make adjustments as necessary the next time around.

12. Keep the natto in the refrigerator for a few days to one week for aging. It will develop a nice stringiness and improved taste. If it is left in the refrigerator too long, the amino acids will crystallize, creating a sandy texture. The best way to keep this from happening is, after aging natto in the fridge, to divide it into several smaller packages and freeze them.

Note: If the natto fermentation is not successful, the finished natto may not be sticky enough, may not be stringy, or may be bitter or have a strong smell of ammonia. On the other hand, a white film on the surface of the natto, as well as stickiness, does not necessarily indicate successful fermentation.

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pitals stock the drugs. If they do stock them, they use them only when someone presents themselves at a hospital within minutes after a stroke or heart attack. They have to be injected quickly following one of these incidents because their fibrinolytic activity (ability to dissolve clots and fibrous tissue) lasts for only about 4 to 20 minutes.

As I said earlier, until just recently, we really didn't have any natural solution to remove fibrin deposits. However, from every indication, it appears that natto and nattokinase have been the natural solutions we've been searching for.

Japanese researchers have shown that *100 grams of natto exhibits the same fibrinolytic activity as a therapeutic dose of urokinase.* Even more remarkable is the fact that while an injection of urokinase is effective for only 4 to 20 minutes, nattokinase (the enzyme in natto) maintains its activity for 4 to 8 hours. *(Acta Haematol 90;84:139-143) (Hemorheology and Related Research Vol. 5(1):43-44) (Data from Japan Functional Food Research Assoc.)*

There are so many conditions that might benefit from natto that it's really hard to list them all. When you try to list all the problems that would benefit from improved circulation, you end up with an extremely long list. Doctors are just beginning to use it in this country, so more information is becoming available every day. It obviously has applications in treating practically any chronic illness, even those that are generally thought of as circulation problems, such as chronic fatigue syndrome, fibromyalgia, multiple sclerosis, etc. Obviously, it could benefit cardiovascular and circulation problems.

Health on a Budget

As I researched and studied natto during the last year or so, I couldn't help but think of natto as an effective tool that could be used to help slow the aging process. One of the biggest fears of getting older is losing one's mental well-being. When I reviewed figures from Japan (and I doubt there's much difference in this country), it was estimated that about 60 percent of the senility in Japan was a direct result of blocked blood supply in the brain. I can't help but believe that a daily dose of natto and a couple of tablespoons of lecithin granules each morning could go a long way toward preventing such problems.

Natto is truly the poor man's form of cleaning the arteries. It's safe, effective, and has no side effects.

Natto isn't readily available in this country like it is in Japan. You may be able to find it if you have a large Japanese population in your area, but I've been unable to find a commercial source. You can, however, make your own from scratch. Considering the benefits it provides, it's dirt cheap. All you need is a little time, some soybeans, and some natto starter spores to get the fermentation process going. A daily intake of 100 grams (3.5 ounces) is the amount suggested to clean arteries and improve circulation.

How to Make Natto

Making natto takes a little bit of doing, and many Americans don't like its taste. However, when you consider its health benefits, both its preparation and taste are small obstacles. I've included a recipe for natto on pages 134–5. It's copied (with permission) and condensed from the Web site *www.gaia21.net*, where you can find more information on natto if you're able to go online. (If you don't have a computer to access the Internet, you can usually use one at your local public library.)

The Nattokinase Option

If making your own natto is too much trouble, you can now buy its active enzyme, nattokinase, in capsule form. It has been made available in the U.S. through the Allergy Research Group, which also does business under the label NutriCology. The product is labeled as Nattokinase, item #74750, and each capsule contains 276 milligrams. Allergy Research Group can be contacted at 30806 Santana Street, Hayward, CA 94544. Their phone number is 800-545-9960. The generally recommended dose is one tablet in the morning and afternoon and two at bedtime.

There are only a couple of precautions for taking nattokinase or eating natto. Individuals taking the drug warfarin, a prescription method to prevent blood clots (and also used as rat poison), should not eat natto or take nattokinase. Natto has a high vitamin K content, which may impede the effectiveness of warfarin. (It is not uncommon for doctors to tell their patients who are on warfarin to also avoid other vitamin K-rich foods such as cabbage and the green algae chlorella.)

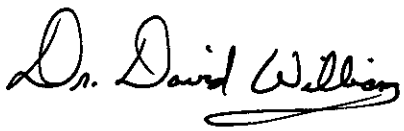
Natto can be eaten at any time during the day, but, if you're at risk from stroke or heart attack, it has been suggested that you eat natto or take nattokinase with the evening meal. Since most heart attacks and strokes occur within a few hours of rising, this should give you a greater degree of protection. (This is also the primary reason for recommending that two tablets of the enzyme nattokinase be taken at bedtime.)

Don't Delay

Nattokinase is one of the most significant tools for improving chronic circulation problems I have uncovered in the last several years. If you suffer from any of the problems I mentioned earlier, it's certainly something you should give serious consideration. It's safe, very effective, and now readily available in this country. It's also one of the few remedies where you have two choices. If you can't afford the enzyme as a supplement, there's nothing to keep you from making your own monthly batch of natto.

And, if your risk of stroke or heart attack is high, I would strongly recommend that you keep a bottle of nattokinase on hand. It can provide you with some of the best clot-busting activity available at a fraction of the cost of drugs like streptokinase, urokinase, etc. And following a heart attack or stroke, time is of the essence. The sooner you put nattokinase to work, the better the ultimate outcome will be.

Take care,



If you have questions or comments for Dr. Williams please send them to the mail or email 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:

- To send in Mailbox questions or Health Hints, write to P.O. Box 61010, Potomac, MD 20859-1010 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 drdavidwilliams.com
- To order nutritional supplements from Mountain Home Nutritionals, call 800-888-1415 or visit drdavidwilliams.com
- To order back issues or reports, call 800-718-8293
- To sign a friend up for *Alternatives*, call 800-219-8591