

The Nutritional Bypass

Reverse Atherosclerosis Without Surgery

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WARNING

This book is not intended to diagnose disease, nor to provide specific medical advice, nor to promote the sale of any product. Its intention is solely to inform and to educate. For the diagnosis of any disease, please consult a physician.

About the Author

David Rowland is the founder and the former publisher of Health Naturally magazine. For 15 years David ran an active nutritional counselling practice. He has written 22 books and 88 articles and nutrition and health

For the first 30 years of his life, David suffered from repeated bouts of respiratory infections, gastrointestinal disturbances, and malaise. His ill health was really a blessing that set him on a course of learning natural methods of healing. In the process of curing himself, David discovered his love for helping others.

David's personal path to full health led him to undertake extensive training in nutrition, eventually leading to a PhD degree in that field. All that he has learned through studying, practice, and teaching he readily shares with his readers -- in a clear, direct writing style.

Other Books by David Rowland

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Endocrine Harmony
Food Alone is Not Enough
How to Give Nutritional Advice Legally
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The Unkindest Cut

Bypass surgery is big business. That is its only legitimate claim to fame. Its effectiveness has *never* been validated scientifically, it does *not* extend life, and it does *nothing* for the cause of the problem. Bypass surgery is incredibly popular, however, even fashionable.

The bypass was first introduced without benefit of clinical testing. No one had ever divided patients in the same condition into two groups, giving one group the procedure and the other nothing, to see which group would fare better. Now that bypass surgery has been performed for so many years, however, we can analyze the historical data. A number of retrospective studies have done just that. They all conclude that bypass surgery does nothing to extend life. Those who have bypass surgery, on average, do not live longer than those in similar condition who do not.

The *New England Journal of Medicine* (Aug. 11/88), reported on a study of 767 men at several European medical centres. Results showed that survival rates were no better in many patients who have had coronary bypass surgery than in those who received only drug treatment. Of the original 767, 109 who had the surgery died within twelve years (compared to 92 in the control group). Thirty-four bypass patients had a total of 44 repeat operations, and five of these 34 died.

Dr. Henry Barnett, Professor of Neurology at the University of Western Ontario, gave a report in Toronto at the July/85 International Congress of Neurologic Surgery. In it he showed, through clinical trial, that brain bypass surgery (then 20 years old) was worthless. Final analysis of the data showed that patients receiving this surgery on the carotid artery had more strokes and fatalities (15%) than similar patients who did not receive surgery (4% strokes and fatalities).

Bypass surgery consists of rerouting blood flow around blockages by grafting in a piece of vein taken from elsewhere in the body. (Areas previously serviced by relocated veins have to adapt to a diminished blood supply.) The bypass can be performed only on parts of the body that are accessible to the scalpel, such as the front of the heart, the abdomen, or in the neck. It cannot be done on the back of the heart, in the skull, for example.

Every surgery has risks. This one may have an estimated mortality rate of one to four percent on the operating table and about 20 per cent or

more within two years. Sometimes blood clots from the operation migrate and lodge themselves in narrowed arteries elsewhere, causing strokes or other complications.

The *British Medical Journal* (Nov/85) reported that, in a study of 312 patients who had coronary artery bypass surgery, 190 (or 61%) had postoperative neurological complications. Most of these patients were not seriously disabled, but fifteen suffered strokes, ten failed to return to consciousness for one to twelve days, and 25 had blurring of vision and difficulty in reading. These hazards of the heart bypass are rarely discussed with patients before the operation. This kind of brain damage is subtle and noticed by close family and friends. The patient cannot remember names and numbers as well as before the surgery. Personality and sleep disturbances are common. The cause of brain injury appears to be the heart-lung machine which may damage blood elements, thus introducing toxic gases, fat globules and/or tiny plastic particles into the bloodstream. These debris apparently re-enter the body, perhaps clogging tiny blood vessels and cutting off oxygen and other nutrients to the brain.

According to a report in *Medical Abstracts* (Sept/86), a survey at two large military hospitals revealed that 63% of patients who underwent coronary bypass surgery before their 36th birthdays either failed to improve, relapsed or died. (Of patients aged 45 and over, 45% had similarly poor outcomes.)

Any relief that the bypass provides is only temporary. This surgery does nothing to stop blockages from reforming at or near the original site. It does nothing to halt progressive deterioration anywhere else in the arterial tree. One bypass operation often leads to a second or even a third some years down the road. But there is a limit. Sooner or later the body runs out of operable sites.

If bypass surgery has so many limitations, why is it so popular? I believe it is ultimately because the general public does not know what its options are. That is the purpose of the book. To present choices. Surgery can be a wise decision, but not if chosen in ignorance of the alternatives.

Lesser Cuts

Angioplasty is a less invasive surgical alternatives to the bypass. A popular version of this technique involves inserting a balloon catheter into the occluded blood vessel, inflating it and rubbing it back and forth to expand the artery and compress the plaque against its wall. Another version involves reaming out the blockage with a high speed, very fine drill that apparently does not damage healthy tissue. Here again, once the technique has been performed, there is nothing to stop the plaque from re-forming -- sometimes rather quickly.

A report in the *New England Journal of Medicine* (Sept. 22/88) suggests that in 25 to 40 percent of coronary angioplasty cases, the same vessel becomes blocked again -- usually within six months after the procedure.

In a more recent report in that same journal, S. R. Tunis and Associates provide data indicating that in the State of Maryland, despite the increasing use of angioplasty from 1979 to 1989, the use of bypass surgery also increased greatly, and the rates of amputation remained the same. (*N. Eng. J. Med.*, 1991; 325:556-62.)

Endarterectomy is another surgical alternative that involves removing the lining of an artery. It is often applied to the carotid artery of the neck.

Although this surgery is supposed to prevent strokes, three studies find that this operation actually causes more strokes, heart attacks and deaths than it prevents. (*N. Eng. J. Med.*, Oct/86; *J. Am. Med. Assn.*, Nov/86; *Ann. Int. Med.*, Jan/87.)

In a letter to the editor (*Nutrition News*, Sept/87), a lady wrote: "In Feb/80 my husband had a second carotid artery surgery. The first, done in Sept/79 after a mild stroke, was a success. Five days after the second surgery he had a massive stroke and hasn't worked since. I was told that there was a five per cent chance of stroke during surgery. Naturally the life of our family changed in an instant."

Surgical methods of treating atherosclerosis attempt either to remove plaque or to bypass plugged arteries. **None of these surgical methods, however, treat the cause of the problem.** They focus only on reducing the effects of the plaque after it has built up -- not on eliminating the factors which created the buildup in the first place.

Chelation Therapy

There is one medical procedure that can remove arterial plaque safely and effectively. It has none of the risks that accompany surgical procedures. It has the potential to clear the entire arterial tree, including areas not accessible by scalpel. Unfortunately, it is not readily available. Many medical organizations have restricted its use, apparently for political reasons. It is, after all, competition to the lucrative bypass.

The method referred to is intravenous chelation. It involves injecting E.D.T.A. (ethyl diamine tetra acetic acid) -- a synthetic amino acid -- slowly into the bloodstream, over a number of hours. E.D.T.A. drastically reduces the mineral content of the blood -- so much so that the blood has to pull calcium from the arterial plaque to restore its balance. The minerals are bound (or "chelated") by the E.D.T.A. and safely eliminated through the kidneys. As calcium is pulled from the plaque, its cementing action is lost and the cholesterol and other substances are freed to be carried away by the bloodstream. Excess cholesterol is converted into bile by the liver, and excreted through the intestinal tract.

Two points are worth noting: (1) E.D.T.A. is foreign to the human body; it does not take part in any bodily reactions and is safely excreted. (2) It is necessary to replace quickly, through supplements, the vital minerals that have been removed by the E.D.T.A. therapy.

Chelation therapy has been used since 1948 as a means of removing lead from the body, in cases of acute poisoning from that metal. Some doctors, however, found that it also improved the symptoms of atherosclerosis and started using it for that purpose as well. Although the former use for chelation therapy is widely accepted by the medical community, this latter application is the subject of much medico-political controversy. In an unprecedented move, the College of Physicians and Surgeons of Ontario (CPSO) made it illegal for E.D.T.A. therapy to be used for arterial disease. (For all other therapies of which the CPSO disapproves, it has always issued statements recommending that its members not use them. It has never before made its recommendations law.)

Detractors of chelation therapy claim that it is unsafe. However, their viewpoints are usually supported merely by speculation or flawed research, however. Prior to 1954 there were two deaths attributed to E.D.T.A. treatments. Since that time, however, safe protocols have been well established. As it is presently practised, chelation therapy is eminently safe.

One of the fears about E.D.T.A. therapy is that it may remove calcium from the bones. Actually, the opposite seems to be true. Some of the ionic calcium which has been removed from the arterial plaque may actually be available to strengthen bones suffering from osteoporosis.

As an emergency measure, chelation therapy can be a life saver at removing arterial obstructions. It is not a preventive technique, however, since it does nothing for the cause of the problem. It does not stop the plaque from building up again. People who have had E.D.T.A. treatments frequently return within a few years to have them repeated again.

Chelation therapy is also time consuming and expensive. A typical course of treatment may consist of a series of 20 or more injections -- each one taking several hours -- at a total cost of several thousand dollars.

Many chelating physicians recommend that their patients take specific nutritional supplements after treatment to help protect arterial health. Rarely are such supplements complete enough to do a full job of keeping the plaque from returning. **A special nutritional arterial cleansing formula has been created, however, that can help the body not only to remove arterial plaque, but also to prevent its later return.** Many people find oral nutritional cleansing to work better for them than chelation. Others prefer the intravenous therapy. Both methods work, depending on individual differences in biochemistry. It is not that one method is automatically superior to the other. If one has both the access and the funds, then it makes sense to combine both approaches.

Bypassing the Bypass

There is a nutritional approach that can bypass the need for the bypass and all related surgeries. It is both safe and effective. It can be used as both therapy and prevention.

Since 1983, many thousands of people have been successfully using this unique cleansing method both to prevent and remove the arterial deposits that are responsible for heart attacks and strokes. "Before" and "after" angiograms and doppler tests have, in some cases, revealed **complete removal of significant arterial blockages** within a few short months of starting the program. Symptoms -- such as angina, leg cramps, lack of measurable pulse in the ankles, tingling in the hands, trembling and even gangrene -- often disappear within weeks. Blood pressure and cholesterol/triglyceride levels tend to normalize themselves. Many who were scheduled for bypass surgery (and many who were inoperable for it) no longer require it. Many have been able to throw away their diuretics, blood thinners, aspirin, anti-cholesterol drugs and nitro-glycerin.

These people are using a simple self-help method to reduce their risk of succumbing to cardiovascular disease -- our nation's number one disease killer. This method works by providing the body with the conditions it needs to cleanse itself of arterial plaque, **in an entirely natural way**. The human body has an amazing ability to heal itself -- if we give it everything it needs to do so.

Some 60,000 miles of blood vessels feed all of our organs, tissues and cells with oxygen and vital nutrients. Clearing out this intricate network of flexible tubing can help to rejuvenate and restore the entire body. Additional conditions reported to have improved from arterial cleansing include Alzheimer's disease, diabetic retinopathy, impotence, prostate problems, arthritis, varicose veins, irregular heartbeat and heavy metal toxicity. Even those who do not have any of the above often report benefits such as improved memory, more energy, warmer hands and feet, better vision, more youthful appearance and the need for less sleep.

How can one simple technique help the body to improve in so many possible ways? It makes perfect sense. Every cell in the body receives its nourishment (directly or indirectly) from the bloodstream. As blood flow improves, so does each cell's potential to receive more of the vital nutrients needed for its survival. Also, an increased blood supply

improves the body's ability to carry away cellular waste products, which if allowed to accumulate, may contribute to a number of degenerative conditions. **Arterial cleansing helps the body both to nourish and to detoxify itself** -- two important conditions necessary for optimal health.

In 1920 heart attacks were very rare. Today they claim more lives than any other disease. Prior to 1920 the human body was resistant to heart disease; since that time it has somehow lost this immunity. In order to reduce our risk of succumbing to this killer, we need to make our bodies as healthy as those of our ancestors of some 75 or more years ago. The program outlined in this book demonstrates how easy it is to restore vital immunity by supporting the body's innate healing ability.

Perhaps the most exciting feature of arterial cleansing is its simplicity. Each of us can do it for him/herself, without having to depend on experts or complex technology. **It is safe, it gets results, and it is extremely cost-effective** when compared to alternatives (especially the alternative of doing nothing).

Arterial cleansing is an excellent example of how each person can take charge of his/her own health and life. Many use it to help reverse arterial disease once it has taken hold. Others use it as prevention. Yet others use it to help build superior health that far surpasses the mere absence of disease. The choice and the challenge are yours.

Early Warning Signs

There are many bodily signs that can warn of deteriorating circulation, long before the onset of any heart attack or stroke -- if only we learn to heed subtle warnings, such as the following:

- Fingers and/or toes often go cold.
- Arms and/or legs often "go to sleep".
- Numbness or heaviness in arms or legs.
- Cramps in hand when writing.
- Sharp, diagonal crease in the earlobe.
- Tingling sensations in lips or fingers.
- Short walk causes cramping or pains in the legs.
- Memory not as good as it used to be.
- Ankles swell late in the day.
- Persistent, nagging cough.
- Breathlessness on slight exertion or lying down.
- Urinating more than twice during the night.
- Whitish ring under outer part of the cornea in the eye.
- High blood pressure.
- Chest pain after physical exertion or emotional stress.

Some of the above signs may have other possible causes as well; however, the more of them that apply to any given individual, the more likely it is that such a person has deteriorating circulation.

For many people, the first heart attack is fatal. **Do not take your body for granted.** Slight problems now may warn of more serious difficulties later on. As soon as any of the above early warnings appear, corrective action can be taken to prevent further arterial deterioration -- and even to reverse that which has already taken place.

Risk Factors

There are many factors in our daily life that may contribute to arterial disease. Some of these are well understood, others are not.

The following is a list of those dietary and lifestyle factors that are potential causative factors in the development of atherosclerosis. You may find some surprises on this list, both by what it includes and what it leaves out.

- Smoking.
- Consumption of polyunsaturated oils (especially rancid ones).
- Nitrates and nitrites (used as food preservatives).
- Inhalation of carbon monoxide (from exhaust fumes).
- Air pollution, inhalation of toxic chemicals.
- Chronic constipation.
- Drinking or bathing in chlorinated water.
- Radiation (e.g. X-rays, gamma rays, ultra violet).
- Stress in job or home life.
- Lack of regular exercise.
- Excessive intake of sugars, alcohol, and/or caffeine.

Overdoing one or two of the above factors may not necessarily lead to heart disease, depending on how healthy one's body is in other respects. A person who does very little exercise, for example, may be able to protect his/her arteries by following most of the other heart health guidelines.

The more of these risk factors we allow in our lives, however, the greater the likelihood of our dying from heart disease. We may be able to survive narrowed arteries if our blood stays slippery (because of sound nutrition) or if we increase artery diameter (from exercise). If, however, the arteries become restricted by deposits and the blood becomes sticky, then that is an open invitation to heart disease to strike at any time.

Fortunately, all of the risk factors are avoidable. At any time we can choose to eliminate (or drastically reduce) our exposure to them.

Causes of Atherosclerosis

Over 50 per cent of all westerners die of diseases that have an underlying cause of hardening of the arteries (also called "atherosclerosis" or "arteriosclerosis"). Arterial blockages lead to poor circulation, senility, strokes, heart attacks and, ultimately, death.

The material (or "plaque") that blocks blood vessels builds up gradually over many years. At one time it was found only in middle aged adults and seniors. Now autopsies are finding its beginnings in young people in their teens and twenties.

Some statistics seem to indicate that fewer people are dying of heart attacks now than were, say, 25 years ago. Not necessarily. Doctors now have the technology to keep more people alive once they have had a heart attack, but the actual chances of getting an initial attack are as great or greater than they have been. Heart disease is still our nation's number one disease killer – in spite of an abundance of drugs and surgical procedures. Atherosclerosis has reached epidemic proportions.

Arterial deterioration begins at an early age and steadily progresses throughout life. As plaque builds up in key locations, circulating blood clots may become trapped in these narrow openings, suddenly cutting off the blood supply to vital tissues and precipitating heart attacks, strokes or gangrene -- depending on where the blockages occur. Often it is not a circulating clot that plugs the narrow opening. The plaque itself can keep on accumulating until it completely closes the artery.

The plaque is a composite of fibrin, collagen, phospholipids, triglycerides, cholesterol, mucopolysaccharides, foreign proteins, heavy metals, muscle tissue, and debris -- all bonded together with calcium. (Cholesterol is only one of a dozen or so components of the plaque.)

Atherosclerosis is found *only* in arteries, *never* in veins. This is because arteries have an inner muscular layer that veins lack. This muscular wall enables the arteries to expand and contract with the flow of blood that is pumped by the heart. It also constricts the arteries during stress, thereby increasing blood pressure so that more oxygen and nutrients can be delivered to the outermost parts of the body -- to

increase energy levels in preparation for "fight or flight". The veins are the low pressure part of the circulatory system, which returns blood to the heart; and they do not require a muscular layer to do so.

Cardiovascular disease begins with damage to this middle, muscular layer of an artery. Something causes these muscle cells to mutate, forcing them to duplicate at an extraordinary rate, eventually creating a bulge inside the arterial wall. Ordinarily, a healthy cell replaces itself only once, when it begins to wear out. Mutated arterial cells, however, reproduce themselves limitlessly, by a process known as "monoclonal proliferation".

The bulges created by the uncontrolled growth of muscle cells are really small, benign tumours called "atheromas". They can grow so large that they cause the inner lining of the artery to rupture. When they do, the bloodstream lays down fibrin (clotting fibres) to patch the tears. Minerals (especially calcium) become trapped in the fibrin net. Because of opposing electromagnetic charges, the minerals attract fats into the patch.

Gradually more and more debris build up over the site of the injury. **Cholesterol**, a slippery, waxy substance, is one of the later substances to be laid down -- and it **may have a protective role** in this regard -- preventing blood cells from being damaged by what would otherwise be a rough surface. (Cholesterol is *not* the first substance to be laid down in the plaque.)

If our immune systems are strong, they recognize mutated cells as foreign and produce antibodies to them. If there are enough circulating T-cells (from the thymus gland), these guardians can identify abnormal cells early and stimulate the thymus to produce antibodies to eliminate them -- before proliferation gets out of control -- before harm is done.

If, however, our immune systems are weak from poor diet, stressful lifestyle, exposure to health hazards, etc., then antibody production may be inadequate. The multiplication of mutated cells may outstrip our ability to produce antibodies to them. There thus appear to be two reasons why our ancestors of not so long ago did not have heart disease: (1) They were not exposed to the same degree of risk factors that we are, and (2) Their immune systems were stronger than ours.

If we wish to find an answer to heart disease, then we must first identify its true cause. To do that we have to look beyond cholesterol (which may be an incidental part of the process), to what actually causes the original mutation in the arterial wall. The most likely culprits in this regard are renegade chemicals called **free radicals**.

Free Radicals

Free radicals are highly reactive molecular fragments that interact rapidly and aggressively with other molecules in your body to create abnormal cells. They can penetrate into the DNA of a cell and change its "blueprint" so that it now produces maverick cells that proliferate out of control.

Free radicals are highly unstable. They have unpaired electrons in their outer orbits, which cause them to react almost instantly with any substance in their vicinity. Oxygen free radicals are especially dangerous because they react readily with many other molecules.

White blood cells (leucocytes) use free radicals, in a controlled way, to kill invading bacteria and virus-infected cells. The liver also uses free radicals to detoxify harmful chemicals. Outside this regulated environment, however, free radicals destroy cellular membranes, enzymes, genetic material and even life itself. They accelerate aging and contribute to the development of arterial disease, cancer, and cataracts. They damage collagen by causing a cross-linkage of molecules and the loss of elasticity.

Wrinkled skin, stiff joints and high blood pressure are often the result of this process of deterioration.

Free radicals are released in the body from the breaking down or detoxification of many chemical compounds, such as petrochemicals (in drugs, artificial food colourings, smog, etc.), preservatives in processed meats (e.g. nitrates, nitrites), exhaust fumes, cleaning fluids (e.g. carbon tetrachloride), unsaturated and rancid fats, alcohol, the tar in tobacco smoke, chlorinated drinking water (which can form chloroform in the body), cadmium and other heavy metals, and from radiation (e.g. X-rays and gamma radiation). The more we expose ourselves to such hazards, the greater the load of uncontrolled free radicals to which we subject our bodies -- and the more likely we are to exceed the ability of our immune systems to protect us from their potential damage. As you can see from the above list, free radical risks in our environment have been steadily increasing over the years. Our great, great grandparents had to contend with only a relatively tiny amount of these harmful factors.

One free radical hazard is an internal one. During constipation, renegade chemicals (such as apcholic acid and 3-methyl cholanthrene)

are released into the colon and the bloodstream -- thus contributing to both colon cancer and arterial disease. Our ancestors ate unprocessed foods, rich in fibre, which tend to fill out the colon and aid in its evacuation -- the way nature intended. We would do well to emulate their habits. Because the fibre has been removed from refined flour and sugar products, these foods tend to be constipating.

If you want to know how much your body has already been affected by free radicals, there is a simple test you can do. Extend your hand, palm down, in a relaxed position. Pinch the skin on the back of your hand and lift the fold upwards. Release this fold of skin and see how long it takes to pull back into position. If you are young or have minimal free radical damage, your skin will snap back immediately. Where there is considerable cross-linkage of collagen, the skin fold will slowly slip back into place, sometimes taking several seconds.

Fats and Oils

Contrary to popular misconception, **polyunsaturated oils do not prevent heart disease**. In fact, they may contribute to it. As our national consumption of polyunsaturates (e.g. vegetable oils, margarines and other processed oils) has increased over the years, so too has the incidence of heart disease increased.

Polyunsaturated oils are chemically unstable. That is because they have a number of loose, double carbon bonds in their atomic structure. When subjected to heat or air, they oxidize rapidly to form harmful free radicals. The more unsaturated the oil, the more potentially hazardous it is in this regard. Examples of oils that are predominately polyunsaturated are safflower, sunflower, soy, sesame, corn, and walnut.

The most hazardous vegetable oils of all are the ones used in restaurants for deep frying. Those oils are heated and re-heated many, many times over. They are rancid, but you cannot taste or smell that rancidity because of deodorants that manufacturers purposely add.

Other very hazardous vegetable oils are those which have been hydrogenated to form margarine, shortening and other manufactured or "tinkered" fats. These substances are not natural foods at all, but are rather in the category of food "artifacts". They contain peroxidized fats, trans fatty acids and other modified fat molecules which severely compromise immune processes in the body.

Even the highly touted, so-called "cold pressed" oils can be potentially harmful. For one thing, many of them are processed at a "cold" temperature of over 100 °C. For another, as soon as they are exposed to air they deteriorate rapidly -- and if heated, their destruction is virtually guaranteed.

Healthy fatty acids are critical to our survival. They help to form the membranes that surround every cell in the body. They help to protect against degenerative diseases. They are precursors to hormone-like substances called "prostaglandins", which help to regulate gastric secretions, pancreatic functions and the release of pituitary hormones. Fatty acids combine with glycerol to form triglycerides, which act as carriers for vitamins A, D and E and help to convert beta carotene into vitamin A.

Fatty acids are of three basic types: saturated (e.g., palmitic acid, stearic acid), monounsaturated (e.g., oleic acid) and polyunsaturated (e.g., linoleic, linolenic, arachidonic). All of the fats and oils in our diet consist of various combinations and proportions of these three groups. If our diets provide an adequate supply of all the basic fatty acids, our bodies can pick and choose the best ones for the tasks that need to be accomplished on any given day. If the best ones are not available, then we force our bodies to make do with substitutes. Unfortunately, if only rancid or peroxidized fats or trans fatty acids are provided, then we end up with inferior or "leaky" cellular membranes, plus inadequate prostaglandins and an overloaded immune system which may struggle in vain to stave off free radical damage.

There are two fatty acids that are critical. They are ones that are deemed "essential" because we need them for our survival but our bodies cannot make them. We have to get them from food. They are linoleic acid (omega-6) and linolenic acid (omega-3). Without these essential fatty acids we perish. With enough of them (and in the presence of adequate vitamins and minerals), the body can manufacture all of the other fatty acids it needs -- including arachidonic acid and gamma-linolenic acid.

The essential fatty acids we need are found in relatively high proportions in those oils that are predominately polyunsaturated. But these are the very oils that are most prone to deterioration and the production of excess free radicals. Therefore, balance is required. We need to do without overdoing. Fortunately, those fats and oils that are predominately saturated or monounsaturated also contain smaller but significant amounts of essential fatty acids.

Our primitive ancestors had an answer. They were unable to extract oils from plants. They got all of the essential fatty acids they needed from the natural whole foods that they ate, including poultry fat, animal fat, fish, avocado, egg yolk, olives, butter, nuts, and seeds and the like. There is wisdom in consuming our polyunsaturates as part of the whole nut or seed, where nature's package protects them from deterioration. It is unwise to consume them as extracted and refined oils, in unnatural and potentially dangerous proportions.

Nuts and seeds that are heated or roasted lose their natural protection against the potentially harmful breakdown of the polyunsaturates they contain. Be especially wary of roasted nuts that are heavily salted. Their saltiness may hide the taste of rancid oils.

(Peanuts fare better than other nuts when roasted because peanut oil has a high percentage of monounsaturates.)

Monounsaturated fatty acids (omega-9) have only one loose double carbon bond in their molecular structure. That makes them much more resistant to deterioration from heat and light than the polyunsaturates. The monounsaturates contribute stability to cellular membranes and to the plants and oils that contain high percentages of them. Examples of such oils are olive, macadamia, hazelnut, almond, canola, pistachio, peanut, and sesame.

Fish body oils contain unique polyunsaturates. The principal one of these is E.P.A. (eicosapentaenoic acid), an omega-3 fatty acid that has been demonstrated to improve the flow characteristics of blood. It prevents blood cells from sticking together to form clots that might otherwise prematurely plug up the arteries. E.P.A. also tends (a) to reduce serum triglycerides and total serum cholesterol, and (b) to increase H.D.L. cholesterol (the "good" kind). E.P.A. is nature's "anti-freeze", to keep the fish's body from stiffening up from cold temperatures. Therefore, the colder the water the fish lives in, the higher its E.P.A. content. Almost any fish will do, but the best sources are salmon, mackerel, cod, herring, haddock, trout, whitefish, oysters and squid.

Another exception to the warnings about polyunsaturates concerns flaxseed oil that has been specially processed at 40 °C in the total absence of oxygen. This oil is bottled with nitrogen into light-resistant bottles. Organic flax oil provides approximately 57% linolenic acid, 16% linoleic acid and 18% oleic acid -- and it is used therapeutically to treat a number of degenerative conditions. Such oil has a very limited shelf life and should always be kept capped and refrigerated and never heated. Even so, as more and more oil is taken from the bottle, more oxygen comes into contact with the remaining oil. The same flax oil is also available in black, hermetically sealed softgel capsules, however, which do not deteriorate as long as they are kept in light-resistant bottles. Flaxseed oil in this safe form makes an ideal supplement for those who wish to ensure an adequate intake of the essential fatty acids.

Both the quantity and quality of fats and oils we consume are critical to our health. If our total fat intake is too low, we will not be getting enough essential fatty acids to sustain life and we increase our risk for

cancer. If our total fat intake is too high, the body will use first the fatty acids it can most easily assimilate, leaving the less desirable ones to circulate throughout the lymphatic system where they can cause tissue damage and tumours.

The following are useful guidelines when considering the relationships of fats and oils to heart disease:

1. **Saturated fats do not cause heart disease.** If they did, the population of rural North America would have died off generations ago from its consumption of beef, pork, bacon, eggs, sausages, lard, etc. Natural fats that are predominately saturated are extremely stable and can still supply tiny amounts of essential fatty acids.
2. **Polyunsaturated oils do not prevent heart disease.** If they did, the incidence of heart attacks would not have increased as our national consumption of vegetable oils has increased. Polyunsaturated oils are very unstable and may actually contribute to the development of heart disease by increasing the body's exposure to harmful free radicals.
3. Oils that contain large amounts of monounsaturated fats (e.g., olive, avocado and peanut) are more stable than the polyunsaturates and provide useful amounts of essential fatty acids. In Mediterranean countries that have a long history of use of olive oil, for example, the incidence of heart disease is significantly lower than it is in those countries that use polyunsaturates predominately.
4. Hydrogenated and processed fats (e.g. margarine, shortening), deep fried fats, and rancid fats and oils of all kinds are very detrimental to arterial health.
5. Fish body oils are generally beneficial to arterial health.
6. The most desirable source of fats in the diet include butter, olive oil, avocado oil, peanut oil -- plus the naturally occurring fats in eggs, fish, poultry and unprocessed meats -- plus the naturally occurring oils in avocado and fresh, raw nuts and seeds.
7. For optimal health, limit total intake of fats and oils to between 20 and 30 per cent of total daily caloric intake.

Cholesterol, the Scapegoat

Nowadays there is an obsession with cholesterol as the cause of heart disease. Yet, careful examination of factual evidence does not support this popular but misguided theory. Did you know, for example, that **80 per cent** of people who have had heart attacks **did not have elevated levels of blood cholesterol prior to these attacks?** If your serum cholesterol levels are normal, you may still be a candidate for a heart attack or stroke. If you assume otherwise, you could be dead wrong.

No matter how carefully you follow a low-cholesterol diet, no matter how much butter or eggs you avoid, your chance of dying prematurely from a heart attack is, statistically speaking, about the same as if you had **not** restricted your intake of cholesterol.

There is just as much cholesterol in our veins as in our arteries; but plaque is always found only in arteries and never in veins. If cholesterol were the cause of circulatory disease, then surely it would damage veins just as much as arteries. But it does not.

Cholesterol is a slippery, waxy substance. The inside linings of healthy blood vessels are very smooth. It is simply not possible for a slippery substance travelling at a high rate of speed to cling to a smooth surface. Only if the arterial lining were already damaged by some **prior causative factor** could cholesterol stick to it.

Cholesterol is one of the last substances to be laid down in the arterial plaque, not the first. It seems to be present either as an innocent bystander, so to speak, or as a protective factor rather than as a villain.

Historically, as our national consumption of high cholesterol foods (such as eggs, butter, lard, red meat, etc.) has declined, the incidence of heart disease has actually increased, **not** decreased.

Cholesterol is a vital bodily substance. It is in every cell in the body. It is used to help conduct nerve impulses; seventeen per cent of brain tissue is cholesterol. We need it for membranes and to make bile. It is a component of a number of hormones, including the sex hormones. It also helps to manufacture vitamin D under the skin, in response to sunlight. The human body needs cholesterol so much that it cannot rely on food sources alone for it. The body itself manufactures about 70 to 80 per cent of the cholesterol it needs; less than 30 per cent comes from

diet. In fact, the less cholesterol we eat, the more of it our bodies produce. That is why low cholesterol diets alone are often futile at bringing down serum cholesterol levels.

The scientific literature offers no clear-cut evidence one way or the other. Some studies suggest that dietary cholesterol may be a causative factor in heart disease. Many others, however, suggest that it is not.

Where did the cholesterol theory go astray? Perhaps it was from the very first animal studies. Rabbits were fed synthetic feed containing cholesterol, and their cholesterol levels went up. To apply this finding to humans, however, involved two significant errors: (1) Rabbits are herbivores (total vegetarians) and, unlike humans, do not have the enzymes necessary to break down cholesterol, which is found only in meat and dairy products. (2) The excess cholesterol in the rabbits' bodies was widely distributed and quite unlike the plaque deposits which are found in human arterial walls.

How is it that the cholesterol-as-cause theory has persisted for so long? Well, for one thing, cholesterol is easy to measure. A simple but not completely reliable blood test will do it. If your serum cholesterol level is found to be high, then there is big money to be made in selling you cholesterol-lowering drugs and/or food artifacts (such as corn oil margarines, egg substitutes, synthetic low-fat foods, etc.). Unfortunately, much of the publicity implicating cholesterol as the cause of heart disease is sponsored by those who stand to benefit financially in some way from it. Some estimates indicate that lowering blood cholesterol may be a \$6 billion per year industry.

Studies of the drugs which are used to lower cholesterol suggest that they may be of marginal benefit only, such as reducing one's theoretical risk of heart disease by one percent or so over an eight year period. Unfortunately, there is a risk to these drugs. They may cause liver dysfunction and/or psychological stress. A Finnish study suggests that patients on cholesterol-lowering drugs increase their risk of cancer and/or dying by suicide or violent accident.

The multi-billion dollar cholesterol industry seems to be trying to put our dairy and egg farmers out of business for the wrong reasons. Their produce are good sources of stable, valuable fats that our bodies need. Eggs are an especially nourishing food. They provide the highest protein quality of any common food and they contain almost all of the vitamins and minerals (except for vitamin C).

There was a study done in a U.S. prison which required volunteers to eat eighteen eggs per day -- six for each of breakfast, lunch and supper.

Contrary to most people's expectations, the serum cholesterol levels of these volunteers went down, not up. (Perhaps it was because they were so full of nourishing eggs that they did not have as much room left over for sugary "junk" foods, which may be the real culprits in elevated cholesterol levels.)

There is a limit to how much cholesterol can be absorbed from food at any given time. It may be that once you have eaten two eggs, no more cholesterol will be absorbed from any additional eggs. As another example, severe burn patients who have lost large amounts of skin are often force fed concentrated eggs -- up to 30 or more per day (because eggs are such an excellent source of vital protein and other rebuilding nutrients). Doctors who prescribe this egg therapy do not expect increases in their patient's cholesterol levels. It does not happen.

There is one documented case of an 88-year old man who has been eating from 20 to 30 soft boiled eggs per day for the last 15 years -- simply because he loves them. His personal physician and nurses at the retirement home where he lives verify that his serum cholesterol levels are always within normal range. Researchers have found that this gentleman absorbs only 18 per cent of the cholesterol in his diet. Eggs are a very nourishing and entirely safe food.

Elevated blood cholesterol levels may or may not be a health hazard. For one thing, it may depend on the kind of cholesterol being measured. "Good" HDL-cholesterol is compact and dense. It can slip through narrowed arteries much more easily than can "bad" LDL-cholesterol, which is light and puffy and may have a greater tendency to plug up narrow openings. If a person has a good ratio of HDL to LDL cholesterol, total cholesterol readings which are high may not have any particular significance to arterial disease.

The undue emphasis on dietary cholesterol has diverted attention away from a number of **key discoveries**, such as the following:

1. Blood cholesterol (and triglyceride) levels tend to rise more in response to dietary sugars, caffeine and alcohol than they do in response to either dietary fats or cholesterol. Often serum cholesterol can be brought back to normal by the complete **elimination of concentrated sweets** (e.g. white sugar, candy, pastries, cookies, soda pop, etc.), caffeine (coffee, tea, chocolate, colas) and alcoholic beverages.

2. Those on **high fibre** diets tend to have lower serum cholesterol levels than those who consume mainly low-fibre refined flour and processed foods. Dietary fibre has the ability to promote the flow of bile, and bile is made from cholesterol. It is a good plan to consume some fibre at every meal (e.g. 100% whole grains, vegetables, peas, beans, nuts, seeds, etc.) In stubborn cases, a fibre supplement may be required. The best one in this regard is finely powdered psyllium hulls -- 1 heaping tablespoon mixed into at least 12 oz. of pure water, once daily.
3. **Exercise** has been shown to reduce elevated cholesterol levels. Any kind of cardiovascular workout for 30 minutes at a time, three times per week can have a significant effect in this regard. It is important to work up a sustained sweat during such workouts.

Cholesterol is assuredly a vital bodily substance. Without it you cannot grow, you cannot digest your food, you cannot mature, and you will die. Cholesterol may also be a potent antioxidant that scavenges and protects against harmful free radicals. It may even be one of our natural defences against those factors that cause arterial damage. Other defences include vitamins A, C, E, B-1, B-6, beta carotene, niacin, pantothenic acid, chromium, manganese, selenium and zinc. These are all vitamins and minerals which we cannot produce internally and must get from our diet. If we do not get enough of them, then the body may have to work overtime to produce one of the few internal self defences it can -- cholesterol. When one supplements his/her diet with ample amounts of antioxidant and free radical scavenging nutrients, elevated cholesterol levels often return to normal.

High cholesterol is not a disease. It is a symptom of insults to our bodies through lack of exercise and improper diet. If we correct the causes of those insults, then cholesterol levels tend to normalize themselves -- safely and naturally.

If high cholesterol levels do not normalize themselves in response to reducing sugar intake, increasing dietary fibre, regular exercise, and supplementary antioxidants, then there is one other factor to consider -- low thyroid function.

Unfortunately, many cases of hypothyroidism escape detection by conventional laboratory tests. That is because there can be normal levels of thyroid hormones in the blood, but not enough gets to all of the tissues that need it. Thyroid hormones regulate the rate of metabolism, influence physical and mental growth, and prevent calcium from building up in the blood. Low function of this gland is associated with an increased risk for heart disease, cancer, hypoglycemia, diabetes and allergies -- and can cause such diverse symptoms as high cholesterol levels, weight gain (especially of the upper body), decreased body temperature, cold hands and feet, numbness and tingling sensations, constipation, sluggishness, mental dullness, inability to work under pressure or stress, coarse hair, thin skin, brittle nails, and/or a puffy face.

The most **reliable test for measuring thyroid function** is the Barnes Basal Temperature Test (BBTT), described in the *Journal of the American Medical Association 119:1072 Aug., 1942*. You can do it yourself at home: Each morning, as soon as you awake stay in bed, place a mercury-type thermometer under your armpit and leave it there for ten minutes. Do this for three days in a row and record the temperature each time. An average morning reading of less than 97.8 °F (or 36.5 °C) probably indicates hypothyroidism -- **regardless of what blood tests may say**. (For women who are still menstruating, the best time to take the BBTT is on the second, third and fourth days of their cycle, to eliminate other hormonal influences on temperature.)

The thyroid gland requires iodine and the B-complex vitamins for its daily nourishment. Sometimes, however, more thyroid support may be needed. This can often be provided through supplementation with iodine-rich herbs (such as kelp or dulse), hormone-free glandular concentrates of thyroid and/or pituitary, and/or homeopathic remedies that stimulate the thyroid. In some cases, however, it is necessary to take thyroid hormone itself -- and this can be prescribed only by a physician.

To sum up: Cholesterol is **not** the cause of heart disease. Most people who get heart attacks do **not** have elevated cholesterol levels. High serum cholesterol has little or nothing to do with dietary intake of cholesterol. It is more directly related to a high sugar intake, low dietary fibre, lack of exercise, insufficient dietary antioxidants, and/or a low functioning thyroid gland.

Exercise

There is evidence that exercise may help to prevent atherosclerosis. A study at Penn State University, for example, compared rats fed either a high fat diet or a control diet. Each group exercised on a treadmill or stayed sedentary. After six months, microscopic examination of the aorta showed significant differences. Degeneration of the arterial lining was greatest in the sedentary rats, regardless of diet. The arterial lining was healthiest in the group that exercised -- again, regardless of diet. (*Nutrition Report*, July/85)

Regular exercise is both protective of our cardiovascular system and supportive of immune processes. It tones muscles, enlarges the diameter of blood vessels, eases stress, stimulates internal organs, relieves depression, promotes sleep, helps to lower cholesterol, improves lymphatic flow, and helps one to think more clearly.

The best form of exercise is any that you can do to work up a sustained sweat for at least 30 minutes, repeated three times per week. Ideally, one's pulse rate during exercise should be between 120 and 140 beats per minute. Rapid walking, rebounding on a mini-trampoline, racquet sports, team sports, martial arts, cycling, aerobics -- all are excellent examples of suitable activities. The best exercise for you is one that you enjoy for its own sake. Doing it will thus be a pleasure rather than a contest of will power.

Exercise alone, however, is rarely enough to give complete protection against cardiovascular disease. There have been a number of professional athletes who have suddenly dropped dead from heart attacks or strokes.

The Nutritional Bypass Program

The complete "nutritional bypass" program consists of (a) reducing one's exposure to harmful factors, (b) increasing one's intake of those foods that have a protective effect, and (c) taking unique supplements that can help the body to remove arterial plaque. These are the guidelines to follow in implementing the program.

1. Stop smoking.
2. Exercise regularly.
3. Eat fish twice weekly.
4. Increase dietary fibre by consuming 100% whole grains, vegetables, nuts, seeds or legumes at each meal. Use fresh, raw fruits for snacks. Supplement with psyllium, if required, for bowel regularity.
5. Drink at least 8 large glasses of purified water daily. Avoid drinking or bathing in chlorinated water.
6. Use butter, olive oil and/or peanut oil as supplementary fats/oils. Reduce intake of polyunsaturated oils. Strictly avoid rancid fats/oils, deep fried foods, margarines, shortening and heated polyunsaturates.
7. Restrict consumption of concentrated sugars of all kinds (sucrose, glucose, fructose, white sugar, brown sugar, corn syrup, maple syrup, honey, molasses, etc.)
8. Eliminate caffeine (coffee, tea, chocolate, colas). Use instead herbal teas, coffee substitutes, pure water, fruit juices or decaffeinated beverages.
9. Limit intake of alcoholic beverages.
10. Avoid processed meats, nitrates, nitrites and other suspect food preservatives.
11. Reduce exposure to radiation, X-rays, exhaust fumes, carbon tetrachloride and other suspect inhalant chemicals.
12. Use the Arterial Cleansing Formula.

If you follow the first eleven recommendations above, you will be providing for yourself a nutritional environment as close as possible to that of our pre-1920 ancestors -- who did not get heart disease. You will be reducing your exposure to those substances and stress factors which contribute to the development of arterial plaque.

Reducing risk factors addresses only one part of the problem, however. The other part involves strengthening one's immune processes not only to be able to withstand future insults, but also to clear away the arterial plaque that has already accumulated over the years. That is the purpose of the twelfth item on the above list -- which is the subject of the next chapter.

Arterial Cleansing Formula

The human body has an incredible, innate ability to heal itself -- if only we give it the conditions and raw materials it needs to do so. It is a little known fact, for example, that there is an enzyme (called "lipoprotein lipase" or LPL) which can be produced in arterial walls -- if the body has enough of the specific nutrients required to manufacture it. LPL does an amazing thing: It acts as a detergent to scrub away the fats in arterial plaque.

Not only are we subject to more cardiovascular risks than our heart-disease-free ancestors, but we also may not be getting enough of the nutrients required for our bodies to produce LPL and other protective factors. Our greater dependence on processed foods, agribusiness farming methods and mass food service may leave us with food that is generally less nutritious. Our hectic, stressful lifestyle and constant bombardment with pollutants may require that many of the nutrients we do consume be used for purposes other than keeping the arteries clear. Our use of medicinal drugs, caffeine, refined sugar, alcohol, and other non-nutritive substances may deplete or interfere with our bodies' use of the nutrients we do take in. In any event, supplementation with sufficient quantities of **a broad spectrum of nutrients can actually stimulate the body's own innate processes to clear away arterial plaque and prevent its return.**

Since 1983, tens of thousands of Canadians have been using the Arterial Cleansing Formula -- with impressive results.

LPL is only one protective measure that the body can use to build and maintain arterial health, in response to adequate amounts of specific nutrients. There are others. A complete list includes the following:

1. Neutralizing free radicals before they can cause cellular damage.
2. Manufacturing enough T-cells and antibodies to locate and destroy mutated cells before they cause any significant damage to arteries.
3. Manufacturing lipoprotein lipase to scrub away arterial fats.
4. Dilating or increasing the diameter of blood vessels.
5. Improving the flow characteristics of the blood, making it more

- slippery so that it does not clump up and so that it can flow easily around obstructions.
6. Opening up collateral blood vessels around obstructions, creating new pathways for blood to reach vital tissues.
 7. Dissolving blood clots.
 8. Normalizing blood pressure.
 9. Chelating or removing heavy metals from arterial walls.
 10. Protecting vital tissues from oxidative damage.

Most people in our day and age do not receive the full benefit of all of the above natural, bodily processes. That is mainly because the nutrients required to do the job do not reach the appropriate sites in sufficient quantity. Even a person who takes vitamins and other supplements usually does not take all factors required, in large enough amounts, and/or for sufficient time.

Nutrients Required

The following is a list of key nutrients required to achieve an arterial cleansing effect, with a brief explanation of what each does:

Vitamin A. Stimulates the thymus gland to grow in size and enable it to produce more T-cells and antibodies. Increases utilization of selenium. Protects epithelial cells and mucous membranes. In the Arterial Cleansing Formula, the vitamin A can be provided either wholly from fish liver oil or from a combination of fish liver oil and beta carotene. (Note: Diabetics cannot convert beta carotene into vitamin A very efficiently, because of poorly functioning livers. They need to get all of their vitamin A from fish liver oil.)

Vitamin B-1. Facilitates removal of lead from tissues. Required for health of heart tissue.

Niacin. Helps to dilate or enlarge blood vessels. Helps the body to eliminate excess cholesterol.

Pantothenic Acid. Necessary for the production of healthy antibodies.

Vitamin B-6. Helps prevent methionine (an amino acid in our diets) from breaking down into homocysteine, a toxic substance that can damage artery walls.

Choline. Emulsifies fats, keeping them in solution in the blood, preventing them from plugging up in narrowed arteries. Helps keep blood fats from sticking together. Oxidizes or burns fats in the liver. (Choline is the active component which makes lecithin a fat emulsifier.)

Inositol. A general relaxant.

Vitamin C. A powerful antioxidant and chelating agent. Protects against heavy metals (e.g. lead, arsenic) and keeps them in solution so that they can be eliminated via the urine. Stimulates the production of lipoprotein lipase, an enzyme that dissolves fats on artery walls.

Vitamin E. An antioxidant. Protects against free radicals, such as superoxides, hydroxyl radicals, peroxides and hydroperoxides. Dissolves clots in the bloodstream and helps to prevent their formation. Increases the rate at which collateral blood vessels develop around damaged areas. Assists in normalizing the viscosity (flow characteristics) of blood. Helps keep blood platelets from sticking together.

Magnesium. Helps to keep calcium in solution, to keep it from precipitating out on arterial walls. Helps to regulate heartbeat. Helps to counteract aluminum buildup in the body.

Potassium. Helps to normalize blood pressure. Helps to regulate heart rhythm.

Zinc. A free radical inhibitor. Helps the body to utilize vitamin A.

Selenium. 200 to 500 times more potent than vitamin E as an antioxidant. The body incorporates it into glutathione peroxidase, an antioxidant enzyme that detoxifies hydrogen peroxide and fatty acid peroxides. Assists vitamin E in inhibiting free radicals and protecting

tissues from oxidative damage. Counteracts mercury buildup in the body. Helps to normalize blood pressure. (Selenium is an important constituent of garlic, an herb long revered for its beneficial effects on blood pressure.)

L-Cysteine Hydrochloride. An amino acid that acts as a chelating agent in the excretion of lead from tissues. Assists in the termination of free radicals produced by ionizing radiation.

dl-Methionine. A chelating agent and free radical scavenger. An amino acid that helps to detoxify the body and emulsify fats, in an action that is similar to that of choline.

Thymus substance. Glandular tissue that supports thymus function, to help it to overcome free radical activity.

A sufficient intake of each of the above nutritional factors will also enable the body to produce a number of byproducts of intermediate metabolism that assist in arterial cleansing and other immune functions. These intermediate helpers include not only lipoprotein lipase and glutathione peroxidase, but also such substances as superoxide dismutase and co-enzyme Q-10.

How Much Is Enough?

Fifteen years of experience in working with nutritional arterial cleansing indicate that it is necessary to take all of the following supplementary nutrients daily, within the ranges suggested beside each. An arterial cleansing program may include other ingredients in addition to these, but **all of the following 26 must be present for the formula to work:**

Vitamin A	22,000 to 40,000 I.U..
Vitamin D	40 to 65 I.U.
Vitamin C	4,000 to 4,400 mg.
Vitamin E	600 to 650 I.U.
Vitamin B-1 (thiamin)	66 to 200 mg.
Vitamin B-2 (riboflavin)	30 to 55 mg.
Vitamin B-6 (pyridoxine)	50 to 150 mg.
Vitamin B-12 (cobalamin)	160 to 550 mcg.
Niacin	44 to 70 mg.
Niacinamide	20 to 50 mg.
Pantothenic Acid	330 to 550 mg.
Folic Acid	0.4 to 2.2 mg.
Biotin	50 to 122 mcg.
Choline (bitartrate)	440 to 725 mg.
Inositol	40 to 55 mg.
dl-Methionine	160 to 550 mg.
Magnesium (oxide)	400 to 555 mg.
Potassium (chloride/citrate)	400 to 444 mg.
Manganese (gluconate)	5 to 22 mg.
Zinc (gluconate)	25 to 33 mg.
Chromium (proteinate)	130 to 333 mcg.
Selenium (proteinate)	200 to 330 mcg.
Betaine Hydrochloride	120 to 130 mg.
L-Cysteine Hydrochloride	660 to 1,000 mg.
Thymus concentrate	55 to 100 mg.
Spleen concentrate	55 to 100 mg.
Adrenal concentrate	40 to 100 mg.

There is no one "miracle" ingredient in the above formula. It is the very special combination of all of them which accomplishes the results. All nutrients have to be present at the same time, working together and

supporting each other, like links in a chain.

It is impossible to put all of the ingredients in the Arterial Cleansing Formula into a single tablet. It would be far too large to swallow. Therefore, to get all of the above nutrients it is necessary either to (a) piece together individual supplements, or (b) look for a single product that has all of the above ingredients in the same proportions but in smaller amounts per tablet -- and take enough tablets per day to bring the totals up to the ranges recommended above (usually 10 tablets per day). In either case you may end up exceeding the label recommendations for "dosage" (which are often the amounts the government thinks you should take and not necessarily what your body needs.)

"A chain is only as strong as its weakest link." If the formula you are considering using has some ingredients missing or in lower amounts than recommended, it may not work for you. There are on the market some products purported to clear the arteries but either (a) are missing entirely in such key ingredients as l-cysteine hydrochloride and/or dl-methionine, and/or (b) have amounts of other key factors, such as vitamins A, C, E and/or niacin, that are too low to be of much use. These six ingredients are especially important to the success of the formula, but they are also among the most expensive to include in tablets. Some manufacturers cut corners in an attempt to lure customers with lower prices. Do not settle for a seeming bargain if it means short-changing your health. Others have done so, with disappointing results. "Let the buyer take care."

Some people express concern that the amount of vitamin A in the Arterial Cleansing Formula may be "toxic". Not so. This formula is incredibly safe. In 15 years of usage and over 100,000 users, there has not been a single reported case of vitamin toxicity of any kind. According to published accounts, it usually takes well over 100,000 I.U. (and often over 500,000 I.U.) of vitamin A taken daily for many months to produce signs of vitamin A overload in adults (which signs are only temporary and go away when the excess vitamin A intake is stopped.) The amount of vitamin A in the Arterial Cleansing Formula is equivalent to what one would get from eating only 2 oz. (55 gm.) of beef liver daily. It is unfortunate that there is such unwarranted fear of vitamin A in our society. It is a highly beneficial nutrient that most of us do not consume in adequate amounts.

Confirming Tests

A number of medical tests are used to diagnose arterial blockages. A popular one is the angiogram, which involves a series of X-rays taken in rapid succession after a radiopaque substance has been injected into the blood vessel being examined. "Before" and "after" angiograms often indicate significant reduction of arterial obstructions following the "nutritional bypass" program.. Angiograms, however, have risks (i.e., from the X-rays and the dye injected into the bloodstream). A much safer, non-invasive alternative is doppler ultrasound testing.

Doppler testing involves measuring blood pressure and flow at various parts of the body. Sensitive instruments take arterial pressure readings at the neck, upper arm, wrist, upper thigh, lower thigh, calf, ankle and even toes. Improvements in flow readings in the extremities through time indicate that the arteries are becoming unblocked.

Some doppler machines have video display screens. "Before" and "after" conditions of the arteries are clearly visible to both doctor and patient -- as the following case illustrates.

A man in Toronto dropped into unconsciousness for nearly a minute. At Sunnybrook Hospital, using doppler testing, the cause was diagnosed as a 40 to 50 per cent occlusion of the left carotid artery. A carotid artery bypass operation was recommended, but the man declined. Instead he followed the Nutritional Bypass program. After three months he returned to his doctor, who could not locate the site of the former occlusion. The gentleman was sent to Toronto General Hospital (TGH) for further testing. The same doppler tests were repeated, but no occlusion was found. The incredulous doctors at TGH accused Sunnybrook of misdiagnosis -- yet the participant himself had seen the confirming "before" and "after" displays on the video screens. The same kind of ultrasound testing instrument was used in both cases.

Elaborate tests are not always necessary to measure progress made through nutritional arterial cleansing. Some doctors simply record (a) how far patients with claudication (intermittent leg cramps) can walk without pain, and/or (b) the number of angina attacks a patient has in a given week. As circulation improves, patients with claudication will be able to walk further without pain and those with angina will experience fewer attacks. These are objective, measurable signs of improvement. Similarly, keeping a diary of the incidences and severity of numbness,

tingling or cramping will indicate how much progress is being made. Some symptoms diminish gradually, others quite dramatically. It is not unusual, for example, for someone who has had cold hands and/or feet for many months (or years) suddenly to have them warm up on one particular day after a month or so into the nutritional bypass program.

The two photos below were taken inside the same coronary artery of the same 68-year old man. The upper photo was taken prior to treatment. The lower was taken after five months on the Nutritional Bypass Program.

What Users Say

It is most gratifying to see older people regain some of their youthful vigour and vitality from arterial cleansing. Within a few short weeks on the program, there is a noticeable improvement in the complexion of most participants. Skin tends to take on a better tone, with a more healthy-looking colour.

Many people on the Nutritional Bypass program have reported unexpected improvement in conditions that were not their primary concern at the time -- conditions such as rheumatoid arthritis, prostate problems, hypertension and failing vision. It is surprising what other healing can happen in the body as circulation is restored.

The following are typical excerpts from letters sent in by satisfied users:

A Young Man Again

"In the fall of 1979, my cardiovascular surgeon told me that I needed a heart bypass operation but that my cardiovascular system was in such poor shape that I would not survive the operation. This was after my second heart attack, and I was told that I would never work again. I had failing heart valves and coronary arteries that were 90% blocked, according to my angiograms. My wife had to lift my legs out of bed in the morning. Walking more than a few yards at a time would bring on pains of angina.

"Realizing that doctors could do nothing for me, I decided to help myself. I launched myself on a program of mega vitamin-mineral supplementation. I cut out red meat, salt, sugar, alcohol and caffeine. I also started to exercise a little each day. After about three years, I then discovered the arterial cleansing program. I went on it and never looked back.

"Today I am in robust health and sometimes walk up to fifteen miles a day. My cholesterol count has dropped from about 300 to 190, and all my blood lipids have shown a similar improvement. I feel like a young man again, enjoying life to the fullest, free from the symptoms of the cardiovascular disease which crippled me a few short years ago. I maintain my health through nutritious food, daily exercise and broad

spectrum vitamin-mineral supplementation.

"When I was crippled with heart disease, my medical and prescription costs were over \$3,000 per year. Last year, my medical and prescription bills totalled less than \$100."
- H. A., Victoria, BC

Thank You For Giving Me Back My Health

"Although I am only 64 years of age, I was unable to cope with running a business due to a heart condition which required 3 separate bypass operations for blockages. I suffered with angina pains that put me into the hospital every few weeks. I could not walk more than a couple of feet without suffering severe shortage of breath; I would have to stop and hold on to something until I felt I could take a few more steps, while stairs were almost an impossibility. I truly thought I had reached the end of the line when the doctors told me I had blockage number 4; but this time, because it was located behind my heart, they said they could do nothing for me. I placed my name with several hospitals for a transplant operation but was turned down as a 'poor risk'.

"Fortunately, a relative sent me a booklet entitled, *Vascular Cleansing*. After reading it I had a ray of hope. My relative sent me some arterial cleansing tablets and told me I would need to take 10 per day.

"I started taking the pills immediately. Within a week I started to feel better. I have now finished 6 bottles and am a new man. Everyone is amazed at my progress. I can walk around any shopping mall without discomfort. I have not had to return to the hospital with angina pains since I started taking the formula. I recently returned to the doctor for thorough checkup and was told that there is no sign of any blockages. I was told the 4th blockage behind my heart is also clear. As a matter of fact, I was told my vascular system is now in the best shape it has been in over 30 years. Thank you for giving me back my health."

- R.J.M., New

York, NY

No More Angina

"My angina pectoris, due to hardening of the arteries, is apparently now a thing of the past, thank goodness, due to the effective application of arterial cleansing. The pains have stopped and my breathing is back to normal. The lethargy of which I had been complaining for some years has now disappeared and I am feeling physically better than I have for many years."
- R. T., Toronto, ON

No More Pounding Sensation

"My reason for going on the arterial cleansing program was because I needed relief from the debilitating condition of fatigue plus a pounding sensation in my head. I am happy to say that after following the program for ten days, the pounding in my head stopped and has never returned."

- R. M., Toronto, ON

Cholesterol Normal

"A lady supervisor at the bank where I worked kept blacking out frequently. Apparently her cholesterol level was dangerously high. I suggested the arterial cleansing formula to her. After taking only one bottle she went back to have her cholesterol checked again. We were both working late one night when she called her doctor for the results. SHE WAS NORMAL."

- J. R., Brighton, ON

Amputation No Longer Required

"In Jan. and Feb. of 1984, I was having considerable difficulty with the circulation in my legs. This was following the advice from St. Michael's Hospital that further by-pass operations were impossible. Amputation of my right leg was recommended. A leeway of six months was given.

"A friend was good enough to take some time to talk and offer some advice on the arterial cleansing formula and diet. Now, nearly seven years later, I can walk reasonable distances -- not fast, but fairly well. I can take in executive length golf courses, etc. This is after terrible discomfort (in the past) with a city block's distance. One storey of stairs used to be a real effort. In short, I am able to handle most mobile requirements.

"I took 10 tablets of the arterial cleansing formula per day for the first four years, and now I take 5 per day. I believe they are the major reason I am mobile and with a chance at enjoying life."

- L. R. C., Richmond Hill, ON

"New" Arteries

"I am a 68 year old man who suffered an attack of chest pain on May 1. I was referred to a cardiologist on May 9, and had the usual ECG and stress tests. I was diagnosed as having angina, and had medication prescribed. At the same time I was told by the cardiologist that he would see me in two months and probably discuss bypass surgery.

"I came across a pamphlet entitled, *Vascular Cleansing: New Hope for Heart Disease*. On May 17, I started on the arterial cleansing formula. After about two weeks the shortness of breath and the 'pokes' in my chest were becoming less frequent. I was re-examined by a different cardiologist on July 18 -- exactly two months after starting with the formula. He could find no evidence of a heart problem and said he didn't need to see me for three months.

"I am starting into the fourth month of arterial cleansing and am now walking 2 1/4 miles on a rural road which is mainly made up of extremely steep hills. The discomfort and warning 'pokes' in the chest have almost entirely disappeared. I am looking forward to having 'new' arteries at the end of my seven months' program. At that point I intend to go on the maintenance program indefinitely." - C. E. M., Peterborough, ON

Leg Saved

"On April 16, 1991, I had vascular surgery on my left leg. Two weeks later, another operation was done near my knee. After a month in hospital I was released to my home.

"Victorian Nurses looked after the dressings, and one noticed some drainage coming from under the large scab. She immediately called the surgeon. He told me he could do no more for me. If the pain got too bad, I should come back and he would take my leg off.

"About July I heard about the arterial cleansing program from my neighbours. I am now on my third month. My feet are as warm as can be and the sore is all gone ... completely healed.

"When I visited my doctor concerning the new colour of my skin, he said it was because so much blood was flowing, the skin was not used to the amount of blood flow. So I still have my leg." M. R. B., Peterborough, ON

No More Shakes

"I am writing to declare the wonders that the arterial cleansing formula has done for me. I am midway through my third month of (self) treatment. Had a severe weakness and trembling throughout my whole body. Have three obstructed arteries in my heart; and the cardiologist wanted to do open heart surgery, which I refused and chose to go the arterial cleansing way.

"I had even been to a neurologist and an endocrinologist, with no relief for my shakes. They said it was probably hardening of the arteries in the part of my brain that controls my central nervous system. With the arterial cleansing program I have lost my shakiness and I look and feel so much better it is unreal. Also my triglycerides have come down over 100 points, my blood pressure has stabilized, my cholesterol is down."

- *M. R., Courtenay, BC*

Cysts Gone

"I'm in the fourth month of arterial cleansing. I might add that I've experienced some very desirable 'side effects' as well. Four cysts have disappeared and several others have been reduced in size. I sense that circulation has increased in my hands and feet"

- *S. M., Muenster, SK*

Can Walk Farther

"As a user of the arterial cleansing formula, I must report excellent results. A month ago, due to angina, everything was a struggle; and to walk one block gave me great distress. After three weeks on the formula I am now walking 20 to 30 blocks as part of my daily exercise program.

- *H. W. H., Sidney, BC*

Frostbitten Toes Healed

"When we had the real cold weather in the later part of the winter, I froze my right foot. Three toes turned black. Also had much pain. That was when I decided to take the arterial cleansing formula. Before my first bottle was used up, my foot felt great. No more black toes, and the end of one toe had the frozen flesh renewed. The damaged flesh came off like a shell. Then there was no more pain and has been no discomfort since."

- *V. W., Welland, ON*

Improvement after Chelation

"I received 30 intravenous chelation treatments early this year, and about one month ago I commenced nutritional arterial cleansing. Since then I have noticed remarkable improvement in my circulation and well-being."

J.C.S.F., Sidney, BC

ByPass Not Justified

"My Minister was scheduled for a triple bypass for June this year. About the middle of April, upon my intensive suggestion, he started taking the arterial cleansing formula. Upon our great amazement, at the final examination at the end of June, the operation was declared unjustified in view of the patient's recovery."

F.R., Toronto, ON

Running Up Stairs

"I have read the book called *Vascular Cleansing* and am astounded by the information in it. My father had angina and an angiogram that demonstrated extensive coronary stenosis. After taking the arterial cleansing formula he is now pain free and running up and down stairs. I am a pharmacist and when I saw that the formula was only a bunch of vitamins I was extremely sceptical. Now I have done a 180⁰ turn and am totally convinced that there is something to the preparation that actually works."

- B. C., Edmonton, AB

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Bypass Not Justified

"My minister was scheduled for a triple bypass for June this year. About the middle of April, upon my intensive suggestion, he started taking the arterial cleansing formula. Upon our great amazement, at the final medical examination at the end of June, the operation was declared 'unjustified' in view of the patient's recovery."

-F.R., Toronto, ON

No More Cramps, Weakness

"Congratulations and many thanks for your arterial cleansing formula. I've used it only two weeks. Already no more painful leg cramps, no more incidents of weakness and numbness below the waist with pulsating headache. I'm getting close to 73, planning another 30 successful years -- at least."
- M.H., 100
Mile House, BC

Life Enjoyable Again

"In the fall, I was experiencing a lot of problems with my legs, caused by poor blood circulation. I started using arterial cleansing at that time. I believe this formula has benefitted my total circulation, as I had a triple bypass operation three years ago.

"On a practical note, my husband and I drove to the Maritimes this past summer. It is the first time in two and a half years we have felt well enough to make a trip like this. Life is enjoyable again."

- D.B.,
Peterborough, ON

Prostate Trouble Gone

"Since taking the arterial cleansing formula I have noticed the following changes in my health: Urine colour changed from cloudy gray to clear yellow. Prostate trouble used to constrict my urine flow to a dribble, but I now have full flow back again. Was up urinating four or five times a night but am now back to once or twice a night."

- W.G.T.,
Bridgewater, NS

Starting to Relive

"At age 62, I was diagnosed with atherosclerosis so severely that I should book in for bypass surgery. I did not have high blood pressure, high cholesterol, or diabetes. I had quit smoking 15 years ago, was taking a lot of vitamins, and had changed my diet to include high fibre and low fat.

"The doctor told me that the bypass would not extend my life past eight years but only make it more bearable. I said NO. I decided to check out alternatives and was given the booklet, *Vascular Cleansing: New Hope for Heart Disease*. This book did give me new hope and also many fears: Am I doing the right thing? Will it do what it says? What will the doctor say when he finds out?

"I started the arterial cleansing program. Everyone was against me, but I said I was worth the money and I didn't want to be a vegetable for the rest of my life. I can stand to suffer a little for six months if it will improve the rest of my life. I have stuck to my plan.

"I am now starting my sixth month of the arterial cleansing, and my fourth month into my walking program. I know the walking has done me a world of good, but without the arterial cleansing formula I probably would still be struggling at two miles in 40 minutes instead of three miles in 51 minutes. Within 30 days of taking the formula, I had warm feet and legs; in fact, my whole body was warmer. I know because I slept in an unheated room for several nights in Manitoba in January, with the outside temperature down to -30 °C -- and that is cold!

"That was the first benefit. Next, my stuffed up nose became unstuffed -- no more colds, more energy, clearing eye sight, and my prostate is improving. At this point I know that the cleansing process has not been completed but I do know that I can do more now with less angina pains that I did just one month ago. I can now set my plans on reliving again, maybe even going back to work."

- P.D., Toronto, ON

Related Conditions

The lifestyle, dietary and supplement recommendations presented thus far are of considerable benefit to the vast majority of people who wish either to prevent or reverse arterial deterioration. There is a significant minority, however, who may have other bodily imbalances, such as diabetes or high blood pressure, that need to be considered separately.

Diabetes

Diabetics are especially prone to developing atherosclerosis and related circulatory problems. Unfortunately, many have lost eyesight to retinopathy and/or feet to gangrene. Diabetics who smoke and/or who exercise little are at particularly high risk for succumbing to a heart attack or stroke. Any diabetic who is seriously concerned about his/her health would be well advised to follow carefully all of the recommendations made in this book -- in addition to those recommended by his/her physician.

Many cases of diabetes are linked to an underlying cause of hypothyroidism and improve when the thyroid gland is supported. The Arterial Cleansing Formula is one that would be wise for most diabetics to take -- for life. Not only does it help to keep the arteries clear, but it is also a good source of nutrients that support the internal organs (such as pancreas, liver and adrenal) which are heavily overworked in diabetes. Such supporting nutrients include chromium, manganese, zinc, vitamin C, and the B-complex vitamins. Many adult diabetics who have followed this program have been able (with their physicians' approval) to reduce and, in some cases, even to eliminate their dependence on insulin injections.

The liver of most people with diabetes has difficulty in converting dietary beta carotene into vitamin A and does not usually do so very efficiently. For that reason, diabetics need to choose a variation of the Arterial Cleansing Formula that provides all of its vitamin A activity from vitamin A itself rather than beta carotene.

High Blood Pressure

Many cases of high blood pressure respond favourably to arterial cleansing. Opening up peripheral circulation lessens the back pressure on the heart and major arteries. Where hypertension does not respond favourably to the Nutritional Bypass program, then more is required.

One of the most common (and least understood) factors contributing to high blood pressure is hidden allergy or sensitivity to common foods. The most common culprit in this regard is caffeine (e.g. in coffee, tea, chocolate, colas) -- which is a potent stimulant that increases pulse rate and constricts blood vessels. Eliminating all sources of caffeine can very often normalize blood pressure very quickly.

Some of the more likely food families which may cause hypertension in susceptible people include the nightshades (tomatoes, potatoes, peppers, paprika, cayenne, eggplant, tobacco) and citrus (oranges, grapefruit, lemons, limes). Each person's biochemistry is unique; therefore, the specific foods to which one is sensitive will vary from person to person. To get relief from allergy-induced hypertension it is necessary to track down and eliminate completely all of the hidden offenders. This can be done through elimination diets, health kinesiology, muscle testing and/or pulse testing. (Conventional skin tests are most unreliable for food allergies.) The services of a nutritional consultant who specializes in food allergies can be most helpful in locating the specific troublemakers in one's diet.

Once offending foods have been identified, it is necessary to eliminate them from the diet without compromise. A little bit of a "poison" is still a "poison", so to speak. Even a few molecules of a culprit food consumed daily could keep blood pressure elevated. In such cases no drug or nutritional supplement will *not* be very effective until the true cause is eliminated. Total elimination of the offending foods, however, can often bring horrendously high blood pressure down to normal within three to five days.

Some hypertensive people may have an imbalance in electrolyte minerals. These are the ones who may benefit from restricting their intake of sodium (e.g., in table salt) and/or supplementing with calcium, magnesium and potassium. These minerals are required in balance to help regulate heartbeat and fluid pressures in the body.

Questions and Answers

Why doesn't my doctor know about nutritional arterial cleansing?

Nutrition is not taught to any significant extent in medical schools, so graduating doctors may not believe that it is very important. Also, most doctors are so busy with their practices that they have little time to keep up with the tremendous volume of scientific research that is being published every year. Nevertheless, more and more doctors are gradually becoming aware of nutritional arterial cleansing.

Why doesn't the public know more about nutritional arterial cleansing?

The profit margins on natural, whole foods and nutritional supplements are quite low; therefore, suppliers do not have the funds to devote to extensive advertising and publicity campaigns. Also, federal regulations make it illegal to advertise to the general public that any food substance is a treatment, cure or even preventative for arteriosclerosis or heart disease.

Are there any drugs in the Arterial Cleansing Formula?

All of the ingredients in the arterial cleansing supplements are natural food factors: vitamins, minerals, amino acids and glandular concentrates -- in a safe and effective balance.

What is the best way to take the tablets?

In divided amounts with meals. If you were taking 10 tablets per day, for example, you could take 3 with breakfast, 3 with lunch and 4 with supper -- or -- 5 with breakfast and 5 with supper. It is important that the tablets be in the stomach with food at the same time. In that way the nutrients in the tablets can assist and support the nutrients in the meal, and vice-versa. It makes for better digestion, absorption and assimilation of all of the vital factors. For best results, do not take the tablets on an empty stomach.

How can I tell if my body is absorbing the nutrients in the tablets?

Your urine will turn a bright yellow colour. This is because a small percentage of vitamins C and B-2 spill over into the urine. If you take the tablets with meals and you do not get the yellow spill-over, that indicates sluggish digestion -- which can be helped by taking a broad spectrum enzyme supplement (containing betaine hydrochloride, pepsin, pancreatin and bile) at each meal at which the arterial cleansing supplements are taken.

Are there any side effects to arterial cleansing?

Not as such. The ingredients in the formula are natural and safe. About five per cent of people, however, may have temporary cleansing reactions to the supplements. Such reactions may include headaches, nausea, indigestion, diarrhea, fatigue or intestinal gas -- lasting only for about five or ten days or so. These signs occur because of beneficial changes in the intestinal flora and the release of debris into the bloodstream. Where they occur, such symptoms are evidence that a cleansing process is taking place and was needed.

Will the arterial cleansing process pull away chunks of plaque that could plug up the arteries further downstream?

No. That is not the way the process works. The plaque does not come away in "chunks". It is scrubbed away, safely and gradually, with a detergent-like action. There are enough emulsifiers (such as choline and methionine) in the Arterial Cleansing Formula to keep fats in solution so that they do not plug up elsewhere.

Does nutritional arterial cleansing work the same way that intravenous chelation does?

Technically, no. It accomplishes the same result but by a different method. Nutritional arterial cleansing works by helping to normalize body chemistry so that natural immune processes can remove the plaque in an entirely natural way. One of the main ways that this happens is by the internal production of the enzyme, lipoprotein lipase, which dissolves fats on arterial walls. There are safe, natural "chelating" agents in the Arterial Cleansing Formula; however, their action assists with the excretion of toxic metals (such as lead,

mercury, aluminum) but do not pull calcium from the arterial plaque and eliminate it via the urine (which is what E.D.T.A. chelation therapy does). Much of the calcium removed from the arterial plaque by the nutritional cleansing method becomes available to the body for other uses.

Will the Arterial Cleansing Formula conflict with any prescription drugs I am taking?

If you are on prescribed medication, you need to have it monitored by your doctor. As your body gradually improves on the arterial cleansing program, you will likely need less of your prescribed drugs.

Be sure to report your progress to your doctor so that s/he can alter your medication accordingly. There is no known conflict between the arterial cleansing nutrients and any drug -- with the possible exception of antibiotics, which are best taken 2 hours apart from the nutritional supplements, simply because the antibiotics and the vitamins tend to cancel each other out. Your doctor and your pharmacist are the people best qualified to counsel you about your drugs. The nutrients themselves are safe.

I decided to take an aspirin every day because I heard that it helps to prevent heart attacks by making the blood thinner. Is it a good idea to continue taking aspirin with the arterial cleansing supplements?

Most people do not have blood which is too "thick", but rather have blood cells which tend to clump or stick together. The arterial cleansing supplements help the blood to become more slippery (not thinner), so that it can flow much more freely. This is a more natural approach than "thinning" the blood, which, if carried too far could cause the blood vessels to leak, leading to hemorrhaging or possible stroke.

How long will it take to start to feel any results on the arterial cleansing program?

That is a variable. We are all different. Some people start to notice slight improvements within a week or so. Almost everyone finds some initial results with four weeks.

How long do I need to take the arterial cleansing supplements for best results?

Optimal arterial cleansing usually takes about one month for every ten years of age. In another words, a person aged 40 would probably benefit by taking the Arterial Cleansing Formula **at full daily amounts** for at least 4 months. Since the formula is such a complete food supplement, however, many people prefer to use it as a total maintenance program for the rest of their lives -- some at full amounts, others at half the usual recommended amounts per day.

I am scheduled for bypass surgery in three weeks time. Should I call off the surgery and try the arterial cleansing program instead?

That is a judgement call that only you can make. Legally, no one except a medical doctor can recommend for or against surgery. It is very unlikely that nutritional arterial cleansing would be able to remove significant blockages in only three weeks, so that is a factor that you should consider if the three week time frame is critical. If the surgery could safely be postponed for at least three months or so, that would give you more time to try the nutritional approach. If you do decide to go ahead with the surgery (at any time), continued nutritional arterial cleansing can better fortify your body to go through the operation, to heal faster, to prevent plaque from recurring at the sites of the surgery, and to remove plaque in areas not accessible to the surgeon.

Which works better, E.D.T.A. chelation therapy or nutritional arterial cleansing?

Both are effective at removing arterial plaque. Some people respond better to one method than the other. Neither is clearly superior to the other. Only the nutritional method, however, can actually prevent the plaque from returning -- by continually supporting the body's own immune processes. Some advocates of intravenous chelation, however, do not have much confidence in the nutritional approach. That may be because they have no experience of it, or perhaps because they have noticed disappointing results from taking inferior nutritional formulas that were incapable of living up to the claims made for them. If you have both the resources and the opportunity, by all means try both approaches and judge for yourself. It is much easier to be objective about an issue if you have lived both sides of it.

Are all arterial cleansing supplements equally effective?

Not by any means. Check the labels to make sure that you will be getting all of the ingredients listed on pages 29 and 30 and within the ranges indicated. The absence of even a single key ingredient could render the product ineffective for the purpose you have in mind. If the supplements you are considering do not provide at least the daily minimums suggested of all nutrients -- but especially vitamin C, vitamin E, methionine, cysteine HCL, niacin and vitamin A -- it may be just an expensive vitamin-mineral formula with no real arterial cleansing action. Deal with supplier(s) that have a proven track record in manufacturing these very specialized kinds of formulations.

Imitators tend to cut corners -- something you do not want to do with your health.

You Are Your Own Healer

There is one lesson that rings loud and clear throughout the entire experience of nutritional arterial cleansing. It is this:

The human body was very cleverly designed to be self-repairing. Heart disease has become a rampant killer only because (a) we expose our bodies to insults at a rate far faster than our natural immune processes can neutralize them, and (b) we do not give our bodies enough of the vital raw materials required to fortify these self-repairing systems. The arterial cleansing program answers both of these issues.

You live in a body that has incredible, innate healing wisdom. It is your body. You own it. You can take control of it. You can direct the course of your own health without having to trust blindly in anyone else to do it for you. You have the ability to prevent and reverse serious health problems -- even those which others may consider to be hopeless.

Arterial cleansing gives you an opportunity -- if you choose it -- to improve the quality and perhaps even the length of your life, as so many others have already done. The choice is yours.

Appendix: Confirmational Research

More and more nutritional studies relating to atherosclerosis are finding their way into the medical and scientific literature. Samples of some of these discoveries are listed below, followed by the number of studies that support each claim. If you would like further details about these and other studies, you may wish to consult *Nutritional Influences on Illness: A Sourcebook of Clinical Research* (2nd ed., 1993), by Melvyn R. Werbach, MD and published by Third Line Press, ISBN 0-9618550-3-7.

Avoid Hydrogenated Vegetable Oils

Hydrogenated vegetable oils (such as margarine and vegetable shortenings) have a high content of trans fatty acids which elevate cholesterol, perhaps because of their anti-essential fatty acid action. [7 studies.]

Avoid Deep Fat Frying and Minimize heating of fats

Heating of fat is believed to oxidize cholesterol to form 25-hydroxy cholesterol, which has been shown to accelerate degeneration of smooth muscle cells in arterial tissue -- thus setting the stage for the development of atherosclerosis. [4 studies]

High Fibre Diet

Water insoluble fibres (e.g. wheat bran, cellulose) are minimally effective in improving lipid metabolism compared to water-soluble fibres (e.g. oat bran, psyllium, guar gum, pectin), which are moderately effective due to their ability to decrease cholesterol absorption by binding dietary and biliary cholesterol. [15 studies]

Restrict Sugar Intake

Sucrose may increase urinary chromium loss, and chromium deficiency is a risk factor for atherosclerotic heart disease. Sugar intake is associated with increased total cholesterol, decreased HDL-cholesterol (the "good" kind), increased triglycerides and increased platelet adhesiveness. [14 studies]

Avoid Coffee

Epidemiologic studies link coffee consumption with hyperlipidaemia and atherosclerosis. [7 studies]

Drink Alcohol in Moderation

The influence of alcohol is detrimental to the prevention of cardiovascular heart disease and has undesirable effects on blood pressure, body weight and glucose tolerance. The incidence of stroke increases as the intake of alcohol increases. [8 studies]

Fish Body Oils

There is an inverse relation between fish consumption and deaths from coronary heart disease. Fish oils may (1) decrease blood viscosity, (2) reduce total cholesterol, (3) increase "good" HDL-cholesterol, (4) lower triglycerides, (5) reduce tissue damage from acute ischemia, (6) reduce anginal pain, (7) improve exercise tolerance, (8) reduce platelet aggregation, and (9) improve blood flow dynamics. [31 studies]

Monounsaturated Fats

Monounsaturated fatty acids (as found in olive & peanut oil) appear to reduce plasma "bad" LDL-cholesterol without lowering "good" HDL-levels and to reduce the risk of coronary artery disease. In laboratory studies they do not suppress the immune system or promote carcinogenesis (as do polyunsaturated oils). [3 studies]

Limit Polyunsaturates

The American Heart Association is now advising against excessive consumption of polyunsaturated oils because data on the safety of such diets is limited.

Vitamin A

Increased consumption of vitamin A may prove to reduce mortality rates due to heart disease. Vitamins A and E have antioxidant properties and can protect against excessive lipid peroxidation. These two vitamins can decrease platelet aggregation, affect oxygen transport and utilization, increase "good" HDL-cholesterol and enhance the ability of niacin to lower lipid levels. [2 studies]

Vitamin C

Leucocyte and plasma concentrations of ascorbate (vitamin C) are significantly decreased in coronary heart disease. Marginal vitamin C deficiency may contribute to atherosclerosis. Vitamin C stimulates plasma lipoprotein lipase, which is required in the catabolism of

triglycerides. Vitamin C is required in the hydroxylation of proline for collagen formation, and thus influences arterial wall integrity. Supplementation with vitamin C may lower total cholesterol, triglycerides and total lipids, while raising "good" HDL-cholesterol levels, increasing fibrinolytic activity and decreasing platelet aggregation. Supplementation with vitamin C may improve peripheral arterial circulation. [13 studies]

Vitamin E

Supplementation with vitamin E may inhibit platelet aggregation and platelet adhesiveness to collagen. Supplementation with vitamin E may improve lipid metabolism and reduce intermittent claudication. Vitamin E supplementation may reduce platelet aggregation and discourage the progression of atherosclerosis in diabetes. [13 studies]

Vitamin B Complex

Supplementation may improve the ratio of unsaturated to saturated fatty acids in the blood. [1 study]

Vitamin B-6 (Pyridoxine)

Dietary deficiency of pyridoxine is associated with atherosclerotic lesions and increased risk of atherosclerotic heart disease. Supplementation with pyridoxine may have an anti-hypercholesterolemic effect. B-6 deficiency may cause arterial damage due to build-up of homocysteine. [13 studies]

Vitamin B-12

Deficiency of B-12 is associated with elevated levels of homocysteine, an atherogenic amino acid. [2 studies]

Niacin

Supplementation with niacin may have a favourable effect on total cholesterol, HDL-cholesterol, LDL-cholesterol and triglycerides. Supplementation with niacin may reduce risks of myocardial infarction (MI) for patients with a previous history of MI. [6 studies]

Folic Acid

Supplementation with folic acid may reduce concentrations of homocysteine, which may contribute to atherosclerosis. [4 studies]

Choline

Supplementation with phosphatidyl choline may not only improve lipoprotein metabolism, but may also cause regression of plaques.

[3 studies]

Inositol

Supplementation with inositol may help to protect against increases in total cholesterol and fatty acids in the liver. [1 study]

Magnesium

Magnesium may be deficient in patients with myocardial infarction. Magnesium deficiency is associated with increased risk of coronary artery disease, sudden cardiac death, myocardial infarction and ventricular tachyarrhythmias. Supplementation with magnesium may reduce the risk of cardiac arrhythmias, vasospastic angina and death following myocardial infarction. Supplementation with magnesium may prevent calcification of blood vessels and the development of atherosclerosis. Supplementation with magnesium may reduce total cholesterol, raise "good" HDL-cholesterol and inhibit platelet aggregation. [15 studies]

Potassium

Deficiency in potassium (which may exist despite normal serum potassium levels) is associated with arrhythmias as well as decreased tolerance to cardiac medications and EKG alterations. Potassium may protect blood vessels from lesions caused by hypertension. Potassium and magnesium may be more effective when administered together when the level of either is deficient, due to the inability of the heart muscle to hold on to potassium in the absence of magnesium. [5 studies]

Zinc

Animal studies suggest that zinc and "good" HDL-cholesterol levels are positively correlated. Supplementation with zinc may reduce intermittent claudication. [4 studies]

Chromium

Chromium deficiency is a risk factor for atherosclerotic heart disease. Chromium supplementation may reduce total cholesterol and triglycerides and raise "good" HDL cholesterol. Chromium supplementation retards the development of experimental atherosclerosis and may result in plaque regression in experimental animals. [10 studies]

Selenium

Serum selenium levels are negatively correlated with atherosclerosis. Supplementary selenium may reduce platelet aggregation by increasing prostacyclin production. [*10 studies*]

Betaine

Supplementation with betaine, folic acid and pyridoxine may be beneficial for patients with homocysteinuria. [*1 study*]

Does your diet provide everything you need?

Are your supplements doing any good?

Are there gaps in your nutritional program?

Are you overdoing anything?

Your body has the answers!

A Nutri-Body® Questionnaire can find out what they are.

The Nutri-Body® method consists of a self-scoring questionnaire that asks you about 600+ signs of nutritional imbalance. Many of these you may have taken for granted, not realizing that nutrition could be involved. Your answers to these questions will give you a clear picture of your own nutritional uniqueness.

David W. Rowland's manual, ***Assessing Biochemical Individuality***, explains how to interpret the Nutri-Body® questionnaire and makes suggestions to help you develop your own effective, custom-tailored nutritional program. Whether you are a novice at nutrition or an expert, you will find this manual to be a valuable resource - for yourself, your loved ones, and/or your clients.

Assessing Biochemical Individuality and Nutri-Body® questionnaires are available in paperback *and* now available through our exciting new **online** program!

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