

Back to Eden

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Some reader will remember newsletter number 33 "The Vegetarian Advantage" that reported on a research study [The China Study] conducted in China by Dr T Colin Campbell for over twenty years. This showed conclusively that animal protein causes not only cancer but is the catalyst of most of the western diseases. But what is most amazing, during the very careful research, he found that one of the strongest predictors of any western disease was blood cholesterol levels. As cholesterol levels rose in certain part of China, the incidence of all western diseases increased. From this we can see that it is very important that we do not let our blood cholesterol get too high. What we must realise is that blood vessel disease develops over an entire lifetime. Heart disease is seventeen times higher in America than in rural China. Australia and New Zealand are only a little behind America.

This is why I have taken an extra page in this newsletter. I believe that we need to know this information, not only for ourselves, but also for our families. Many of us are cooks for our families and my desire is to educate you and inspire you to become vegetarian. Dr Campbell's research showed that the more animal protein you eat, the more heart disease you have. Please consider this now, not after you have lost a loved one.

I have also placed an article in this issue on a subject that is close to my heart. Read it with an open mind and consider carefully the thoughts I have presented.

If you would like to attend any of the classes advertised on the back page, contact Kaye. Join our group of people who enjoy each monthly class, learning lots of interesting information on living a healthy lifestyle.

From Kaye and the Back to Eden team

Heart and Blood Vessel Disease....

Strokes, like heart attacks are a major concern in Australia, affecting mainly older adults, but they can also affect younger people as well. Some years ago heart disease was considered a rich man's disease. Affluent Western societies had high rates of heart disease, while underdeveloped countries had relatively low rates. Where poverty, poor sanitation and lack of education once contributed greatly to sickness and death, it is now affluence and wealth, with its sedentary habits, rich food, stress and smoking which lay the foundation for our prevalent health problems.

Many people who have heart disease are not aware of it. This is because heart disease usually develops silently. Before any damage to the heart occurs, a process called atherosclerosis or "hardening of the arteries" has been taking place in the arteries of the heart for many years. The early phase of atherosclerosis is called a "fatty streak." The process of atherosclerosis is not confined to the heart arteries (known as "coronary arteries"). The term "coronary artery disease" refers specifically to the gradual narrowing of atherosclerosis as it affects the heart arteries. Large and medium sized arteries throughout other parts of the body can also become narrowed by this buildup of fatty material as a plaque is formed.

There is more to the process of atherosclerosis than the buildup of fat. When fat accumulates on the inside of the coronary arteries (or any other artery), the body reacts to prevent a blood clot. It covers those fatty deposits with a tough, fibrous cap. This is an important response, because if fatty material is allowed to come into direct contact with the blood it can stimulate the blood to clot. The fibrous cap

protects against this deadly clotting. In fact, this dual process gives atherosclerosis its name. "Athero" refers to the "mushy" or "gruel-like" fatty material that builds up inside the arteries. "Sclerosis" describes the hard fibrous material made by the body in response.

Unfortunately, an atherosclerotic plaque can ulcerate, causing a break in the protective cap. When this happens, a combination of fibrous and fatty material is released into the blood stream. A now smaller, eroded fatty deposit, called an ulcerated plaque (sometimes called "lesion"), remains attached to the artery wall. Both the liberated fatty material and the ulcerated plaque itself can activate platelets, the body's clotting cells. This often sets in motion a chain of events that can completely obstruct any artery that is already significantly narrowed by atherosclerosis. If this or another process results in complete obstruction of a coronary artery, the heart muscle that was dependent on the blood flow in that artery will die. This death of heart tissue is called a myocardial infarction (MI), or heart attack.

Atherosclerosis progresses at different rates in different people. Early atherosclerosis is very common in Western nations. In fact, it may be present at age 10 or 15. By the time a person reaches 20, fatty streaks can be so prominent that they are clearly visible when the coronary artery is cut open. If the unhealthy lifestyle continues, by age 30 the plaques progress to become even more pronounced. By age 40, it is not unusual to have significant coronary artery blockages that reduce the diameter of the artery by more than half. Even at this point, the effects of 30 years worth of atherosclerosis will likely still be "silent." Most individuals will have no symptoms at all.

If symptoms do arise, they may be vague or considered normal, or they may be classic "angina pectoris," which is the first symptom in the progression toward a heart attack. Angina pectoris refers to chest pain

on exertion or severe emotional stress that is usually described as a heaviness, pressure, or tightness centred in the middle or left side of the chest. The pain can travel up to the neck or jaw or down either arm. Occasionally there is also back or stomach area pain. A large meal or cold weather may also precipitate this pain. The symptom of pain is caused by an insufficient blood supply to the heart muscle. Even under situations of significant exertion, a heart artery must have at least 50 to 60 percent of its diameter blocked before the heart muscle suffers from lack of blood supply, which is the cause of the pain. Many individuals with narrowing even in the 70 percent range or greater have no recognizable symptoms. As a result of the lack of symptoms, heart disease is often not detected in its earlier stages. A person may feel great, be working full time, and yet be on the verge of a major heart attack and perhaps even sudden death. Approximately 60 percent of heart attack deaths occur suddenly or outside of a hospital before treatment can be administered. Over half of all sudden deaths (almost two-thirds of sudden death cases in women) occur in individuals who were not previously diagnosed with coronary artery disease. It is a sobering reality for many that their first heart attack is their only heart attack. Sudden death offers no second chances.

Even when people survive a heart attack, over two-thirds do not make a complete recovery, leaving them with some form of disability and a permanently decreased quality of life. Following a heart attack, the heart is weaker because of lost muscle tissue.

The different kinds of blood vessel disease

As the term cardiovascular disease implicates, heart attacks are not the only manifestation of this disease. Strokes are also often caused by atherosclerosis. Complete blockage of a brain artery results in the death of any brain tissue that depended on the blood flow in that artery. The brain cells downstream of the blocked artery die because they are deprived of oxygen. It is the death of brain tissue that is called a stroke. Although most people know that strokes commonly paralyze half of the body, they can cause other serious difficulties. For example, they can cause blindness, inability to speak or hear, and severe personality or memory problems. The actual problems that occur depend on what part of the brain is damaged.

The body's largest artery, the aorta, is commonly affected by atherosclerosis. This huge vessel that carries blood directly from

the heart and is attached to it is especially prone to problems called "aneurysms." Aortic aneurysms typically result when the lining of the aorta is weakened by atherosclerosis. Because of the high pressures in this great artery, the weakened wall can balloon out like a bad spot on a tyre. If this ballooned area gets large enough, the tissues will be too thin to contain the high pressure and the artery will burst. A ruptured aortic aneurysm is usually a death sentence. Massive internal bleeding occurs literally within a matter of seconds or minutes.

Two arteries that branch off the aorta in the abdomen are also prone to atherosclerotic narrowing. These are the renal arteries, the blood vessels that supply the kidneys. If one of these arteries becomes significantly narrowed, a person can develop high blood pressure, or—even worse—lose the function of that kidney entirely.

Other atherosclerosis-related conditions may not cause death but will rob the quality of life, allowing the afflicted individuals to live with varying degrees of misery. For example, male impotence, leg pain when walking (called "intermittent claudication"), limping, and gangrene can result from atherosclerosis in the femoral arteries in the thigh, and posterior tibial arteries in the lower leg and ankle. When atherosclerosis affects heart and brain arteries, peripheral arteries supplying the legs and arms are often also narrowed. Gangrene can result in blood poisoning and death if amputation is not carried out promptly.

Cardiovascular diseases claim the lives of about one out of two people in our country. But there is good news. The major factor in almost all of these deaths is atherosclerosis—and atherosclerosis is a condition that medical science has now demonstrated to be preventable, treatable, and even reversible. Let us now look at the compelling evidence that will give you the keys to a lifestyle program to combat atherosclerosis. Our focus will be primarily on heart disease and stroke prevention, but be aware that the preventive factors we illuminate will help address atherosclerosis in all its varieties and locations in the body.

Keys to preventing blood vessel disease

There are some factors that influence our risk of heart disease that we can do nothing about. For example, age and sex cannot be changed, yet they have a significant bearing on cardiovascular risk. The older we are, the greater our risk. Similarly, men are at higher risk than women of the same age—

particularly in the years before menopause. Fortunately, however, medical research demonstrates that we can change a number of factors that influence our risk of heart disease. The three most important modifiable heart disease risk factors are cigarette smoking, high blood pressure, and high cholesterol.

Addressing all three can make a considerable impact, as was illustrated by a study of some 29,000 Finnish men and women over a 20-year period (1972 to 1992). When these individuals lowered the cholesterol in their diets, lowered their blood pressure, and stopped their tobacco use, they reduced their heart attack risk by more than half.

Focusing on cholesterol

Cholesterol is a white, waxy fat that is manufactured in our bodies and is used to build cell walls and make certain hormones. However, too much cholesterol in the blood stream (called "serum cholesterol") can contribute to atherosclerosis. For this reason, high blood cholesterol level as a single factor correlates well with coronary heart disease death rate.

Cholesterol never travels alone in our arteries and veins. It always travels in different carriers or vehicles. The heaviest carriers of cholesterol are called HDL or high density lipoprotein. Some lighter weight carriers are named low density lipoprotein (LDL), while a still lighter vehicle is called very low density lipoprotein (VLDL).

Today we are able to use these cholesterol divisions as better indicators of heart disease risk than total cholesterol levels alone. For example, HDL [H for "healthy" cholesterol] actually protects us from heart disease. The reason for this is that HDL actually removes cholesterol from the arteries. The HDL vehicle then carries that cholesterol to the liver, where the body disposes of the fatty material through the bile.

LDL [L for "lethal" cholesterol], on the other hand, is the so-called "bad cholesterol" that is linked to an increased risk of heart disease. It is probably a certain type of cholesterol within LDL that is the main culprit, namely, oxidized cholesterol. The level of LDL in the blood is an important determinant of the rate at which cholesterol is deposited in the artery walls.

Note that vegetarians have an average total cholesterol to HDL ratio that is low, at 2.8. Vegetarians generally have a very low risk of heart disease. Marathon runners are also at low risk for heart disease; their ratio is 3.4. These desirable low levels can be

compared with the average American woman who has a ratio of 4.4, or the average man who comes in at 5.0. Although many people would feel secure to be “average,” average is not really desirable in a country where more people die from heart disease than any other cause. This is emphasized by the fact that the average heart attack victim has a total cholesterol to HDL ratio that is very close to average for the whole population. The typical man who has a heart attack has a ratio greater than 5.5, and the average female coronary heart disease victim has a ratio greater than 4.6. In other words, if you are a woman and your total cholesterol to HDL ratio is greater than 4.6, or if you are a man with a ratio above 5.5, you are right where the average heart attack victim is. The message is that before a heart attack strikes, adopt a better lifestyle program. Try to get your total cholesterol/HDL ratio into the ideal range—3.4 or less.

How to achieve the best cholesterol levels

How can we improve our cholesterol levels? Specifically, how can we decrease total cholesterol and LDL [lethal cholesterol] and at the same time raise HDL [healthy cholesterol]? The answer to this question is extremely important. To fully appreciate the answers, however, we must make sure we understand where cholesterol comes from.

It is of primary importance that we recognize that our livers manufacture more than enough cholesterol for all our body functions. For this reason, we do not need to eat any cholesterol whatsoever. In other words, cholesterol is totally unnecessary in the human diet. However, many of us get significant amounts of cholesterol from our foods. In fact, the average Westerner eats about 300mg of cholesterol every day. Where does all this cholesterol come from?

Note that all the cholesterol we eat comes from animal products. It is critical that we understand that fruits, vegetables, grains, and even nuts contain no cholesterol. If the food comes exclusively from plant products, then it has no cholesterol in it. On the other hand, if the food product comes from an animal, it almost always has cholesterol in it. (A few exceptions exist where the cholesterol-containing portion of the animal product has been removed. Egg whites would be the main example of this.)

Many people think that if they eat chicken, turkey, or fish they are not getting cholesterol. On the contrary, we see that every animal product contains cholesterol. Also, take note that chicken contains about

the same amount as pork and beef. This bad news about “white meat” has not received much press. Furthermore, many kinds of fish have a high cholesterol content.

To what extent does our intake of cholesterol affect our blood cholesterol level? The more cholesterol we eat, the higher our blood cholesterol tends to be.

Animal fat's contribution to cholesterol levels

Many people do not understand the difference between the saturated fat (S) and polyunsaturated fat (P). The saturated fat is solid at room temperature and polyunsaturated fat is liquid. Generally, the more solid the fat, the more saturated it is. Most fats from animal products are predominately saturated, while most plant products are high in polyunsaturated fats.

Note that many of the animal products such as beef, venison (deer), lamb, and bacon have extremely low P/S ratios. These foods, based on their fat content, will tend to dramatically raise an individual's serum cholesterol. Thus, red meats are undesirable not only because they contain cholesterol, but their harmfulness is compounded because they contain so much saturated fat, and so little polyunsaturated fat. The same is true of milk, butter, and cheese. Chicken and turkey have less saturated fat than red meats, but they, too, will raise cholesterol levels. One of the greatest myths is that chicken, turkey, and fish lower a person's cholesterol level. These foods actually raise a person's cholesterol, but they raise it less than red meat does. As a result, a person's cholesterol may go down when leaving off red meat and substituting fish and fowl. But the drop in cholesterol level occurs because chicken, turkey, and fish raise one's cholesterol level less than red meat, not because they have a cholesterol-lowering effect.

The story is similar with fish. Some fish have favorable P/S ratios (greater than 2.0), but many others do not. Furthermore, all fish contain cholesterol. In short, fish, like fowl, if substituted for red meat, will tend to lower cholesterol levels, possibly even more than fowl. However, your cholesterol levels would be lower yet if you left chicken, turkey, and fish completely out of your diet.

Vegetable fat's effect on cholesterol

A study on nut consumption was conducted at Loma Linda University and has received

international attention. The initial study focused on the amount of nuts eaten by the participants in the Adventist Health Study. They found that those consuming nuts less than once per week had the highest risk of heart attack. Those who consumed nuts one to four times per week lowered their risk about 25 percent. Those who consumed nuts more than five times a week cut their risk in half. The study was controlled for other lifestyle variables so that the researchers could be more certain that the nuts were the only factor involved. Many health professionals were surprised by the findings of this study. Previously, health professionals commonly encouraged patients to avoid nuts because of their high fat content. Now we know that nuts in small to moderate amounts are part of a healthful diet because they supply some fat nutrients that are beneficial for preventing heart disease.

Regarding peanuts, the fat in peanuts has a specific chemistry and triglyceride structure (apart from the saturated and polyunsaturated content) that makes them surprisingly harder on your arteries than other vegetable fats. Thus, a person who wants to protect his arteries would be wise to choose other nuts such as almonds, walnuts, or pecans in place of peanuts. Almonds have another advantage. They are unique among the nut food group in that they contain far more vitamin E than other nuts; in fact, they exceed just about all other foods in this regard.

After the 1992 study of nuts and cholesterol, researchers took the nut research a step further. Instead of using Seventh-day Adventists again, who are already on a better overall diet than most Americans, they now studied individuals on an average American diet. One half of the total group was placed on an average diet. The other half were fed an identical-looking diet with one major difference. Walnuts were blended up and added to various food items. Other sources of fat were decreased to keep the calorie and total fat levels the same in the two groups.

Eating walnuts daily had some amazing results. LDL cholesterol, the “bad cholesterol,” dropped by .5, which translates into a 36 to 54 percent drop in heart disease risk. The benefits of walnuts may not simply be due to their excellent P/S ratio. These nuts are also high in so-called omega-3 fatty acids, which have some special benefits

Margarine

Margarines were first thought to be beneficial to our health because they had a

higher polyunsaturated fat content than butter. Most margarines, however, are not natural products. These popular spreads are typically made from vegetable oil, such as corn oil, which is heated under pressure to partially hydrogenate (saturate) it so that it becomes a spreadable, solid fat at room temperature.

The hydrogenation process alters some of the fat in the vegetable oil by changing the microscopic shape of the fat molecules. Normally fatty acids (the building blocks of fat) are found in nature in what is called the cis form, which refers to the molecules' three dimensional appearance. The hydrogenation process changes some of these molecules into the trans form. Trans fatty acids, unlike their cis counterparts, significantly raise the serum cholesterol and LDL, even though they are polyunsaturated. This rise in cholesterol correlates with the effect of margarine on heart disease risk measured in an eight year Harvard University study. This means avoiding all damaged or altered fats, eg cooking oils. Trans fatty acids have also been implicated in causing cancer.

All of these facts suggest that it would be better to spread a little nut butter, or learn to make healthy spreads to use on our bread rather than use margarine or butter. Another option would be to replace margarine on our bread with olive oil or avocado.

Fibre's cholesterol-lowering abilities

Fibre in our food will help lower cholesterol. Most Americans eat far less than the recommended 25 to 30 grams per day. Evidence now suggests that a low fat, high fibre, high carbohydrate diet offers a number of advantages. Eating at least 30 to 40 grams of fibre per day from a variety of plant foods can lower your risk of heart disease, cancer, intestinal disorders, and other diseases.

Many are surprised to learn that there are different types of fibre. Yet all fibres have one thing in common—they cannot be digested by the normal human intestinal system. Fibre works by binding to cholesterol and bile acids (excreted by the liver) in the small intestine, thus preventing their absorption. Fortunately, neither bile nor cholesterol is absorbed high in the intestinal tract, but rather in the distal ileum (the last part of the small bowel). This allows the fiber plenty of time to bind up these compounds. If, however, adequate fiber is lacking, both bile and cholesterol are reabsorbed into the blood stream, raising blood cholesterol levels. Bile acids are actually made from cholesterol by the

liver. As a result, the more bile you lose in the stool, the more cholesterol the body must utilize to make new bile acids that are necessary for fat digestion. Remember, animal products (meat, milk, eggs, and cheese) have absolutely no fibre.

In the past, most cholesterol education programs told participants about the importance of cholesterol in the diet as well as the dangers of saturated fat with most of the emphasis being on saturated fat, but this is where discussions ended. More recently, the topic of fibre has found its way into lay educational efforts, but it often does not get the full attention that it deserves. Other information that is sadly lacking in most educational efforts is the topic of animal protein and oxidized cholesterol.

Animal protein raises cholesterol

The relationships between cholesterol and protein have been published in the medical literature for some 20 years, but for the most part have been sadly neglected. An extensive body of research now has established that serum cholesterol is extremely dependent on the type of protein consumed. Animal protein alone (even skim milk protein) will increase blood cholesterol levels while plant proteins will decrease cholesterol. In fact, many people who are on otherwise heart-healthy diets will be unable to lower their cholesterol sufficiently unless they completely eliminate animal protein from their diets. Research has shown that switching from a low saturated fat, low cholesterol diet using skim milk protein to a low saturated fat, low cholesterol diet using soy protein as a milk substitute can drop cholesterol levels by as much as 1.5 to 2.0 in as little as three weeks. This has happened in many of my people who have tried a total vegetarian diet (no animal protein). If a dramatic reduction does not occur in such a diet, thoroughly review what the patient is actually eating, and you will often find that animal protein has been unwittingly consumed in the form of casein in a milk substitute or a cholesterol-free egg product. Once the animal protein is completely excluded, the expected dramatic result usually occurs.

The problem with oxidized cholesterol

Cholesterol exposed to the atmosphere for a period of time tends to combine with oxygen in the air, producing what is called "oxidized cholesterol." This compound may turn out to be the most important dietary factor that influences heart disease risk.

As early as the 1940s it was discovered that not all cholesterol was the same in its likelihood of causing atherosclerosis. Dr. Chaikoff and associates found that chickens that were fed large amounts of cholesterol developed high blood cholesterol levels and a considerable amount of atherosclerosis. On the other hand, chickens that were given hormones to raise their cholesterol to similar levels had virtually no fatty buildup in their arteries. Drs. Peng and Taylor in Albany, New York carried on further experiments looking for something in dietary cholesterol that was particularly damaging to blood vessels.

Some of the chemicals, called "oxidation products," were so toxic that they destroyed cells that line the arteries in less than 24 hours. Furthermore, it took only a small amount of these toxic chemicals to cause irreversible damage. In Peng and Taylor's work, the deadly effects on blood vessels occurred when as little as one half of one percent of the blood cholesterol was oxidized. Their research is particularly important because destruction of artery-lining cells is one of the main factors that begins or accelerates the buildup of cholesterol in atherosclerosis.

Peng and Taylor also made chemical measurements of specific foods to see how much oxidized cholesterol they contained. The researchers then tested the harmful compounds on blood vessel cells of monkeys to determine how dangerous they were. The most harmful combination of cholesterol oxidation products was found in **custard mix where sugar, milk, and eggs were combined**. The dried mix was apparently exposed to air for a considerable period of time due to its long shelf life. Some have observed that ice cream is the most common form of custard in America today. **Pancake mixes containing eggs and dried powdered milk** were equally as harmful as custard. The third most harmful item was **Parmesan cheese**; it turned out to be as damaging as **lard**.

Furthermore, eating oxidized cholesterol may raise blood cholesterol levels more than pure cholesterol alone. However, even if your blood cholesterol level remains normal, animal research demonstrates that eating oxidized cholesterol can have adverse consequences.

The rabbits were fed a moderate amount of pure, non-oxidized cholesterol for 45 days. Their blood cholesterol levels stayed in the normal range and they suffered no damage to their blood vessels. Those rabbits that were given the same amount of oxidized cholesterol also maintained normal blood cholesterol values. However, they

sustained significant damage to their blood vessels. Research on humans also supports the fact that oxidized cholesterol in the diet can increase your risk of heart disease even if your blood cholesterol levels stay normal. For example, we have known for years that—regardless of your blood cholesterol level—the more cholesterol you eat, the greater your risk of heart disease. Cholesterol in the diet is what is called an “independent risk factor” for the development of heart disease.

Our growing understanding of oxidized cholesterol has led me to conclude that any program that does not address this subject is neglecting one of the most important factors in decreasing heart disease risk. I think that the increased research attention on oxidation products of cholesterol will illuminate some other relationships. For instance, it is very possible that foods with high sugar content are more susceptible to oxidation. This would help further explain the abundant oxidation products that are found in things like custard and pancakes—foods with a source of cholesterol (milk and eggs) and sugar. It would also explain why dietary sugar has repeatedly been linked to atherosclerosis.

Problems with iron and oxidation

In 1992, Scandinavian researchers surprised many in the medical community with the discovery that higher amounts of iron stored in the body increased a person’s risk of heart disease. These researchers highlighted an important fact: in addition to cholesterol being oxidized in our food, it may also become oxidized within our bodies. Higher blood iron levels (measured by a blood compound called “ferritin”) may increase the conversion of normal cholesterol into the dangerous oxidized variety—within our own bodies. In fact, iron is a well-recognized stimulant (catalyst) of oxidation. Oxidized compounds like oxidized cholesterol can then damage the lining of blood vessels and promote atherosclerosis.

Iron also promotes higher hemoglobin levels. Although high hemoglobins were once thought to be desirable, too high a hemoglobin level can present problems. More hemoglobin means more oxygen in the blood. Oxygen-carrying hemoglobin can, in turn, provide fuel for the oxidation that iron stimulates. Therefore, excessive iron may be adversely working in two ways in our blood: first, it means more oxygen is present, and second, it stimulates the oxygen to combine with cholesterol to form oxidized cholesterol. A third adverse result

of higher hemoglobin levels is that it makes the blood thicker and more likely to clot and initiate a heart attack.

It is important to understand that we do need iron, but excess iron appears to be a problem (Hemochromatosis). Fortunately, a person can maintain sufficient iron levels without having excess iron by adopting a total vegetarian diet. Research from Harvard University proves these relationships. Harvard researchers analyzed the dietary habits of nearly 45,000 men and then kept in touch with them for four years. They found that the men who ate the largest amount of animal sources of iron (called “heme” iron) had higher rates of heart attacks. This relationship could not be explained by differences in the amount of fat or cholesterol they were eating. Those same men with liberal intakes of iron from animal sources also had higher serum ferritin levels, meaning that they had more iron stored in their bodies.

Other contributing factors

There are a number of substances in foods that appear to prevent oxidation from taking place inside of us. These substances are called antioxidants. Three of the most well-researched compounds in this regard are the antioxidant vitamins E, C, and beta-carotene – all found in the vegetarian diet.

Homocysteine is one of more than 20 different amino acids that the body uses to construct proteins and carry out chemical processes in the cells. Although genes play a part in elevated levels of homocysteine, diet also has a significant role. Researchers have now found that individuals with high levels of homocysteine in their bloodstreams are twice as likely to have clogged arteries. For every 10 percent rise in blood homocysteine levels, heart disease risk goes up roughly 10 percent as well. Although this is not quite as significant a risk factor as serum cholesterol (for every 10 percent risk in cholesterol there is a 20 to 30 percent rise in heart disease risk), homocysteine levels are another “independent risk factor” for the disease. The good news, as usual, is that a healthful lifestyle can help solve the problem by beneficially decreasing blood homocysteine levels.

Coffee drinkers have high blood levels of the substance. If they smoke it is higher, according to a study of 16,000 adults in Norway. Abstaining from coffee and tobacco will go a long way in freeing a person from this risk of heart disease.

Folate and vitamins B6 and B12 in the diet get rid of homocysteine, converting it to

another amino acid called methionine. These B vitamins are found in fortified soy milks and certain breakfast cereals as well as animal products. Obtaining at least 400 mcg/day of folate in fruits and vegetables solely may reduce the risk of heart attack and stroke by up to 40 percent by lowering homocysteine levels. Adequate supplies of methionine (an essential amino acid) are important and can be easily obtained from a total vegetarian diet.

Another way to get our HDL levels up is aerobic exercise that gets the heart rate up and requires rhythmic body movements and deep breathing. The more aerobic exercise obtained the greater the rise in HDL.

Elevated amounts of triglycerides are also a risk factor for heart disease. Many people with high triglycerides are overweight. Getting down to your ideal weight may bring your triglycerides into the ideal range. Another step is to eat less fat. As we have already seen, most of the lipids in our diet are triglycerides by nature. In addition, decreasing your stress level and stopping smoking can lower the triglycerides. Many people have high triglyceride levels just because of alcohol use. When they become abstainers, their triglyceride levels come down to normal. Lastly, use sugar sparingly. Sugar raises triglycerides. If you want to bring your triglycerides into line, especially avoid refined sugars like white sugar, honey, molasses, and soft drinks, desserts, candies, etc. that utilize those sweeteners. Sweeteners in combination with cholesterol and saturated fats as in custards and ice cream are especially to be avoided.

Genetics and cholesterol

Some individuals genetically have a tendency toward low blood cholesterol levels. However, if they follow a poor lifestyle, they can still have a heart attack. Other individuals have “bad genes” that predispose them to high cholesterol levels. However, if their overall lifestyle is good they can definitely postpone—if not completely avoid—a heart attack. There are people who genetically tend to run high total cholesterol levels but may not be at risk for heart attacks because they are living a healthy lifestyle and have high HDL levels.

The important message is this: we need to look beyond what our cholesterol levels are, beyond what our HDL levels are, and beyond what our triglycerides are. The number one line of defence is to live a healthful lifestyle. This includes special attention to a food intake that is based largely on the cholesterol-free, high-fibre

plant foods. Other aspects of a heart disease preventive regimen include regular exercise, not smoking, and controlling blood pressure. However, there are still other factors in a heart-healthy lifestyle that we must address if we want to maximize the preventive potential of heart disease.

Overweight

In 1990, the U.S. Government revised women's weight guidelines. This appeared to support the idea that a modest weight gain in middle age was acceptable. However, a subsequent study analyzed weight data on over 110,000 female registered nurses over a 14-year period. The Harvard researchers found that any weight gain after 18 years old increased the risk of heart disease. Even among those who were within the new guidelines for normal weight, the more weight they gained, the more they increased their heart disease risk. There was about a 20 percent increase in risk for the smallest weight gain but nearly four times the chance of heart attack for the largest weight gainers who were still within the normal weight guidelines.

The research article concluded that a weight gain after 18 years of age is a strong predictor of heart disease. It expressed concerns that current U.S. weight guidelines were falsely reassuring a large proportion of people who are within the current guidelines but have avoidable risk factors for heart disease. Although we have known for years that obesity alone is a risk for heart disease, this study shows that even "nicely filled out" people may have a significant risk for heart disease compared with their thinner nonsmoking counterparts.

Use of drugs to reduce cholesterol levels

In today's society it is popular to lower high cholesterol levels with drugs. We have very potent medications that can indeed help lower cholesterol, but they all have the potential for adverse side effects. On the other hand, many who adopt a healthful lifestyle find that they can lower their cholesterol levels as much or more than they could with drugs—and they avoid the potentially harmful side effects. There are no adverse side effects when following a judicious regular exercise program and consuming a diet low in saturated fat, low in cholesterol, and high in fibre. There are only good side effects that result from such a lifestyle. Examples include a better energy level, sounder sleep, more attractive appearance, and less minor illnesses.

Medication is not really the best answer to our number one killer, heart disease.

Prescription drugs have their place, but in the overall prevention of heart disease, the best, most inexpensive, and most effective way is still a healthy lifestyle. A healthful diet is not expensive and the benefits are far reaching. Even for those on medications, a good diet is still necessary. That person will get a greater cholesterol-lowering effect if they make lifestyle changes in addition to taking a pill.

Life stresses can cause a heart attack

A total of 129 heart attack survivors were questioned about everything that happened to them in the 26 hours before the attack. Serious stress was experienced by 51 percent. In comparison, a large number of people that did not have a heart attack were asked about their stresses. Only 12 percent of those experienced any serious stress in the same time frame. Stressful situations that provoke anger are especially trying for those with heart disease. Individuals with pre-existing heart disease more than double their risk of myocardial infarction when they get angry. This increased risk continues for two hours after the anger episode.

Benefits from this healthy diet

Let us look at a compelling study that helps us to see the impact of diet alone in decreasing heart disease risk. Many honestly wonder, "How much can I expect to reduce my heart attack risk by adopting a truly ideal diet?"

First, what is the ideal diet? By now it should be clear from the medical research that the ideal diet consists of plenty of fruits, vegetables, whole grains, and nuts (the latter in moderation). If we use foods that come exclusively from these food groups, we can make the most dramatic changes in lowering cholesterol and heart disease rates. This is the ideal diet for those with high cholesterol or other risk factors for heart disease, and is also the best diet for those with any blood vessel disease. Now back to the primary question: how much can you expect to lower your risk? This study looked at the impact of three diets on heart disease risk: total vegetarian (the diet recommend for high cholesterol and heart diseases patients), lacto-ovo vegetarian, and non-vegetarian. The population that was studied were Seventh-day Adventist men over 35 years of age living in California. The U.S. government has spent more than fourteen million dollars funding research on Seventh-day Adventists and their lifestyle. This fascination with Adventists probably

derives largely from their markedly increased longevity and decreased disease rates. They found a significant decrease in heart disease deaths among vegetarian Adventists.

The research revealed that about half of the Adventists were not vegetarians; nonetheless, this non-vegetarian group had only 56 percent of the average heart disease death rate compared to the general population. The researchers felt this was due largely to their being nonsmokers; they also avoided alcohol and possibly had a somewhat healthier diet than the general population. Most of the other Adventists were lacto-ovo-vegetarians; that is, they used eggs and dairy products but no meat of any kind. Their heart disease death rate was down to 39 percent of expected—apparently due simply to eliminating meat from their diets. The total vegetarians had the most astounding results. They only experienced 14 percent of the expected death rate.

The Adventist Health Study provides solid evidence that we can significantly reduce our risk of heart disease death by following a total vegetarian diet. In fact, the research presented suggests that fully nine out of ten heart attack deaths could be prevented with a proper lifestyle program. We now know enough about the cause of heart disease to virtually eliminate this disease as a major cause of death in the world. If the elimination of heart disease was accomplished in the U.S., the American Heart Association states that our average life expectancy would increase by almost 10 years.

In reality, however, life expectancy would increase significantly more than the nearly ten years suggested by the American Heart Association. An ideal program to prevent heart disease would also, to a large extent, prevent cancer, chronic obstructive pulmonary disease, pneumonia, and many other leading causes of death. Preventing these maladies would no doubt extend our life span and quality of life even further.

Does high tech Treatment of heart disease make lifestyle changes obsolete?

Some people may feel that our advanced technology for treating heart disease gives them more liberty to do as they please. They reason that there is no need for a controlled lifestyle if they live near a state-of-the-art hospital. Indeed, "high tech" has made a significant difference in the heart disease scene. When a person has a heart attack, cardiologists can open up the blocked arteries with potent drugs or

angioplasty balloons. As a result, if the first-time heart attack patient lives to reach the hospital they have only about a 10 percent risk of dying from the heart attack. Twenty-five years ago the risk was almost 30 percent. By failing to emphasize the importance of lifestyle, cardiologists and others seem to neglect the important fact that heart attack survivors often live on with a marked decrease in quality of life. Of course, cardiologists are well aware of the results of heart attacks. The main cardiology association in our nation, the American Heart Association, recently attacked the common lay myth that heart attack victims who survive will “recover and be fine.” They explained that those who do survive a heart attack have a risk of illness and death two to nine times higher than the general population.

One common problem that results from heart attacks is congestive heart failure. As previously stated, this is a condition in

which the heart is weakened by a heart attack (or other cause) and can no longer perform all the work it should be doing. As a result, fluid typically backs up into the lungs, legs, and feet. Congestive heart failure hospitalizations more than doubled from 1979 to 1992. Congestive heart failure is now the most common cause of hospitalization for people over 65. We clearly need to get to the root of the problem. It is not sufficient to trade an epidemic of heart disease deaths for an epidemic of heart disabilities. Only by preventing or reversing atherosclerosis by lifestyle improvements will we see any great strides toward both decreasing heart disease deaths and heart-related disabilities.

The evidence is indeed clear. We can dramatically decrease our risk of heart disease by following an optimal lifestyle. We need to make these changes so that a known preventable disease no longer leads the list of our killers. Now is the very best

time to improve your diet and other lifestyle habits. Do not wait for warning signs or a first heart attack before getting serious about lifestyle changes. By then you may have already developed irreversible disease. Worse, yet, heart disease may claim your life before you are ever aware that you had a heart problem.

For your own sake and the sake of your loved ones, why not embark on at least some elements of a new lifestyle today? If you stick with such changes, I am convinced you will regard them as among your life’s wisest investments. After all, the investment will pay dividends in providing longer life, disability prevention, and an enhanced quality of life. Do not procrastinate—start to get more of the full benefits of a heart disease preventive lifestyle today.

Taken from PROOF POSITIVE: Neil Nedley MD (used by permission)

Practical Ways to Help Blood Vessel Disease

Follow eight laws of health

Nutrition: A vegetarian diet of fruit, nuts, grains and vegetables that are rich in vitamins and minerals prepared in a simple way. Use lots of leafy green vegetables. Chew your foods thoroughly.

Exercise: Get into a regular exercise program. Exercise does so much for you, from decreasing your stress to increasing your happy hormones. You can think sharper, your whole body will be oxygenated and function better.

Water: Most people do not drink enough pure water. An average sized person needs about 2 litres per day to keep themselves well hydrated.

Sunshine: Sunshine is one of nature’s most healing agents. We need about 20-30 minutes sunshine on our skin each day, but not in the heat of the day.

Temperance: We need to say no to alcohol, tobacco, coffee, tea, caffeinated drinks, chocolate, wrong fats, refined “white” foods, white sugar, white refined salt (use Celtic sea salt instead), sweets, lollies, soft drinks, poisonous drugs, don’t overeat, no cheese, be temperate in all things – be moderate in all things healthy and eliminate all things unhealthy.

Air: Do not live in a house that does not get fresh air, and especially so at night. Learn to breathe deeply when outdoors in the fresh clean unpolluted air.

Rest: Every part of our body needs rest. By pushing ourselves we will burn out. We need a weekly as well as a daily rest. Each night we need a regular bed time, going to bed early to gain the benefit from the melatonin and serotonin produced during these hours.

Trust in Divine Power: When we were created, God placed an emptiness inside of us that only He can fill. He wants us to come to Him and learn how He will give us a peace, healing and rest from any problem we have in our lives. He desires to give us an abundant life.

Herbs for heart health

Cayenne: Normalises blood pressure, both raising or lowering it depending on the need, and improves circulation. Take 1 teaspoon in a few centimetres of water. Can wash down with more water. This can be used long term to strengthen circulatory system or can be used as a treatment to stop heart attacks or stroke. Place a teaspoon in a small amount of water and throw into the victim’s mouth. (Buy cayenne from health food shop)

Ginger: This will improve peripheral circulation. Place 1 teaspoon of freshly grated ginger, place in cup and add hot water. Cover and steep, drain and drink when cool enough. Can add lemon or any other herb to tea.

Hawthorn Berries, flowers, leaves: Can use any of these parts of the hawthorn tree, all work effectively. Hawthorn will rebuild the heart as well as improve its function. It will rebuild heart valves. It normalises blood pressure. To rebuild the heart it needs to be taken for 1 to 2 years. Many people have testified to the wonderful properties of Hawthorn to rebuild their badly damaged hearts and regain a quality of life they thought was gone. Drink tea and/or take the ground berries 3-5 times daily.

Barley Leaf Powder: (or wheat, alfalfa etc) This powder has an abundance of vitamins and minerals which are essential for blood vessel health. Take 6-10 tspns daily.

Garlic: Use raw to thin the blood, reduces cholesterol and reverses atherosclerosis.

To dissolve blood clots: Use papain from the pineapple, raw garlic, sap from raw figs.

For overall heart health: Heart problems result from mineral deficiencies, particularly magnesium, copper, zinc and iodine.

Epsom Salt drench: Dissolve half a cup of epsom salts in a litre of warm water. After you have finished your shower, pour the epsom salt water over your body. Allow to dry as naturally as possible, patting dry if necessary. Then dress.

Our World in Crisis

Hunger, disease, epidemics, global disasters, fierce weather, chaos, earthquakes, financial collapse, political unrest, a medical system that will not be able to help, hopelessness, despair, and a spiritual drought.....is this our future?

It was the year AD70. Forty years earlier Jesus had predicted that Jerusalem would fall. During these years God had patiently waited for the Jews to repent. We are told that God slowly withdrew His protection over Israel and allowed them to follow their own ways. God gave them the choice to see whom they would follow, but sadly, they did not choose Him. The leaders, in their blind and presumptuous way, declared that they had no fear that Jerusalem would be destroyed for it was God's own city. But conditions deteriorated in the nation; there was suspicion, envy, hatred, strife, rebellion and murder. Friends and family betrayed one another, Parents killed their children and children their parents. Rulers of the people were tyrants. Israel had spurned divine protection and now she had no defence.

All the predictions given by Christ concerning this destruction were fulfilled to the letter. Signs and wonders appeared in their city. For seven years a man went up and down the street declaring the woes that would come upon the city. Terrible were the calamities that eventually fell on Jerusalem. The horrors of starvation were experienced. The most inhumane tortures were inflicted by those in power. Thousands perished from famine and pestilence. Great numbers were whipped, tortured and crucified. In a valley, crosses were erected in so great numbers that there was scarcely room to move among them. Inside the city, countless were slaughtered. More than a million people perished. Any who survived were carried away captives, sold as slaves, dragged to Rome to be thrown to wild beasts in the amphitheatres or scattered as homeless wanderers throughout the earth.

The most amazing part in all this is that not one Christian perished in the destruction of Jerusalem. Christ had given His disciples a warning and told them how and when to escape, and all who believed His words watched for the promised sign. The Christians were only given a window of opportunity to leave the besieged city. Those who watched for the sign had a very small amount of time to make their escape unmolested.

What has this to do with us today? Why am I relating this history? The answer is that I believe in Bible prophecy. The Bible has predicted what the world will be like just before Jesus returns. For example, in the book of Matthew chapter 24 it tells of 17 predictions, 16 of these have already occurred. In other parts of the Bible, more signs are given as to the condition of the world at the end of time. Almost all of these predictions have happened.

Can the current financial crisis be fixed? People who believe in Bible prophecy can see events unfolding before their eyes exactly as predicted. Many believe that this is the start of a period of time that will be very unstable, and this will eventually lead to a time of extreme hardship. We have seen the world change dramatically over the past 50 years. People are wondering what the future will hold. Tragedies, drunkenness, rebellion, rage, financial insecurity are seen all around us.

Many are convinced that climate change is one of the most urgent issues facing the world today. The Washington Times (14/11/08) has reported on fears that climate change will trigger many different emergencies around the world. Some scientists predict a hotter and warmer climate, less water, and many native plants and wildlife pushed to the brink of extinction. Then there are other scientists that share the view that the connection between climate change and global warming are not proven. They think the changes in temperature and weather patterns are simply a part of earth's natural cycles. Irrespective of who is right, many believe the earth's last days are predicted.

What about the health of our nation? Children are being raised on junk foods. What will their health be like in 20 years or that of their children? While alternative medicine has a large following, yet it is small compared to the majority who eat fast food and have poor nutrition. Cancer, diabetes and heart disease are everywhere. When we look at our food supply, what has happened to it? Genetic manipulation, pesticides, herbicides all come at a price. Who really cares about all these things?

Law and order has broken down. People don't feel safe unless locked in their own homes at night. Road rage, bashings, rape, murder, drunkenness, burglary, and assaults are common. Homes and families are at breaking point, children are rebellious, divorce is widespread. Sexual immorality is so common it is now considered normal.

The Bible predicts these events will happen just before the Second Coming of Jesus. Behind each sign is the corresponding Bible text where these signs are found.

War sign (Matthew 24:6-7)

Earthquake sign (Matthew 24:7)

Famine sign (Matthew 24:7)

Disease sign (Matthew 24:7)

Knowledge sign (Daniel 12:4)

Scoffer sign (2 Peter 3:3-5)

Selfishness sign (Matthew 24:37)

Dangerous society sign (2 Timothy 3:1)

Stress sign (Luke 21:25,26)

Travel sign (Daniel 12:4)

Sexual immorality sign (Luke 17:28-30)

Financial sign (James 5:1-3)

Disobedience sign (2 Timothy 3:1-2)

Pleasure loving sign (2 Timothy 3:4)

Women rule sign (Isaiah 3:12)

Form of godliness sign (2 Timothy 3:5)

False miracle sign (Matthew 13:22)

Turning to spiritism sign (1 Timothy 4:1)

Gospel preached sign (Matthew 24:14)

The Second Coming (Luke 21:22,25-28)

Yes the Bible does predict the end of the world, not when it will happen, but it gives signs for us to know when it is near. I believe that time is near.

Just like He warned the Christians in AD70, He wants all of us to read and understand what will happen and how we can escape the destruction. I ask you with sincerity, please check it out for yourself. Yes, there is a way of escape, but only for those who are interested in finding this out and for those who will then do what God asks.

If you would like a free DVD that will take you through step by step to learn what the Bible says about these and more subjects, please contact Kaye on 0260255018 or write to PO Box 850 Lavington NSW 2641.

Products for Sale

Licorice Root Powder 200g.....\$12
Licorice root is used to rebuild Adrenal Glands. Suggested maximum daily dose is 1½ tspns

Maca Root Powder 200g.....\$14
A GREAT PRICE for this superfood. Great for a diverse range of conditions. Especially good HRT alternative, menopause, PMS, Anemia, Thyroid deficiency, osteoporosis, fertility and increased energy. Organically grown.

Blood Cleansing Herbal Tea 200g.....\$12
Contains Buckthorn, Licorice Root, Burdock, Chaparral, Red Clover, Cascara Sagrada, Dandelion, Cat's Claw. Use it long term to help cleanse bowel, liver and blood.

Barley Leaf Powder 200g.....\$12
Loose powder, organic 450g.....\$27
1kg.....\$55
A powerful way to get needed nutrients including beta-carotene, anti-oxidants, proteins, carbohydrates, vitamins, minerals, enzymes and chlorophyll.

Comfrey Root Powder 200g.....\$13
Powdered ready to use as a poultice. Use on bruises, swellings sprains, fractures, chest complaints plus many more uses.

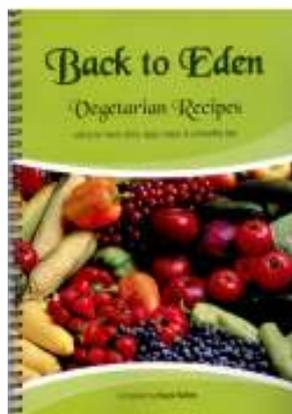
Schnitzer Flour Mill
Hand or electric flour mills to grind your fresh flour as you use it. Order from Kaye or direct from www.skippygrainmills.com.au. Quote representative number SR0033

Sourdough Bread Culture \$20 (express postage included)
Mailed to anywhere in Australia. Recipes included

Order by phoning Kaye on 02 6025 5018. Products are in bags. Add postage

Back to Eden

Vegetarian Recipe Book



Over 350 delicious Vegan Vegetarian recipes that use whole foods, nuts, seeds, grains fruits and vegetables. Recipes avoid many ingredients that are harmful to your health.

GREAT GIFT IDEA

TO OBTAIN YOUR COPY:

Pick up: at 496 Hague Street Lavington.
For postal orders: send \$25 for each book plus postage, to Kaye Sehm 496 Hague Street Lavington NSW 2641
Phone orders: phone Kaye on 0260 255018 to get account details for a direct debit.
Postage: add \$3 for 1 book, \$6 for 2 books, \$9 for 3 books, \$10 for 4 - 7 books

\$25

Recipes

HAYSTACKS

1 packet of corn chips (or more)

SAUCE:

2 cups cooked and drained red kidney or borlotti beans
1 large carrot, grated
1 medium zucchini, chopped fine
1 large onion, chopped fine
1 large tin tomatoes or 5 fresh, chopped
3 tablespoons tomato paste
1 teaspoon Celtic sea salt
herbs to taste: marjoram, oregano, cumin, coriander
2 cups water or vegetable stock
3 tablespoons cornflour

SALAD:

1 large salad onion
2 large tomatoes, diced
1 large carrot, grated
1 cucumber, chopped
shredded lettuce
grated beetroot

SOUR CREAM:

¾ cup raw sunflower seeds
¼ cup rolled oats
½ tsp dill weed
2 tablespoons yeast flakes (opt)
½ red capsicum, roughly chopped
1¼ teaspoon Celtic sea salt
½ teaspoon garlic powder
1 teaspoon onion powder
2-4 tablespoons lemon juice
1 cup water

METHOD:

Sauce: Saute onion in a little water, add other vegetables, salt, tomato paste, pre-cooked beans and water. Simmer for 20 minutes. Mix cornflour into paste with water, stir into sauce, cook until thick.

Sour Cream: Blend all ingredients together until very smooth and creamy.

Serving: Place some corn chips on a plate. Pour over some of the sauce. Add a variety of salad ingredients and top with sour cream.

Adjust the amount of ingredients. You may want to use a few more corn chips. The sauce can be frozen for future use.

Health Program Calendar for 2009

Back to Eden will be conducting more classes in 2009

Classes will be conducted on the first Wednesday morning each month (10am - 12 noon)

all programs will be confirmed - dates may have to be changed

If you are interested in attending any of these Back to Eden classes, mark these dates on your calendar or simply photocopy this page and return it to Kaye with your name and phone number. You will then be contacted prior to each class. A brief overview of the classes is given below. (\$12 cost for classes)

Or you can phone Kaye directly to book your place on 0260 255018 or post to Kaye Sehm 496 Hague Street Lavington 2641. Classes will be held at Kaye's home at above address.

Wednesday March 4 Vegetarian Cooking Class This class will teach you how to cook low fat, inexpensive, dairy free, additive free, sugar free, delicious tasty meals. We will cover nutritious breakfasts, healthy main meals, spreads and dressings, desserts, demonstrating many recipes. New recipes.

Wednesday April 1 Sprouts/ Kefir/ Sauerkraut Learn how to make healthy sprouts, how to make kefir and sauerkraut very easily using a live culture.

Wednesday May 6 Simple Water Treatments This class will show you how to use water treatments (Hydrotherapy) to relieve pain, boost your immune system and break up congestion in different parts of your body.

Wednesday June 3 Herbal Ointments and Oils A hands-on-class that will show you how to prepare different oil infusions, and how to make herbal ointments and even a face cream.

Wednesday July 1 Sourdough Breadmaking Class This class shows how easy it is to make sourdough bread from different wholemeal grains. You will receive recipes and a sourdough culture.

Wednesday August 5 Simple Home Remedies This class will teach you how to treat many physical problems using old-fashioned simple home remedies with ingredients that are found in your garden and kitchen cupboard.

Wednesday September 2 Health Laws from the Bible You will be amazed to discover that the Bible contains many health principles and laws, that if followed, will restore and strengthen your health. Discover what they are.

Wednesday October 7 Vegetarian Cooking Class A class that will teach you how to cook low fat, inexpensive, dairy free, additive free, sugar free, delicious tasty meals. We will cover nutritious breakfasts, healthy main meals, spreads and dressings, desserts, demonstrating many recipes. New recipes.

Wednesday November 4 Herbs for your Health This class will identify simple garden herbs and how to use them to treat illness and to strengthen your health.

Invite your friends along