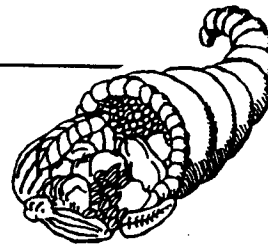


# THE NEWSLETTER MCDougALL



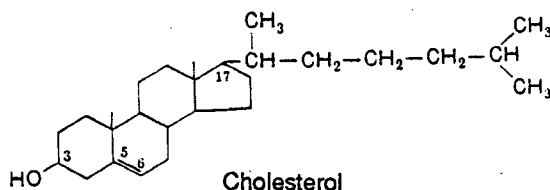
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## INFORMATION FOR YOUR HEALTH

### CHOLESTEROL

#### A CRYSTAL BALL TO YOUR FUTURE HEALTH



**What is Cholesterol?** Cholesterol is a waxy substance that is classified under a general category called lipids. Often people confuse cholesterol with another lipid in the blood known as triglycerides. When picturing cholesterol think of candle wax; triglycerides should bring to mind cream, butter or lard. These two types of lipids are very different, even though it is common for people who indulge in rich diets to have trouble with elevated levels of both substances in their blood, and their entire bodies.

**Where is cholesterol found?** Cholesterol is synthesized, stored and used only by animals. Most tissues in the body produce cholesterol, with the exception of the brain. Animals, including humans, use cholesterol to make the walls of every cell in their body. Once made, cholesterol is used in the synthesis of many steroids and hormones (such as estrogen, testosterone, cortisol and vitamin D). The excess is excreted through the liver in the form of bile or stored in the body tissues. Cholesterol is not a nutrient required in our diet—we make all we need for the above purposes.

You won't find a speck of this substance in any plant (starch, vegetable or fruit) product. Plants contain similar substances classified as sterols. These plant sterols actually inhibit the absorption of cholesterol from our intestine.

**Why do so many people have cholesterol trouble?** Accumulation in our bodies occurs when more is produced and eaten than can be eliminated. In addition to making all the cholesterol we need, most people in affluent societies eat large quantities of cholesterol-containing foods (red meat, chicken, fish, seafood, eggs, dairy products, etc.) Approximately half of the amount eaten is absorbed through the intestine into the body. The cholesterol molecule is almost indestructible; therefore it remains unmetabolized and intact in the body tissues for years.

With these common dietary indulgences, excessive cholesterol accumulation occurs because the human body has a limited capacity to excrete cholesterol through the liver into the intestine and out with the stool. This limitation is part of our natural design and is more convincing evidence that we are designed to eat largely cholesterol-free plant foods. On the other hand, dogs and cats, animals designed to eat large amounts of cholesterol-containing animal products, have a

limitless capacity to excrete cholesterol. Feed more cholesterol to your dogs or cats; they simply excrete more by increasing their bile production--as a consequence it is essentially impossible to produce atherosclerosis in these and other natural carnivores.

**What damage results from excess cholesterol accumulation?** When more cholesterol goes into the body than leaves, the excess is stored in various body tissues. One visible sign can be found as yellow-white deposits in the eye-lids called xanthelasma; another is lumps on the tendons called xanthomas. However, most of the accumulation is hidden from our view--the blood becomes saturated with this substance, the blood vessels are infiltrated and eventually the excess cholesterol enters all our soft and fatty tissues.

For health reasons the most critical area of cholesterol deposit is the blood vessel walls, especially the arteries. In the arteries cholesterol solidifies into crystals that act like slivers of wood caught under the skin--sores develop on the surface and within the wall of the artery. These sores, called a plaque, initially consist of cholesterol and fat; later on, scar tissue forms and smooth muscle cells of the artery overgrow as a reaction to the long-standing irritation. Very late stages of plaque formation have much scar tissue and also calcium deposits. The damage resulting from cholesterol accumulation in the artery walls is known medically as **athero-sclerosis**.

**Can the arteries heal and the atherosclerosis reverse?** The cholesterol that enters the arteries also leaves. This dynamic action has been clearly demonstrated by feeding radioactive cholesterol to people and seeing it accumulate inside the blood vessels and plaques--a short time later this same radioactive cholesterol is seen leaving these tissues.

Because most people eat large amounts of cholesterol, their blood cholesterol levels are high, causing predominant movement of this substance into the arteries, thus the disease progresses unrelenting until some tragic event kills.

When the diet is improved and blood cholesterol levels fall, the arteries are bathed with a healthier fluid (low cholesterol blood). Under these circumstances more cholesterol leaves the arteries than enters--the plaques grow smaller, the surface ulcers heal, the openings for blood flow become larger, the artery walls become stronger and the risk of a tragedy decreases.

**What if my doctor insists atherosclerosis is not reversible?** Ask him or her for the evidence that supports this pessimistic view. You will find your learned professional empty handed and somewhat embarrassed. All evidence to date in the medical-scientific literature shows atherosclerosis can be slowed, stopped and/or reversed. This is not concrete (cement) infiltrating the artery walls. A pathologist can tell you that during an autopsy examination of older persons with advanced disease, the arteries are observed to have all of the various stages of atherosclerosis from soft fat to hard calcium

and scar tissue. When atherosclerosis reverses the softer material leaves first. On the other hand, some of the harder substances (scar tissues) never go away. The overall condition of the arteries improves as seen by special X-ray pictures called angiograms, and this improvement is reflected in the person by such observations as: a decrease in chest pain in heart patients, longer walking in those with diseased leg arteries, and fewer heart attacks and strokes. (Literature supporting statements in this article can be found in McDougall's Medicine, New Century Publishers, 1985)

Finally, (consider this more pessimistic view on reversing atherosclerosis) because most of us are functioning well right now with an adequate supply of blood to all of our tissues, if the arteries remained in the same condition they are right now--didn't worsen--that promise alone would be worth any efforts we put into a better diet and a healthier lifestyle,

**How do I know if this silent disease is threatening my life?** Short of an angiogram or an autopsy, a simple blood test is your best indicator of the health of your arteries. The **cholesterol level** in the blood is easily and inexpensively measured; this level accurately reflects the accumulation of cholesterol in the tissues and the amount of damage you have likely developed so far. The higher the level the more likely the trouble and the longer you have had this damaging level the greater the artery disease--in other words, the older you are, the worse the trouble.

**What is a safe level of cholesterol?** The lower the better, with 150 mg% or lower as your goal.

Level of Cholesterol (mg%)	Atherosclerosis Risk
150	Virtually None
210	Average for Americans
265	Very High

The risk of developing complications of atherosclerosis (for example, a stroke or a heart attack) for the Americans with an average cholesterol of 210 mg% is around 50%. This is, of course, a level of risk unacceptable to most of us.

**How do I lower my cholesterol?** *Stop eating cholesterol*--this simply means animal products are eliminated from your diet. Don't be fooled by the the common advice to switch from red meat to fish and chicken to lower cholesterol--**A muscle is a muscle is a muscle, whether it moves a limb, flaps a wing, wiggles a fin, flips a tail or opens a shell.** Too many people have been declared incurably ill because their cholesterol level failed to fall when their doctor or dietitian told them to "give up the red meat." With very few exceptions, these unfortunate people continue in poor health, heading for a tragedy, simply because of bad advice.

Consider these nutritional facts:

FOOD	CHOLESTEROL CONTENT per 3 1/2 ounces	FOOD	CHOLESTEROL CONTENT per 3 1/2 ounces
Beef	70	Mackerel fish	95
Pork	70	Tuna	63
Turkey	82	Shrimp	150
Chicken	60	Lobster	200

**What else in my diet and lifestyle will affect my cholesterol?** The fats predominately in beef, pork and dairy products, called saturated fats, will independently raise blood cholesterol levels. Highly "saturated" atherosclerosis-promoting-vegetable fats are found in a few plant products, such as coconut meat and oil, cocoa, vegetable shortening, margarine, and palm oil.

Unsaturated fats found in most of the plant kingdom, and in many poultry and fish products, have a tendency to lower cholesterol (however, overall, these fats in excess are a health hazard for other reasons--obesity, cancer, gallbladder disease.) The fiber, vitamin C, and vitamin B3 in vegetable foods will also help to lower the blood cholesterol (these nutrients are absent or very low in animal-derived foods.) Exercise does not lower cholesterol, but will reduce the risk of heart disease by increasing the size of the heart arteries and by increasing the body's cholesterol metabolism for the production of more of the high density "good" cholesterol.

**What can I expect from a no-cholesterol, low-fat diet?** The fall in blood cholesterol occurs largely during the first three weeks after a change to a health-supporting diet. In this short period of time most people will see a fall averaging 25%--this could mean in actual blood values a drop of 260 mg% to 195 mg%, or 200 mg% to 150 mg%, in only three weeks. This is only an average--many people can expect better results.

Each 1% drop in cholesterol means a corresponding 2% drop in risk of death from heart disease. In other values, each 10 mg% fall in cholesterol is associated with a 5% decrease in deaths of all causes and a 9% decrease in deaths from heart disease. (please note one statistic is in %, the other is in mg%)

**What if my "good" cholesterol is high--am I safe?** "Good" and "bad" cholesterol refer to a classification according to the density (compactness) of a "cholesterol-fat-protein-lipid package," called a lipoprotein, that floats in the blood. The density of the packages that damage the arteries is low; therefore they are called **low-density lipoproteins (LDL)**. As cholesterol metabolism proceeds the density of the package becomes higher and in this form called **high density lipoprotein - (HDL)** the cholesterol is less damaging to the arteries and is actually the form that leaves the body. People with more high density cholesterol are rapid metabolizers of cholesterol, thus they have less of the form that damages the arteries (LDL) compared to the form that leaves the body (HDL.)

This information on the levels of the various cholesterol fractions is relevant only for those people who insist on eating a high cholesterol diet and want to be compared with other high risk people. All densities of cholesterol are increased, including high density (HDL), when you eat more cholesterol. **Total cholesterol level** is the information most people should rely on to tell their risk and progress. False and potentially harmful reassurance is too often given to someone with a high total cholesterol when the high-density form is found in an elevated range--the doctors says "your high HDL makes everything OK."

Also some people on low cholesterol diets have been told to eat more cholesterol, because their HDL levels were too low. Actually, when people on various diets around the world are compared--those with the lowest total cholesterol, also have

the lowest HDL level, and the lowest risk of heart disease. You want to pattern your eating habits after a population with no heart disease--such as rural Asian and African people following high grain/vegetable/fruit diets.

**I'm convinced. How do I find my cholesterol level?** There are several avenues you can take to get this potentially life saving test:

1) Ask your doctor. Unfortunately, this may cost you a doctor's visit and an argument. If your doctor really understands the importance of this test and is not the type that gets defensive when you try to take some interest in your own medical care, then you should be able to make the request over the phone--without an expensive office charge. Arrangements should be made to have the test repeated at reasonable intervals (every three weeks initially)--this can be accomplished with a "standing order" left with the laboratory.

2) In some communities independent profit-making medical testing centers have been set up in shopping centers and grocery stores, that provide this and other tests for a reasonable charge and no doctor's order. Check your yellow pages.

3) Check with your community hospital. Often tests are given as a community service--sometimes at a health fair--most of the time at little or no charge.

4) Call the Chronic Disease Division of your Health Department. They may have a community event set up in your area to check cholesterol--free.

Someday soon it should be as easy to find out your cholesterol value, as going to the fire station to get your blood pressure checked.

**Are drugs ever necessary to lower cholesterol?** *Diet is the cornerstone* for all high cholesterol therapy. For those people that cannot (or will not) get their cholesterol low enough by diet alone, then cholesterol-lowering drugs do more good than harm for most people.

At what level of cholesterol drugs should be used, is still largely a matter of opinion. Definitely for levels above 220 mg%, and probably for most people with levels above 180 mg% (after a strict diet has been followed for at least four months.) Older people tolerate drugs less well.

The first drug for most people to try is Niacin (Vitamin B3) starting at a dose of 100 mg twice a day. The drug is cheap and side effects are limited mostly to a flushing feeling; most people adapt to this over time and when taken with meals it may be less bothersome. Doses can be raised to 2,000-3,000 mg per day for maximum effects.

Cholestyramine (Questran) should be tried next at 2 to 6 scoops (or packages) a day. The cost is \$30 to \$150 or more per month and the side effects may be indigestion, constipation and bloating. This drug requires a doctor's prescription. It works by binding cholesterol and bile acids in the intestine preventing reabsorption, causing them to be excreted with the stool. The drug never enters the body, and therefore, has the potential for few serious side effects.

Soon, very powerful cholesterol-lowering drugs that shut off the body's own production of cholesterol will be available by doctor's prescription. One brand of this drug called Lovastatin

is supposed to have few side effects and be very effective. Its use should, like all other medications, be reserved for those unable to solve their problems by diet alone.

**What other problems will a diet high in cholesterol cause?** Ninety percent of gallstones in Western societies are made of cholesterol and a direct consequence of the diet consumed. Cholesterol is suspected of acting as a cancer-promoting-factor called a co-carcinogen--especially in the development of colon cancer. There is also evidence that cholesterol may play an important role in other tumors, as different as brain cancer.

**What other things should I know about my health to predict a rosy future?** Cholesterol is not only a substance that injures the arteries and other tissues, but it also provides a marker to indicate the amount of rich food a person eats. And these rich foods, from cakes to steaks, raise the body weight, blood pressure, triglycerides, blood sugar and uric acid. You should be aware of their significance and your values for all of these risk factors that predict a future of health or illness.

## PATIENT PROFILE

### GARY PETERSON

(Associate Pastor of Kailua Methodist Church, Hawaii)



•Reverend Peterson's health problems began in 1978 as a 26 year old student for the ministry at San Diego State college with the onset of chest pains. A thorough medical examination, EKG, and cholesterol check prompted the doctor to recommend weight reduction and a careful watch on his mildly elevated blood pressure.

•In 1983 free blood pressure measurements were offered at a church conference. His blood pressure on this occasion was found in the 160 range and he was advised to see a doctor.

•He didn't see any urgency, so it was 1984, while living in California, that he finally got around to seeing a doctor. He was told to "be on a modified low-salt diet and watch red meats" (whatever that means--he made no changes in his eating). The doctor placed Reverend Peterson on a diuretic and told him emphatically that "blood pressure medication was for life, in ten years another medication would probably be necessary and if he followed his advice he'd probably live to 65."

•The side effects from the medication were minimal--except he could relate to a nurse Aunt's comments that blood pressure medication did decrease sexual functions.

•The medication and all the testing for heart disease (Treadmill, EKG) gave him a clear message that heart trouble could be right around the corner. He tried to follow his doctor's advice to avoid stress by relaxing, and taking time out to be more spiritual. There was also a hint given to cut out red meat.

•After 2 years of medication Reverend Peterson came to work in Hawaii for Reverend Kessler who had had similar problems, but was able to get off of all his medications by following a special diet. The doctor he chose in Hawaii reaffirmed his previous doctor's recommendations, and a lifetime condemnation to medication. Shortly, thereafter, he met the McDougall family at the church--the knowledge and pressure to change was building. The excuse that Dr. McDougall was pro-

bably too busy with patients kept him from changing for another year.

•In July 1986 Reverend Peterson made the final commitment to faith in the soundness of his body and the importance of proper diet. In less than a month he called Dr. McDougall for advice. His blood pressure was down, he'd lost weight, but he couldn't figure out what to do with the medication he was required to take for the rest of his life. His phone order was to stop the medication and his blood pressure has remained at 110/70, and better, ever since. As a side benefit by the time he saw Dr. McDougall in person he had lost 25 lb. and his cholesterol was down below 150. His wife is happier these days too; not simply because of the change in his sexual functions --but she also lost 25 lb. At first, she wasn't sure she was going to go along with his new diet, but since he did all the cooking her choice to avoid hunger was easy.

•For Reverend Peterson his change to a health-supporting diet of starches vegetables and fruits has changed his mental and spiritual outlook on life. He no longer worries about having a heart attack any day--for some unexplained reason, life's not so stressful either--"I'm more spiritually connected, when I ate meat I felt all tied up inside. More and more being a vegetarian doesn't bother me--I can wave Burger King bye bye."

•Reverend Peterson finds it is easier all the time to eat the correct foods. Admittedly, at first the cookies and donuts brought by the kids at Bible study were not often passed up. But temptation is more under the Reverend's control these days.

•"People no longer look at me like I'm from another planet at church dinner functions. In fact I like being a vegetarian. I tell people they don't know what they are missing--like you don't know what Paris is like til you've been there." Many people around him and his wife have since made changes in their diets.

•At age 35 Reverend Peterson expects to share his spiritual message, as well as the message of good health, with as many people as he is fortunate enough to know from now until long after the 65 year life expectancy once predicted for him.

## RECIPES

### VEGETABLE SOUP

Makes 1 1/2 quarts

1 onion, sliced	2 potatoes, cubed
1 stalk celery, sliced	1 tsp. basil
1 green pepper, sliced	1 tsp. paprika
1/4 tsp. crushed garlic	1/3 tsp. black pepper
2 tsp. grated gingerroot	1 zucchini, sliced
4 cups water	2 cups frozen corn kernels
1 cup tomato puree	

Saute onion, celery, green pepper, garlic and gingerroot in a small amount of water until softened. Add 4 cups water, tomato puree, potatoes and seasonings. Cook for 30 minutes. Add zucchini and corn. Continue to cook for another 30 minutes, or until all vegetables are done.

The following recipes were contributed by Joanne Stepaniak from Pittsburgh, PA. She has sent in several delicious recipes and you will see more of them in the months to come.

### SPECIAL GREEN BEAN PATE'

Makes 2 cups

2 cups cooked green beans  
1/2 cup walnuts  
1/2 lb. firm tofu, crumbled (about 1 cup)

1 medium onion, chopped  
1/4 cup dry white wine, OR water  
1 tblsp. low sodium soy sauce  
dash of black pepper  
dash of nutmeg

TOAST walnuts in a dry skillet. Saute onion in 1/4 cup water for 5 minutes. Combine walnuts and onions with remaining ingredients. Process into a smooth paste using a food processor or blender. (If you use a blender, you may need to add a little more liquid.) Chill at least 2 hours before serving.

Helpful Hints: This can be used as a sandwich filling, cracker spread, dip, or a topping for baked potatoes. It is very versatile and delicious.

### MICHAEL'S KALE SANDWICHES

Kale  
Lemon juice  
Garlic powder  
Dijon or spicy brown mustard  
Pita bread (whole wheat)

Steam kale and drain off any liquid. DO NOT CHOP-KEEP THE LEAVES IN LARGE PIECES. Sprinkle with lemon juice and garlic powder and chill. When ready to serve, cut pita bread in half, spread each pocket with mustard and then stuff with the seasoned, cold, kale. Enjoy!

Helpful Hints: These sandwiches were the inspiration of Michael Stepaniak. They are delicious and the kale is chewy and "meaty" in texture.

## LETTERS TO MCDOUGALLS

I can't thank you enough for writing **The McDougall Plan**. I am a 34 year old woman and have had severe reactive hypoglycemia for years. I didn't agree with the high protein diet recommended to me, so modified it to suit my own tastes: small amounts of concentrated protein, but I did stay away from large amounts of starch at one meal, having been told starch would wreck havoc with my blood sugar level. After only a few weeks of using your recipes, I have a tremendous increase in energy-- my blood sugar is stabilized and does not drop after eating, I'm losing weight, and to top it off, I really enjoy your recipes and haven't looked forward to eating so much in years. I would like to express my appreciation for your work as it has much changed my life. C.C., Seattle, WA

Thanks to your (now our) way of eating and a daily exercise program, I'm the size I was when I got married 20 years ago. In a year and a half I've gone from 165 lb. to 133 lb.: size 16 to size 8. What a laugh to find bones underneath it all! J.G., Sonora, CA

## SUBSCRIBING INFORMATION

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