

CHOLESTEROL AND YOUR HEART

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Medical authorities continue to recommend drugs and low-fat diets to reduce an elevated serum cholesterol level. I think this is worthless, or worse, toxic and dangerous to use the statin drugs in most cases. An elevated cholesterol level is a stress indicator, and little else. It is easy to lower with natural methods, and drugs are never needed, in my experience. Let us examine cholesterol in more detail.

WHAT IS CHOLESTEROL?

Cholesterol is an essential body chemical, mostly synthesized in the liver. It is the precursor or raw material used to make the vital pituitary, adrenal and sex hormones. Cholesterol is also required to form vitamin D and bile acids. The liver makes about 2 grams of cholesterol daily, regardless of one's diet. Under stress, the body makes more cholesterol in order to make more adrenal or stress hormones.

Cholesterol is a mixture of compounds. These include high density lipoproteins or HDL, and low density lipoproteins or LDL. The latter contain lipoprotein-A, thought by some authorities to be important in the genesis of heart disease.

HDL, which is unoxidized cholesterol, is sometimes called 'good cholesterol', while LDL, the oxidized form, is often termed 'bad cholesterol'. Blood laboratories often measure the ratio between the HDL and total cholesterol.

DOES CHOLESTEROL CAUSE HEART DISEASE?

The cholesterol theory of heart disease asserts that: 1) The risk of cardiovascular disease correlates with the serum level of cholesterol, and 2) eating cholesterol-containing foods raises your cholesterol level. Let us explore this theory and alternative hypotheses in more detail.

About 100 years ago scientists noted that fatty deposits in the arteries often contain cholesterol. Of course, it was not known whether cholesterol deposits were the cause or the result of heart disease. Studies, including the large Framingham study, found a definite correlation between high serum cholesterol levels and the risk of heart disease.

However, the picture is not as clear as it seems. The Framingham study found that LDL or oxidized cholesterol was more predictive of heart disease than total cholesterol. Also, the study could not correlate eating foods containing cholesterol with an increase in the blood cholesterol.

Furthermore, many studies from around the world do not support the simplistic idea that eating more cholesterol or saturated fat increases the risk of heart disease. In an interesting book, *The Milk Of Human Kindness Is Not Pasteurized* (1), William C. Douglass, MD cites the following:

- The famous heart surgeon Michael DeBakey analyzed 1700 patients with hardening of the arteries and found no correlation between blood cholesterol levels and the degree of atherosclerosis (2).
- The *New England Journal of Medicine* reported that a group of Guinea natives whose diet is normally low in cholesterol were fed eggs to see how much the eggs would influence their cholesterol. There was no significant effect on cholesterol levels (3).
- A study done by the American Cancer Society revealed that non-egg users had a higher death rate from heart attacks and strokes than egg users. This was a large and therefore convincing study involving over 800,000 people (4).
- Eskimos living on a diet of mostly meat and fat, have low cholesterol levels (about 130 mg) provided they stay on their native diet.
- The Masai tribe of Africa, drink about 7 quarts of milk per day containing 60% saturated fat. Yet the average adult cholesterol level was 122. (The average American adult level is about 234.) (5)
- The American Academy of Pediatrics is warning against the latest call for low-cholesterol foods for children, since it is known that cholesterol is vital for children's growth.
- Many other studies show no significant effect on blood cholesterol from eating eggs or other cholesterol-containing foods. Several are reported in *The New Vegetarian*, by Gary and Steve Null. A study in France found that although butter consumption is much higher in Western than in Eastern France, the mortality from heart disease in Western France is almost half that of Eastern France (6).
- Before Western eating habits were introduced into the Eskimo population, they lived almost exclusively on animal meat and fat. Yet the incidence of heart disease was very low and cholesterol levels were below 200 mg (7). Similar results were found in studies in the Soviet Union, India, and elsewhere (8,9).

The cholesterol theory of heart disease is very simplistic. It is like saying that duct tape wrapped around a damaged water hose is the cause of the hose damage. More likely, the tape - and the cholesterol - are the *result* of the damage, not the cause. In fact, two scientists, Brown and Goldstein, won a Nobel Prize in 1985 for their research into this theory. Cholesterol plaques are often there to protect a damaged artery. After all, a clogged artery is far preferable to a ruptured one. Elevated cholesterol is associated with heart disease, but may not be its cause.

WHAT CAUSES HEART DISEASE?

If cholesterol is not the cause of heart disease, what are the causes? Many factors may contribute to cardiovascular disease. A properly performed hair mineral analysis can help identify a number of them. Here are some of the major factors suspected in cardiovascular disease:

- Klevay and others showed that copper deficiency is associated with atherosclerosis. Copper is required for connective tissue synthesis.
- Zinc deficiency reduces the flexibility of the arteries and causes hardening. It may also cause inflammation of the arterial walls.

- Magnesium and taurine deficiencies may contribute to high blood pressure and other heart problems.
- Cadmium toxicity is associated with hardening of the arteries.
- Elevated homocysteine levels are a factor in heart disease. Homocysteine is an amino acid. Its level can be reduced by increasing the intake of vitamin B6 and folic acid.
- According to Rath and Pauling's unified theory of heart disease, the causes are deficiencies of vitamin C and lysine. These are required for collagen synthesis. This theory asserts that high levels of lipoprotein-A, part of LDL cholesterol, is responsible for arterial damage.
- Other vitamins and minerals are involved. Chromium supplements, for instance, have been shown to lower cholesterol levels. Chromium, manganese and B-complex vitamins may reduce stress by enhancing carbohydrate metabolism.
- Low thyroid activity is associated with heart disease. Hypothyroidism may have numerous causes, including nutritional deficiencies and toxic metal poisoning.
- Inflammation and infections are now known to be important in cardiovascular disease. These can include seemingly unrelated locations of infection such as dental infections. These can spread toxins that affect every organ.
- High blood pressure from any cause is a factor.
- Smoking, diabetes, obesity, coffee-drinking and a sedentary lifestyle are risk factors.
- Oxidant damage from refined vegetable oils and other oxidant exposure contributes to vascular disease. This factor may explain why populations that consume more animal fats often have less heart disease. (Animal fats are not as subject to oxidant damage). A hundred years ago in America, people ate far more animal fat and there was far less heart disease.
- Artificially-hydrogenated fats often contain trans-fatty acids and are found in margarine, dressings, fried foods and many processed foods, may contribute to heart disease.
- Chlorinated and fluoridated drinking water, and residues of ionic detergents may be a very important factor in heart disease.
- Drinking homogenized milk may be harmful for the arteries.
- Adelle Davis in *Let's Get Well* noted that "animals and human volunteers that are fed sugar instead of unrefined carbohydrates develop high cholesterol levels". Unrefined carbohydrates include **whole** grains.
- Familial and genetic tendencies, and emotions such as hostility appear related to heart disease.

WHY DOES CHOLESTEROL RISE?

Modern nutritional science reveals several important facts about cholesterol:

- High cholesterol is usually a symptom of an imbalanced body chemistry. One can observe high cholesterol levels in vegetarians who consume no cholesterol at all.
- Stress can increase cholesterol. Cholesterol is needed to make stress-fighting hormones such as cortisone and cortisol. A body under excessive stress (from internal or external sources) may produce extra cholesterol to increase the anti-stress hormones.
- Cholesterol plaques may protect weak arteries to prevent breakage.
- Cholesterol may in fact protect the body against free radical or oxidant damage. This theory was first advanced by Dr. Elmer Cranton in the book, *Bypassing Bypass*. This may be why high HDL which is non-oxidized cholesterol is positive, while LDL, which is oxidized cholesterol, is more of a risk for heart disease. In coping with oxidant stress, the HDL is oxidized, or converted to LDL.
- Some people seem to have a familial tendency for elevated cholesterol.
- Excessive consumption of *sugar* can contribute to high serum lipid levels.
- Fingertick cholesterol tests are among the least accurate medical tests. Always have such tests repeated. HDL and LDL levels are as important or more important than total cholesterol. A simple cholesterol reading is not too revealing.

WHAT ABOUT DIETARY FAT?

The subject of fat in the diet is complex. There are many kinds of dietary fats, produced in many ways. Some are natural. Others are highly processed. Each has different characteristics. In addition, some metabolic types fare better on dietary fat than others. Let us examine dietary fats in more detail.

The egg was indicted as a major cause of elevated cholesterol based on studies in the 1940s and 1950s. However, it turned out that powdered eggs were used in those studies(10). These processed eggs contain *oxidized* cholesterol, the type known to cause problems. When the studies were repeated with fresh eggs, they did not raise cholesterol significantly(11). However, many physicians and health authorities still quote the old studies. (Stay away from powdered eggs). Eggs from chickens allowed to run free, so called cage-free eggs, have less cholesterol. In other words, the way our eggs are produced also influences their nutritional content.

Studies have shown that a diet high in tuna, salmon, sardines and mackerel, which contain anti-inflammatory omega-3 fats, can reduce heart disease (12). Other studies show great value in unrefined olive oil, flax seed oil, hemp oil, fish oil and the oil found in almond butter.

Dr. George Watson(13) identified metabolic types he called fast and slow oxidizers. He found that fast oxidizers require more fats and oils to help normalize body chemistry. Slow oxidizers, by contrast, do poorly on fats. This fact alone means that studies that look at the effects of fats on large groups are flawed unless they take into account different body chemistries.

This can help account for divergent results of studies, some of which show no ill effect of fats, while others show that saturated fats, for example, are not healthy. The concept of metabolic types can be most helpful to assess the effects of fats on any particular person. Let us explore this in more detail.

FATS AND FAST OXIDIZERS

Fast oxidizer is the term Dr. George Watson used to describe a person who was able to metabolize fats well, but had difficulty metabolizing carbohydrates. These individuals may become irritable, hungry and nervous if they are on a low-fat diet. One might think that fast oxidizers would have low cholesterol because they burn their fats and other nutrients better than most average. In theory, this is indeed true.

However, in practice, often fast oxidizers have elevated cholesterol levels. There are at least two reasons for this. First, many of them live on high-carbohydrate diets. This diet unbalances their body chemistry, creating more stress. The body may respond by producing more cholesterol.

Second, many who appear to be fast oxidizers are in fact what we call slow oxidizers under stress, or temporary fast oxidizers. This means they are in fact slow metabolizers, who often have more difficulty with fats. Also, they are under plenty of stress, which can cause the body to produce more cholesterol. This situation is especially likely when on a hair mineral analysis, the ratio of sodium to potassium is less than about 2:1, or when the calcium and magnesium levels are above 40 mg% and 6 mg% respectively.

If you are in fast oxidation and feel you must restrict cholesterol, use high-quality vegetable oils including, fish oil, olive oil, flaxseed and hempseed oil. It is best to avoid processed vegetable oils such as corn, soy, sunflower, safflower, canola and peanut oils sold in the supermarket. These have had all their vitamin E removed, and can cause more problems.

Some health authorities recommend restricting all fats and oils when the cholesterol is elevated. However, fast oxidizers often note a reduction in cholesterol when some fats and oils are added to the diet, substituting for high carbohydrates in the diet.

Heart disease in fast oxidizers is most often due to deficiencies in copper, zinc and magnesium. Excessive adrenal activity may also cause constriction of the coronary arteries. This can precipitate sudden and massive heart attacks.

SLOW OXIDATION

Slow oxidizers have more difficulty converting cholesterol into adrenal and sex hormones. The body may attempt to compensate by raising cholesterol to help produce more stress hormones. This is one cause of elevated cholesterol in these individuals. The solution is to improve glandular activity. Slow oxidizers may be under stress for other reasons, and this can also lead to elevated cholesterol.

Heart disease in slow oxidizers may occur due to calcium deposits in the arteries. Also, zinc deficiency or cadmium toxicity may cause inflammation and damage to the arteries. Sluggish circulation may allow emboli (blood clots or plaque) to form.

Slow oxidizers usually fare better restricting all fats and oils due to their metabolic patterns.

LOW SODIUM/POTASSIUM RATIO

A hair analysis pattern often associated with cardiovascular disease and elevated cholesterol is a ratio of sodium to potassium less than 2.5:1. This is a chronic stress pattern, associated with excessive tissue breakdown, fatigue, diabetes and heavy metal toxicity, all of which may contribute to cardiovascular disease.

MARGARINE AND OTHER PLASTIC FOODS

All margarine is made by heating vegetable oil and bubbling hydrogen through the mixture to produce an artificially saturated fat. (The advertising about polyunsaturated oil used in margarine is misleading. The oil is saturated by the time they finish with it.) The problems with margarine are:

- Nutrients in the oil such as vitamin E are destroyed when the product is heated. (Vitamin E deficiency from overeating on refined vegetable oils *increases* the risk of heart disease).
- Hydrogenation produces trans-fatty acids. These are non-naturally occurring fatty acids that contribute to inflammation, one of the causes of heart disease. (Some margarines today claim to have the trans-fatty acids removed).
- Nickel is added as a catalyst in making margarine. Nickel is a highly toxic metal - fine for making coins, but not for eating.
- Artificial color and flavor are often added to margarine to make it palatable. These chemicals may have their own toxic effects.
- A recent study showed that margarine elevated the undesirable LDL cholesterol.

The problems with margarine apply equally to commercial peanut butters, vegetable shortening such as Crisco, fake whip cream products such as Cool-Whip, and many fried foods, salad dressings and crackers made with hydrogenated oils. These artificially saturated fats are worse for the body than naturally-occurring fats.

REDUCING ELEVATED CHOLESTEROL AND TRIGLYCERIDES

Reducing cholesterol and increasing the HDL/LDL ratio can usually be accomplished easily and quickly with nutritional methods. Here are some guidelines:

- While some fat restriction may be helpful, other dietary factors are often much more important. A properly performed and interpreted hair analysis will provide much information about diet as well as mineral deficiencies, heavy metal toxicity and supplement recommendations to correct stress patterns.
- Food products containing refined white flour and white sugar - in all its forms - should be totally eliminated from the diet.
- Conditions such as dental infections and diabetes need to be addressed.

- Lifestyle considerations are important including exercise, weight control, adequate rest and sleep and smoking cessation.

Such a holistic approach is endorsed by Jonathan Wright, MD, a leading holistic physician and former medical columnist for Prevention Magazine. He writes:

"Only a few patients of the hundreds I've treated for high cholesterol have had to severely limit dietary intake (of fat). Usually, it is a matter of correcting the metabolism rather than the diet".(12)

CHOLESTEROL-LOWERING DRUGS

Today the main drugs used to lower cholesterol are the HMG-CoA reductase inhibitors, popularly called the statin drugs. Brand names include Lipitor, Lescol, Mevacor, Prevacol, Lovastatin and Zocor. These drugs can increase the risk of heart attacks and diabetes, and they deplete coenzyme Q-10, leading to muscle diseases and lowered energy in the cells. They should all be strictly avoided for good health. In one study, patients placed on gemfibrozil did have reduced cardiac events than a placebo group. However, the overall death rate was almost identical. Those taking the drug had a higher incidence of violence, accidents and intercranial hemorrhages (14).

New recommendations suggest the use of medication whenever cholesterol is over 200 mg (15). This ignores the research that total cholesterol is not nearly as important as LDL and its ratio to the total cholesterol. Drugs do not address the biochemical causes for high cholesterol in most cases. This means that pathology in the body may continue to progress, despite the use of these drugs.

Natural approaches to cholesterol and heart disease have no side effects, except perhaps improved general health. Also, they address deeper causes to create a more permanent correction. However, it is often best to consult a physician before stopping any medication.

References

- 1) Douglass, W.C., *The Milk of Human Kindness is not Pasteurized*, Cople House Books, Lakemont, Ga., 1985.
- 2) JAMA 189:655-59 (1964)
- 3) New Eng. J. of Med. 98:317 (1978)
- 4) Abrams, J. Applied Nut., Vol.32, #2, pp.53-87.
- 5) *Cardiovascular Disease of the Masai*, Mann et al.
- 6) MacLennan, R and Meyer, F., "Food and Mortality in France", The Lancet, 2 (1977): p. 133.
- 7) Ho, K.J. et al., "Alaska Arctic Eskimo: Responses to a Customary High Fat Diet", Am. J. of Clinical Nut., 25:1972, pp. 737-745.

- 8) Malhotra, S., "Graphic Aspects of Acute Myocardial Infarction in India with Special Reference to Patterns of Diet and Eating", *British Heart J.*, 29:1967, pp. 337-344.
- 9) Prior, I.A. et al., "Cholesterol, Coconuts, and Diet on Polynesian Atolls: A Natural Experiment", *Am. J. of Clinical Nut.*, 25:1972, pp. 737-745.
- 10) Cook, R.P., *Cholesterol: Chemistry, Biochemistry, and Pathology*, Academic Press, NY, 1958.
- 11) Passwater, R., *Super Nutrition for Healthy Hearts*, Deal Press, NY 1977. See also Flynn, M.A. et al, Effects of Dietary Egg on Human Cholesterol and Triglycerides, *Am. J. of Clin. Nut.*, 32 (May 1979) pp. 1051-1057.
- 12) Wright, J., MD, *Dr. Wright's Book of Nutritional Therapy*, Rodale Press, Emmaus, Pa., 1979.
- 13) Watson, G., *Nutrition and Your Mind*, Bantam Books, NY, 1972.
- 14) Frick, M.H. et al, Helsinki Heart Study. Primary Prevention Trial with Gemfibrozil in Middle-aged Men with Dylipidemia, *New Eng. J. of Med.*, 317 (1987).pp. 1237-45.
- 15) *J. Amer. Med. Assn.*, May 16, 2001;285:2486-2497.
- 16) Atkins, R., *Dr. Atkins Health Revolution*, Houghton Mifflin Co., Boston, 1988.

The American Heart Association helps you understand your cholesterol levels, what is good cholesterol what is bad cholesterol, the difference between LDL and HDL cholesterol, and more.Â The remainder of the cholesterol in your body comes from foods derived from animals. For example, meat, poultry and full-fat dairy products all contain cholesterol, called dietary cholesterol. Those same foods are high in saturated and trans fats. Those fats cause your liver to make more cholesterol than it otherwise would. For some people, this added production means they go from a normal cholesterol level to one thatâ€™s unhealthy. Some tropical oils â€” such as palm oil, palm kernel oil and coconut oil â€” can also trigger your liver to make more cholesterol.