

Cholesterol

In recent years there has been much written, in both professional journals and magazines for the general public, about cholesterol and its effect on the body. Anyone who has read much of this material has every right to be confused about the subject.

The original thoughts about cholesterol were developed from research material indicating that plaque, or buildup in the blood vessels, is a result of elevated cholesterol levels in the blood stream. The buildup of plaque in the blood vessel walls is very similar to the buildup that takes place in a water pipe which has been in service for a long time. The buildup on the water pipe developed from minerals in the water attaching to the pipe. This, of course, takes a long time. Eventually it narrows the lumen, or opening, of the pipe enough to restrict water flow. When this same thing happens in the arteries it is called atherosclerosis; it will ultimately interfere with blood circulation throughout the body.

Circulation to the heart is also usually impaired. The coronary arteries are the small arteries which give nutrition and oxygen to the heart muscles. With atherosclerosis there is a narrowing of these arteries, and a very great chance of shutting off the heart muscles' blood supply. This happens when a small clot develops somewhere in the body and floats up to the coronary arteries, which are already narrowed, and blocks them. This is the most common type of heart attack, a "coronary thrombosis" or "coronary occlusion". The heart muscle, having lost its nutrition and oxygen, dies.

The most popular approach to controlling cholesterol buildup in the arteries is to drastically reduce cholesterol intake from foods. On first consideration this seems realistic; when you have too much of something, the logical approach is to reduce the intake of that item. With cholesterol, however, this approach is unrealistic when all of cholesterol's factors are taken into consideration.

First of all, let's consider what cholesterol is and what its function is. Cholesterol is not, as many people think, a totally unwanted substance in the body. Cholesterol is the raw material of which many hormones are made. It lubricates the blood vessels to keep the friction of the blood from unduly wearing away the artery walls. The basic male and female sex hormones are made from cholesterol. The brain itself contains a very high percentage of cholesterol. Several hormones of the adrenal gland are made from cholesterol. Indeed, normal levels of cholesterol in the body are absolutely necessary for the life process. Second, only about 20% of the body's cholesterol comes from exogenous sources. In other words, only one-fifth of

the cholesterol comes from the food we eat. The other 80% is manufactured in the body, primarily by the liver. In fact, when we reduce cholesterol in our diet, the liver and other tissues manufacture increased amounts of cholesterol. This fact in itself should make us wonder about the wisdom of reducing cholesterol in our diets to lower blood levels of the substance.

Cholesterol Is Necessary

It is obvious that cholesterol is necessary for life and health. We can observe some interesting transitions in cholesterol utilization by the general population during this century. Not many years ago it was the consensus of opinion in the healing arts that "normal" cholesterol levels were between 150mg% and 250mg%. In more recent years the "authorities" have revised the figures for "normal" cholesterol levels up to and above 300mg%. Some authorities have given different "normal" cholesterol levels for different age groups, with older people having higher cholesterol levels. These figures were obtained by sampling the general population who were considered healthy.

We cannot help looking at the fact that as the general population's cholesterol levels have risen, so has the incidence of heart attacks, clogged arteries, and hardening of the arteries. Heart attacks as we know them today were unheard of at the beginning of this century.

It is obvious that too high a cholesterol level is not good for your health, nor is too low a level. But what has caused the change – during this short period of time – of cholesterol utilization within the body? The answer is found in the changing of our foods by refining and preserving processes.

There is a process done to fats called "hydrogenation", which is primarily a preservative process. This process adds hydrogen to the fat molecule, to keep the fat from becoming rancid. The process is designed to make a very stable fat which will not spoil. At the same time this is accomplished, the fat becomes much more difficult for the body to break down for utilization. In natural food supplies, there are many substances, called lipotropic factors, which are essentially fat breakdown factors. They work in a similar way to the way detergent works on grease in your dishwasher. When foods are refined, many of the lipotropic factors are removed; thus there are too few in our modern diet. Add to this the fact that hydrogenated fats require far more lipotropic factors for breakdown, and we begin to see a dietary deficiency as a result of these refining processes.

To the deficiency already described, add what happens when a person is placed on a so-called low cholesterol diet. Nature, being a pretty intelligent old girl, has – in most instances – provided a high amount of lipotrophic factors in the foods that are high in cholesterol. For example, an egg has a very high cholesterol content; however, it also has a very high level of lecithin, choline, and inositol plus other factors, which are all lipotrophic in nature. When we tamper with nature, we interfere with its delicate balance. Refined foods are the primary reason for the increased incidence of elevated cholesterol levels. Eliminating cholesterol from the diet, causes the liver to make more cholesterol. On top of this we take away the foods which have the very nutritional products necessary to control the problem.

What Should We Do?

We must return as much as possible to an unrefined diet. If the cholesterol level is already elevated, it is usually necessary to add some lipotrophic factors, in the form of nutritional supplements, to the diet. Sometimes it is necessary to utilize certain treatments and nutritional supplements to decongest the liver, as it becomes significantly involved with prolonged abnormal cholesterol levels.

When lipotrophic factors in the diet have been returned to normal, there will ultimately be a cleansing of the blood vessel walls and tissues. This process is similar to putting a water softener on your water supply. The water softener takes all the minerals out of the water. Running that demineralized water through the old water pipes slowly but surely will leach back the minerals that have accumulated on the pipe walls, and the pipes will be clean. This process, of course, takes many years – just as the buildup took many years. The best solution is to prevent the abnormal accumulation of cholesterol and its products on the artery walls and in the tissues. This can be accomplished by periodic monitoring of the blood cholesterol level and following the dietary principles indicated below.

One of the most important factors for dietary regulation of elevated cholesterol, or for prevention, is to eliminate hydrogenated fats from the diet. Food products will state “hydrogenated” fats or oils, or will use such terms as “hardened for easier spreading”, or “fats stabilized by hydrogenation”, etc.

Many, many foods fit into this category. Most peanut butters have been stabilized this way; shortening that is solid at room temperature, margarine, and most processed oils that are solid at room temperature are in this category. Palm oils and coconut oils should be avoided because they are highly saturated, even though naturally so. Eggs and butter and many other natural food products which are high in cholesterol are good food items. As mentioned before, these natural food products contain many lipotrophic factors, as nature intended, for the adequate utilization and control of cholesterol. You should not eliminate these

excellent food products from your diet because of their high cholesterol levels. Your liver and other tissues will just make more cholesterol, and you will have a bigger problem because of reduced lipotrophic factors.

To summarize, the cholesterol problem is a disease of civilization – specifically, refined foods. Without adequate lipotrophic factors, cholesterol builds up along the blood vessels and in other tissues, especially the liver, in a way similar to the way grease builds up in a kitchen sink. If you washed dishes day after day without detergent, and never washed the sink, the buildup would eventually be so thick it would break off.

Low Cholesterol / Low Fat Diet

FOODS

ALLOWED

AVOID

Meats and Meat Substitutes

Chicken, turkey, Cornish hen, pheasant (without skin)
Sweets and Miscellaneous
water fish – use often in place of
Meat (salmon, mackerel, and sardines)
Canned fish
Clams, scallops, oysters
White fish – herring and tuna
Lean cuts of beef , veal, ham, lamb, pork, (limit 1 serving/day in small amounts)
Turkey ham and turkey franks
Low cholesterol egg substitutes
Egg Whites
Tofu (bean curd)
Skim milk yogurt
All legumes such as beans, peas, and lentils
Sesame, pumpkin, and sunflower seeds

Duck, goose, or mutton
Caviar
Bacon, spareribs, sausage, lunchmeat, Cold salami and hot dogs
Heavily marbled or fatty meats such as regular hamburger
Whole milk yogurt
Shrimp, crab, lobster (especially lobster Newburg)
Organ meats such as liver, kidney, heart, brains or sweetbreads
All egg yolks

Cheeses

Cheese made with skim milk (i.e. mozzarella, Monterey jack, and Swiss)
Uncreamed or dry curd cottage cheese
Low fat cottage, pot cheese
Parmesan cheese, sapsago
Cheese-ola, Count Down Cheese
Products

Processed cheeses, natural cheeses
Cream Cheese, creamed cottage cheese
Whole milk cheese (i.e. Swiss and Jack)
Cheddar cheese, American, Velveeta
Cheese spreads
Brie, Roquefort

Fruits

All fresh, frozen, or canned vegetables (fresh prepared)
Fruit juices

Avocados

Vegetables

All fresh, frozen, or canned vegetables

Breads

White, whole wheat, rye, French, pita
Italian, oatmeal, pumpernickel
Bagels
English muffins
Homemade biscuits or muffins containing margarine or vegetable oil
All hot or cold cereals
Crackers (all kinds), rye wafers
Breadsticks, Melba toast, matzo
Air-popped popcorn (without butter)
May use melted designated margarine
Pizza without meat (most pizza stores use Mozzarella cheese)

Commercially prepared pastries rolls, donuts
biscuits, muffins, batters made with eggs
Mixes containing dried eggs or milk
Egg bread, cheese bread

Potato or Substitutes

White or sweet potatoes
Rice, noodles, spaghetti, lasagna
macaroni, or pasta
Pretzels, corn chips, and potato chips (zero cholesterol) in small amounts

Egg noodle

Soup

Milk soups made with skim or ½% milk

Coffee cream, half and half
Canned whole milk

Beverages	No more than two cups of coffee or tea per day Soft drinks without caffeine Skim milk, nonfat dry milk, ½% milk Skim milk buttermilk Milnot (canned skim milk with soybean oil) Seltzer or mineral water	Soft drinks with caffeine Whole milk, 2% milk, chocolate milk, milk Shakes, eggnog, condensed milk, malted milk
Fats	Soft or liquid margarine (liquid best) (“Liquid” should be the first word after the word “Ingredient” on the package) Sunflower, corn and soybean, cottonseed, sesame seed, olive, or sunflower seed oil Natural peanut butter Poly Perx non-dairy creamer Mayonnaise, French dressing, or salad dressing made with one of the above listed oils Walnuts, pecans, hazelnuts, almonds, peanuts	Hydrogenated margarines Butter Regular peanut butter Fatback, Slat pork, meat fat Lard or shortenings Coconut oil, palm oil Non-dairy creamers, half and half Sour cream Sour cream or cheese salad dressings Cashew, Brazil, pistachio, macadamia Fast-food restaurant eating (except for the bar)
Desserts	Sherbet, gelatins (Jell-O) and fruit ices, fruit whips Angel food cake Whips made with egg whites Homemade cakes, cookies, pies using egg substitutes, skim milk and allowed margarines and oils Tapioca Pudding made from skim milk Hard candies, gumdrops Vanilla wafers, ginger snaps, fig bars, and animal crackers	Coconut (i.e. Donuts with coconut sprinkles) Cream pies, custards, or whole milk pudding, pastries, and donuts Commercial candies, chocolate puddings Cake mixes containing egg or milk Candy made from cream or butter Cocoa butter
Sweets	Jellies and Jams	
Miscellaneous	Sugar, syrup, honey, molasses Cocoa powder, marshmallows Salt, pepper, herbs, spices Mustard, catsup, chili sauce, pickles, Horseradish, vinegar, olives	