

DEALING WITH CARDIOVASCULAR DISEASE FROM A NUTRITIONAL PERSPECTIVE: PART ONE

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The number one degenerative problem that we continue to deal with in this country is heart disease. Hundreds of thousands of people die every year from heart disease and yet the first heart attack ever recorded in a medical journal was in 1912. It is only in the past fifty to sixty years that heart disease has become a significant killer. American soldiers killed in World War I and autopsied, were seldom found to have cardiovascular disease. Soldiers killed in the Vietnam War and autopsied, were rarely found **not to have** the beginning or even the advanced stages of cardiovascular disease (CVD). CVD includes congestive heart problems, arteriosclerosis (hardening of the arteries due to disposition of calcium in arterial walls), atherosclerosis (narrowing of arteries due to build up of plaque), and high blood pressure.

It is interesting to note that the raise in CVD parallels our nations shift from whole foods to refined foods and from very active life styles to very sedentary life styles. Add the thousands of chemicals that have entered our environment in the last fifty years and the stressful lives many live, it becomes apparent we have greatly compromised our health and one of the results is CVD.

We may not be able to do a lot about the chemicals or even the stress in our lives. We can do a great deal about our diets and sedentary lives. If you are overweight you must lose weight. Overweight is a major risk factor in CVD. Increased weight places increased stress on the heart and the entire cardiovascular system. Many overweight people are diabetic. High blood sugar damages the vascular system and therefore increases the risk for CVD.

The pathway to weight loss, reduced blood sugar levels and reduced risk of CVD is the same. Diet and exercise are the two most important dynamics!

DIET IS THE MOST IMPORTANT DYNAMIC: The diet must be adjusted to include a predominance of raw and mildly cooked vegetables and fruit, lightly processed grains and legumes (beans), nuts and seeds, and limited amounts of animal products. Eating at a fast food restaurant must become a very occasional event. Boxed, canned and packaged foods must be largely avoided. Soda water should be eliminated and alcoholic beverages consumed in moderation. The diet must become nutritionally dense and not calorie dense. A nutritionally dense diet will provide the body with a wide spectrum of vitamins, minerals, enzymes, amino acids, glyconutrients, anti-oxidants and other food factors which are required by the body on a daily basis. Most Americans eat a diet high in refined foods which supply calories but have little nutrition due to nutrients

being destroyed in food processing. Your diet should contain 40 to 50 grams of water and non-water soluble fiber on a daily basis. Fiber helps regulate blood sugar and facilitates the removal of cholesterol and other fats through the stool.

EXERCISE IS A MUST: Our bodies were designed to be active. Exercise is critical to lowering the risk of CVD and improving health in general. Exercise will burn calories and lower blood sugar. Exercise is not, however, a quick pathway to weight loss. The average pound of stored fat in the body is equal to 3,600 calories of stored energy. Running an eight minute mile will burn up approximately 100 calories. Dancing for twenty minutes, bicycling two and one-half miles in nine minutes or walking one mile in twenty minutes will do the same. To put it another way, you would have to run thirty six miles at eight minutes a mile to lose one pound of stored fat. You can readily see that exercise, in and of itself, is not a quick pathway to weight loss. **This is why diet is the more critical dynamic.**

What exercise will do for you is strengthen the heart muscle and the entire vascular system. Exercise dilates blood vessels and improves circulation. Exercise increases the oxygen utilization capacity of the body. Exercise will raise your basic metabolic rate and keep it elevated for hours after you have finished exercising. This results in an increase in the rate at which calories are burned. This can help to reduce weight through more efficient metabolism. For example, walking one hour per day with no increase in daily calorie intake could result in the loss of thirty pounds in one year.

Exercise will increase the rate at which fat is burned while at the same time increasing the synthesis of protein. Exercise will also increase the burning of brown fat, which is felt to be a primary factor in weight management. Brown fat is a metabolically active fat that is found close to the skeleton and is responsible for the production of body heat. Overweight individuals are often found to poorly utilize brown fat.

Additional benefits of regular exercise include a decrease in the resting pulse rate and blood pressure, an increase in hemoglobin and therefore better oxygen carrying capacity of the blood, increase in HDL cholesterol, a decrease in LDL cholesterol, and an increase in the number of capillaries carrying blood throughout the body. Typical forms of exercise include walking, running, rebounding, swimming, biking, push-ups, chin-ups and working out with free weights, weight machines and stretching equipment such as Xertubes

CHOLESTEROL AND CVD: Cholesterol is not a bad guy! Cholesterol has the very important function of keeping the membranes of our cells functioning properly. Every cell in your body has the ability to synthesize cholesterol. The liver, intestines, adrenal glands and sex glands also make cholesterol as necessary. All steroid hormones are made from cholesterol. Vitamin D is, in part, synthesized from cholesterol. Bile acids, secreted into the small intestine from the gall bladder, are made from cholesterol and play a vital role in the digestion of fats consumed in the diet. Finally, cholesterol is secreted by the glands in the skin to protect the skin from dehydration.

Cholesterol can become a risk factor for CVD when LDL and VLDL (low and very low density lipo protein) cholesterol becomes oxidized and creates free radical activity causing damage to the walls of the arterial system. The body repairs this damage which leads to the build up of plaque in the arteries. One way to guard against such oxidation is to insure that you are consuming a large variety of anti-oxidant nutrients on a daily basis. HDL (high density lipo protein) cholesterol helps to remove LDL cholesterol by collecting it and returning it to the liver. Aerobic and resistive exercise is effective in raising HDL levels. Japanese researches found that eating a raw onion per day raised HDL levels by 30%.

Since excessive cholesterol in the blood can lead to excessive oxidative damage of the arterial system, it is wise to maintain a total cholesterol of around 200 or less mg per deciliter of blood with an HDL of 60 or more mg per deciliter of blood. This gives you an approximate ratio of 3:1 total cholesterol to HDL. Most Americans fall far short of this ideal with much lower HDL levels compared to total cholesterol. The result is that LDL and VLDL levels are much higher than they should be which increases the risk for oxidized cholesterol causing arterial damage.

Next month we will explore how you can naturally raise HDL and lower cholesterol levels. We will also discuss several other risk factors for CVD and the protective role of the omega-3 fatty acids. Visit www.milkandhoneyhealthfoods.com for comprehensive articles on many aspects of health and nutrition.