



Article 4*

The Non-Medicated Life:

Specific Dietary Practices Shown to Reduce Cardiovascular Risk

by Paul E. Lemanski, MD, MS, FACP

*Originally published in Adirondack Sports & Fitness Magazine (www.ADKSportsFitness.com)

This is the fourth in a series on optimal diet and lifestyle to help prevent disease and responsibly avoid an over-reliance on medications. This complementary approach is based in the medical evidence of the most successful research trials and the best science available. Any planned change in diet, exercise or treatment should be discussed with and approved by your personal physician before implementation. Consultation with a registered dietitian is strongly advised.

Medicines are a mainstay of American life and the healthcare system, in part, because of their proven benefit to reduce the risk of strokes, heart attacks and cardiovascular death. The March, May and August Health columns on “The Non-Medicated Life” have shown how optimal diet and lifestyle may affect cholesterol levels, blood pressure and blood sugar and accomplish for most individuals many, if not most, of the benefits of medication. Several specific dietary practices and/or diets have been shown to reduce cardiovascular risk. These include reducing saturated fat consumption as a part of any diet, a low-fat vegetarian or vegan diet, and a high omega-3 fatty acid Mediterranean diet. Such dietary approaches may provide substantial benefit reducing the risk of cardiovascular death and nonfatal heart attack by up to 70 percent.

Blood cholesterol levels are a function of the amount of dietary cholesterol consumed as well as saturated fat consumed. All animal derived foods and food products contain dietary cholesterol. Thus, meat contains dietary cholesterol; butter and dairy product do as well. Vegetables and fruits do not contain dietary cholesterol. In the body, dietary cholesterol in the gut is absorbed into the blood stream and accounts for up to 30 percent of blood cholesterol levels. Saturated fat, which is also contained in meats (especially the marbled variety and in the skin of chickens as well) is absorbed into the body and converted in the liver to blood cholesterol. Non-meat sources of

saturated fat include coconut products, coconut oil and palm oil. Specifically, saturated fat is converted into the “bad cholesterol” or LDL, which forms cholesterol plaques that clog up arteries ultimately causing heart attack, stroke and cardiovascular death (see Article 3, A New Laboratory Test to Assess Heart Attack Risk).

“Certainly, the most exciting diet for cardiovascular risk reduction, because of its proven benefit as well as its general acceptance by large numbers of people, is the high omega-3 Mediterranean diet.”

Diets that reduce dietary cholesterol may reduce blood cholesterol levels to a modest degree in most people. Diets that reduce saturated fat will have a much more powerful effect on lowering LDL. The American Heart Association’s recommended diet reduces dietary cholesterol to 200 milligrams per day (mg/day) and saturated fat to no more than 7 percent of total calories. Such a dietary approach may reduce LDL modestly, but still sufficiently to allow medication to be reduced to levels less likely to cause side effects while still achieving national guideline targets (see Article 2, Implementation Strategies). Counting saturated fat grams and reducing saturated fat to 7-10 grams per day is an alternative practical way to reduce blood cholesterol. Most products by law now list the grams of saturated fat on the product label.

“Trans” fats which are equivalent to saturated
(continued on back)



CENTER FOR
PREVENTIVE MEDICINE
Prime Care Physicians, PLLC 

fat for cholesterol raising will soon be printed on product labels as well and should be added to saturated fat grams when calculating one's daily 7-10 gram target.

A low fat vegetarian diet reduces cardiovascular risk essentially by eliminating dietary cholesterol and reducing saturated fat consumption markedly. The mean LDL level for vegans is 75 milligrams per deciliter (mg/dl), easily achieving the national guideline target for even those at highest cardiovascular risk. In his Lifestyle Heart Trial, Dr. Dean Ornish was able in this way to reduce LDL 30 percent and achieve not only the national guideline target, but also was able to show via coronary angiography (an x-ray dye study which identifies the size and location of cholesterol plaques in arteries) that on average cholesterol plaques got smaller. So called lacto-ovo vegetarian diets, which may include cheese and a large amount of saturated fat, are many times ineffective in lowering blood cholesterol.

Certainly, the most exciting diet for cardiovascular risk reduction because of its proven benefit as well as its general acceptance by large numbers of people is the high omega-3 Mediterranean diet. The diet was studied as part of a clinical trial (the Lyon Diet Heart Study) as a result of prior observational and population studies, which showed that people living in Mediterranean countries had low rates of cardiovascular disease. Of all the Mediterranean countries studied, the Greek island of Crete had the lowest rates of cardiovascular disease. When the blood of the people of Crete was compared to the blood of other Mediterranean peoples, the most interesting difference was the level of omega-3 fatty acids, which was significantly higher. When the diet of Cretans was analyzed for the source of the omega-3 fatty acids, researchers found walnuts and a vegetable called purslane as the major foods that contributed.

Thus, in the design of the Lyon Diet Heart Study, researchers chose to compare not just any Mediterranean diet to a "prudent" Western diet. They chose to compare the experimental high omega-3 Mediterranean diet to a control "prudent" Western diet, which was the diet of the people of Lyon in southern France. Contrary

to popular American belief, the French diet is actually superior to the typical American diet in terms of fat as well as total calories. The French in the experimental group (those getting the omega-3 Mediterranean diet) were supplied with canola oil margarine to provide the omega-3 fatty acids to their diet. As in all Mediterranean diets, olive oil was the main source of fat calories.

The results of the Lyon Diet Heart study were published in the prestigious cardiology journal *Circulation* in 1999 and were nothing short of astonishing. French who consumed the high omega-3 Mediterranean diet had a 70 percent reduction in cardiovascular death and non-fatal heart attack as compared to those in the control group eating the prudent Western diet. The blood of the French on the high omega-3 Mediterranean diet contained the same levels of omega-3 fatty acids as the blood of the people of Crete, while those in the control group did not. Interestingly, the levels of total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides were the same in the control group and the experimental group, suggesting that while cholesterol is important, it is not the only aspect of diet which may dramatically reduce cardiovascular death. Moreover, because the typical American diet carries a higher risk than the typical French diet, the benefit for Americans who consumes a high omega-3 Mediterranean diet may be higher still.

Medications have been shown to reduce the risk of heart attack, stroke and cardiovascular death. Specific dietary practices and/or diets including eating lower saturated fat and cholesterol as part of any diet, the consumption of a vegan diet, and finally the consumption of a high omega-3 Mediterranean diet, may reduce cardiovascular death by both cholesterol reduction and non-cholesterol means. Such dietary practices and/or diets may be easily incorporated into a busy American lifestyle with the help of a dietitian or a physician versed in medical nutrition therapy. Such dietary practices and/or diets may allow national guideline targets to be reached for those in whom medication alone proves insufficient; they may allow medication to be reduced in dose or under a physician's care may allow medication

(continued on next page)

to be discontinued. As such, specific dietary practices and/or diets, as part of a practice of adopting a heart healthy lifestyle, may be seen as complements as well as prudent alternatives to an over reliance on a bottle of pills to solve an individual's healthcare problems.

Paul E. Lemanski, MD, MS, FACP is a board certified internist with a master's degree in human nutrition. He is director of the Center for Preventive Medicine, Albany Associates in Cardiology, Prime Care Physicians, P.C.

Dr. Lemanski is an assistant clinical professor of medicine at Albany Medical College and a fellow of the American College of Physicians.