



Article 23*

The Non-Medicated Life: Triglycerides Revisited

by Paul E. Lemanski, MD, MS, FACP

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This is the 23rd 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 not only because they are perceived to work by the individual taking them, but also because their benefit may be shown by the objective assessment of scientific study. Clinical research trials have shown that some of the medicines of Western science may reduce the risk of heart attacks, strokes and cardiovascular death.

In the first twenty-two installments of The Non-Medicated Life, informed diet and lifestyle have been shown to accomplish naturally for the majority of individuals, many, if not most of the benefits of medications. This is especially true for the management of blood fats called triglycerides and the cardiovascular risk they confer.

Triglycerides are the storage form of fat in the body. When a man or a woman has an abdominal circumference greater than their hip circumference, this indicates excess stored triglycerides and probably excess blood triglycerides as well. In the blood triglycerides should not exceed 150 milligrams per deciliter on a 12-hour fasting specimen.

When the level exceeds this limit the cardiovascular risk for the individual rises steadily to 500 milligrams per deciliter when the risk for other diseases such as a possible life-threatening inflammation of the pancreas called pancreatitis rises as well. Fasting levels

of triglycerides over 1,000 milligrams per deciliter are considered a very serious risk for the heart and the pancreas and generally require medication.

In the range of 150 to 500 milligrams per deciliter, triglycerides are still of concern for heart health and may contribute to increased cardiovascular risk. The reasons for this are not fully understood; however, part of the explanation may be the effect of triglycerides on the size of the particles in the blood which carry the bad cholesterol or LDL (see The Non-Medicated Life: A New Laboratory Test to Assess Heart Attack Risk). LDL particles in the blood are of different sizes from small to medium size to large. For most healthy individuals, there are more large particles than small particles. The large particles in the blood stream tend to bounce off the cells that line the arteries whereas the small particles are much more likely to penetrate gaps between the lining cells and form an accumulation of LDL or a cholesterol plaque in the artery wall. Cholesterol plaques can rupture and result in a heart attack or stroke.

A number of observational studies suggest that triglycerides increase risk. The Framingham Heart Study shows a progressive increase in cardiovascular risk with rising triglycerides which is more pronounced in women than men. Moreover, clinical trials of medications to

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reduce triglycerides show a reduction in heart attacks, strokes and deaths in individuals who take medication to reduce triglycerides. In the Veterans Affairs High-Density Lipoprotein Cholesterol Intervention Trial (VA-HIT) study with a medication called gemfibrozil which lowers triglycerides, individuals who took the medication had a reduction in heart attack and stroke of about 23 percent compared to those who took placebo. In the Coronary Drug Project using pharmacological doses of the vitamin niacin, those individuals who took the medication also had a 14 to 29 percent reduction, respectively, in heart attack and stroke compared to individuals who took placebo.

While medication may be used to reduce triglycerides, both diet and lifestyle have been shown to have a very significant effect on triglycerides and may reduce the amount of medication required or may allow, under a physician's supervision, its discontinuation. For those who are overweight or obese with elevated triglycerides, reducing calories and losing weight may reduce triglycerides by 50 percent or more. For those 50 to 100 pounds above their ideal body weight even a modest weight loss of 10 to 20 pounds may have a significant impact on triglycerides levels. Exercise, even in the absence of weight loss, has a large impact on triglycerides. Daily walking may reduce triglycerides 30 to 40 percent. Those who have only one to two hours per week to exercise may find greater triglycerides reductions by spreading their exercise out over the week, engaging in some activity each day.

The composition of the diet has a significant impact on triglycerides. The excess consumption of carbohydrate and especially sugars will drive up triglycerides in those with a predisposition. It is preferable to limit the consumption of carbohydrates including sugar in favor of somewhat higher amounts of good fats such as monounsaturated fats and lean protein such as fish or seafood. Bread consumption should be limited. Additionally, avoiding excess consumption of fruits high in sugar may lower triglycerides. Fruits which taste sweet such as ripe bananas and pineapples should be avoided

in favor of less sweet fruits such as apples and pears.

Alcohol, which the body metabolizes as a carbohydrate, will also significantly drive up triglycerides in those with a predisposition. Limiting alcohol to no more than one to two glasses of wine or beer, or one to two shots of liquor per day, may reduce triglycerides significantly. In individuals who are very sensitive to the effects of alcohol, complete abstinence may be required to control triglycerides.

The consumption of omega-3 fat may lower triglycerides. Four ounces of a fatty fish such as sardines, salmon or mackerel contain about 1 to 1.5 grams of omega-3 fish oil, the equivalent of a 1,000 milligrams fish oil capsule. Consuming fish or taking fish oil capsules under a physician's supervision may substantially reduce triglycerides and in the case of fish oil capsules may reduce triglycerides by 45 percent.

In summary, triglycerides may significantly increase cardiovascular risk and reducing triglycerides may reduce risk. While medication exists which lowers triglycerides, a healthy diet and lifestyle may have a very profound effect on triglycerides and help avoid the proverbial bottle of pills to address this very significant cardiovascular health risk.

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.