



Love nuts? Your APOA5 gene may not!

Nuts are generally considered healthy foods because they are high in protein, high in unsaturated fat and contain no cholesterol. But they are not good for everyone. Many people develop high blood triglycerides when they eat too many nuts which can be linked to variants of the APOA5 gene.

The APOA5 gene is one of the key players in regulating blood triglyceride levels. Triglycerides travel through the blood, delivering fatty acids (the usable fat) to all cells and tissues for energy production or storage. But when triglyceride levels in the blood become too high, the risk for cardiovascular disease goes up.

There are several risk variants of the APOA5 gene that cause abnormal levels of blood triglycerides. One risk variant is particularly common in Asian, African and Hispanic populations, with a 20-50% frequency. This variant is much less common in Caucasians of whom only 8% are carriers. If you carry one copy of this variant, your blood triglyceride level is likely to be 20% higher than that of non-carriers. And if you carry two copies of this variant, your blood triglyceride level is likely to be 25-35% higher than that of non-carriers.

So what does this have to do with nuts? A study has found that APOA5 variant carriers are more sensitive to specific types of polyunsaturated fatty acids (PUFAs) found in nuts. There are two types of PUFAs in nuts and many other natural fats and oils: omega-3 (ω -3) and omega-6 (ω -6). It was shown that when dietary omega-6 PUFAs exceeded 6% or more of total calorie intake, APOA5 risk variant carriers had about a 30% increase in blood triglyceride levels. And when omega-6 PUFAs were less than 6%, blood triglyceride levels in variant carriers was comparable to that in non-carriers. Therefore, if you are an APOA5 gene risk variant carrier, you can prevent high blood triglycerides by limiting your omega-6 PUFAs to less than 6% of your total calorie intake.

Because most nuts are rich in omega-6, an efficient way to limit your omega-6 intake is to avoid overconsumption of nuts. However, nuts are not the only dietary source of omega-6! Many staple food oils such as corn oil, soybean oil, and cottonseed oil are also sources of dietary omega-6. In order to manage your dietary omega-6 intake, GB HealthWatch can help in two ways. You can get an accurate assessment of your current omega-6 PUFAs with the GB HealthWatch Diet and Nutrition Evaluator. We can also help you find out what foods are rich in omega-6. This information can be found in the article [Omega-3 and Omega-6 Fatty Acids](#).

APOA5 variants not only influence your sensitivity to omega-6, they also make carriers respond differently to triglyceride-lowering medications and exercise. A more comprehensive look at the APOA5 gene, its variants and their impact on triglyceride levels is discussed in the article High Blood Triglycerides and the APOA5 Gene:

<http://www.gbhealthwatch.com/GND-High-Blood-Triglycerides-APOA5.php>