

What are triglycerides?

Do you know your triglyceride level? If not, run right out and get that measured! It is one of the most powerful markers you could get to assess your own metabolic health.

Here's why:

Triglycerides are a type of fat the body uses to store and transport energy. And while triglycerides are often lumped in with cholesterol, as if they are also cholesterol, they are really an entirely different thing.

Your body has a couple of ways that it makes triglycerides – an external pathway and an internal pathway.

The external pathway begins in your intestines when you eat foods high in fatty acids (chia seeds, walnuts, coconut, avocados, olive oil, and salmon, for instance). Your body can use fat for energy just like it can use glucose for energy, although through a different metabolic pathway.

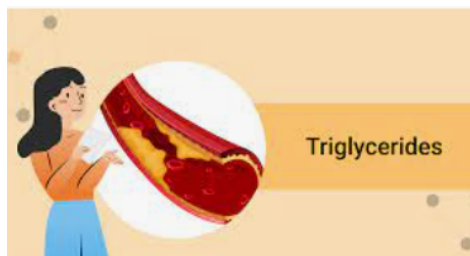
To store fatty acids to use later for fuel, your GI tract packages them into sets of three attached to a glycerol molecule. That's where the name comes from: tri (three) glycerides (glycerol). The triglyceride is then wrapped up into a travel vehicle called a "chylomicron," giving it the ability to move around in your blood stream. They float along in your circulation until they find a muscle or a fat receptor. If they meet up with a muscle receptor, the triglycerides are released and broken back down into fatty acids which the muscle cells can use for energy.

When a chylomicron binds to a fat cell, the triglyceride is broken back down into fatty acids, but instead of being used for energy, the cell takes the fatty acids from the chylomicron and then proceeds to rebuild them back into triglycerides to be stored as body fat. The empty chylomicron then returns to the liver to find another triglyceride package that needs delivery.

In the internal pathway, triglycerides are created in the liver from fatty acids that were made either from extra glucose in your blood stream, or from fat cells releasing triglycerides into your blood stream to be used as fuel.

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Triglycerides are essential for proper metabolic function, and they are an indicator of the state of your metabolic health.

They allow your body to get the fuel it needs from either the fat you eat, or from the fat you store on your body. They are necessary and fantastic when their numbers are normal, but when they become abnormally high, they increase your risk for heart disease dramatically. The higher the triglycerides the higher the risk.

Diet plays a key role in triglyceride levels, but it is NOT the fat in your diet that elevates triglycerides, it's the glucose! (Alcohol does it too.)

When you eat starches or sugars, they are broken down into various components including glucose. The glucose travels to your liver where it is either released into your blood stream or turned into triglycerides and stored as fat. More starchy carbs and/or sugars means more glucose is released, which means more fatty acids which means higher triglycerides in your bloodstream.

Under normal metabolic conditions, insulin acts like a key that unlocks cells and allows glucose to enter. But when your cells become insulin resistant, glucose cannot enter the cells. Glucose is left in the bloodstream where it travels to the liver, which then increases production of triglycerides to be stored as body fat.

The triglyceride to HDL ratio

When you get your cholesterol checked, you know your total cholesterol, your LDL cholesterol, your HDL cholesterol and your triglycerides. You may be used to thinking that LDL is the one that matters the most, the one that increases your risk of heart disease. Not so! Just as many people develop heart disease who have high LDL as those who have low LDL. There is no statistically significant correlation between heart disease and LDL all by itself. There IS a correlation to heart disease, however, with triglycerides and HDL.

When triglycerides are high and HDL is low, you are twice as likely to develop heart disease. In addition, a high triglyceride to HDL ratio is linked to insulin resistance and

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type 2 diabetes, likely due to the triglycerides indicating the presence of insulin resistance rather than causing it.

What should your triglyceride level be?

When I entered medical practice in the early 1990s, we were taught to only begin to worry about high triglycerides when they were above 500, and that was because the risk of pancreatitis increased. We did not think they had anything to do with heart disease or diabetes.

As we learned more, we began to notice that high triglycerides were associated with heart disease, and we began to worry when they were over 300. Today you are told that your triglycerides are too high when they are above 150. You are told they are perfectly normal when they are below 150.

Lipid experts and providers specializing in metabolic health believe normal triglycerides should be much lower than that - less than 50 - and research is bearing this out.

If your triglycerides are high, how can you lower them?

Reduce your intake of those carbohydrates that elevate blood sugar (starches and sugars). When you eat sugar and starchy carbs, your blood sugar goes up. When your blood sugar rises, it means there is more glucose circulating in your blood stream. If your cells don't currently need that much glucose, your liver will turn that extra glucose into triglycerides.

You already know how to avoid the obvious foods high in sugar but what might surprise you is the number of foods that have added sugars that you would never suspect. Read those food labels!

What are the starchy carbohydrates that raise blood sugar?

The biggest category of them all are the grains, particularly if they have been made into a powder such as flour. Pasta, bread, rice, oats, crackers, chips, etc – it's a long list, but one thing they all have in common is that you are eating none of them in the way mother nature originally made them. They have ALL been processed in some way to make them digestible to humans, and that processing made the glucose inside of them more accessible to you.

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Just about all processed foods, whether a grain or not, will have ingredients that raise blood sugar.

The highly starchy vegetables that grow below the ground will also raise blood sugar! Potatoes, sweet potatoes, carrots, jicama – it's a fairly long list. Although you can eat these foods raw, the mother nature made them, they still represent the part of the plant that stores starch to keep the plant alive. When you eat them, you are getting all the glucose that was meant for that plant.

What else can you do to lower your triglycerides?

Exercise!

Research has consistently shown that exercise is a powerful way to lower triglycerides. Exercise means your muscles are working, and working muscles will slurp up the glucose and/or fatty acids from your blood stream, leaving less of it to be turned into stored triglycerides.

Eat foods high in Omega-3 fatty acids, and/or take an Omega-3 supplement daily. Omega-3 fatty acids increase fatty acid oxidation in the liver, lowering the creation of triglycerides.

Keep alcohol intake to a minimum. Heavy alcohol use is associated with high triglyceride levels due to alcohol's affect on the liver. The data is unclear on the potential effect from moderate alcohol intake, but if you 'd like to "pull all the levers" to reduce triglycerides, keep alcohol intake low just in case even moderate drinking makes a difference.

Ok, there you have it. All the skinny on triglycerides! Get yours checked today, and if it's above 50, work on lowering it. The process of lowering it will, of course, improve your metabolic health in all kinds of other ways too!

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