

# Triglycerides

Plasma triglycerides are a part of the cholesterol profile that is obtained by your doctor. Triglycerides are fatty molecules constructed of three fatty acid chains attached to a sugary backbone. Triglycerides are also normally found circulating in the blood with other fatty molecules such as cholesterol. Abnormally elevated levels of triglyceride in the blood may also be associated with an increased risk of atherosclerosis and other diseases. Elevated levels are defined as greater than 200 mg/dl of blood.

Triglycerides have a close relationship with HDL (the "good") cholesterol, and many of the factors that effect lowering HDL also effect the elevation of triglycerides. It is not uncommon to see elevated triglycerides (greater than 200) and low HDL (less than 40 for men, or less than 45 for women) occur together. The combination of elevated triglycerides and low HDL may increase the risk of coronary heart disease. Triglycerides are also indicative of "insulin resistance", diabetes, or sensitivity to simple carbohydrates and alcohol (see list, below).

Triglycerides also have another meaning when they are not measured in the blood. Triglycerides describe a broad category of fats, not a single structure. Most of the fat we consume through our diet is triglyceride (saturated, polyunsaturated, and monounsaturated fats are all types of triglycerides). They provide the majority of our energy at rest and during low-intensity exercise and are the major storage form of fat in the human body. However, it is elevated plasma triglycerides that are of concern for those at risk of coronary heart disease.

## The Top Ten Ways to Decrease Elevated Triglycerides

Triglycerides are usually very responsive to dietary changes. It doesn't take long to lower triglycerides with the right dietary intake. We can see responses to triglycerides in just a few days. However, it takes longer to change lifestyles!

### **1. Decrease or eliminate sweets:**

- The sugar in sweets will have an immediate effect on individuals sensitive to elevated triglycerides. *Examples:* soda, candy, cookies, pies, pastries, sweet desserts, and concentrated fruit juices.

### **2. Decrease or eliminate alcohol:**

- Excessive alcohol consumption is strongly associated with dangerously high triglyceride levels. For those individuals who are sensitive, even a small amount of alcohol can trigger elevated triglycerides.

### **3. Decrease refined carbohydrate-containing foods**

- White bread, white pasta, and white rice can have an impact on triglycerides in sensitive individuals. Instead try whole grains such as 7-grain breads, whole-wheat pasta, brown rice and other grains such as quinoa, barley, oats, and millet. High protein/low carbohydrate diets are *not* recommended for the treatment of elevated triglycerides or heart disease.

**4. Choose foods rich in omega 3 fatty acids**

- Individuals with triglycerides above 250 mg/dl should consider including foods high in omega-3 fatty acids daily. The American Heart Association recommends 2 servings of fish weekly to increase the consumption of these beneficial fats.

*Examples:* Cold water fish, flax seed, flaxseed oil, soy products, legumes, walnuts, and dark leafy green vegetables

**5) Maintain a healthy weight:**

- Healthy weight may be a difficult goal for many to achieve. Obtaining advice through your physician or dietitian can provide you with needed specific information. Often individuals need to gain knowledge about the inclusion of missing foods that will help metabolism in addition to foods that should be decreased or eliminated. A healthy diet does not have to involve severe deprivation, and should not involve the exclusion of any one group of foods over any other (such as high protein/low carbohydrate diets).

**6) Adopt an eating plan low in saturated and hydrogenated fats**

- Use olive oil, canola oil, rice bran, walnut oil, and flax oil instead of more saturated fats like butter, shortening, lard, or margarine

**7) Avoid hidden fats**

- Avoid such high fat foods such as regular fat meats, lunchmeats, hot dogs, and fatty snack foods. Be careful when lowering the fat in the diet that high sugar foods are not substituted.

**8) Choose high fiber foods**

- Foods high in fiber will help to control your triglycerides and LDL ("bad") cholesterol. *Examples include:* beans, whole grains, ground flaxseed, pumpkin seeds, rice bran, oat bran, fruits and vegetables. An increase in fiber should be accompanied by an increase in water intake. Increase fiber slowly to prevent any discomfort.

**9) Replace red meat with lower fat sources of protein**

- Fish can act directly to decrease triglycerides and improve your risk of coronary heart disease. Likewise, vegetable proteins such as dried beans, peas, and soy products are excellent ways to improve your health. White poultry, prepared without the skin, is a good source of protein without a lot of fat content.

**10) Exercise regularly** to increase HDL cholesterol and burn off excess triglycerides, the body's storage of energy.

## Hearty Vegetarian Chili

3 tbs. olive oil  
2-3 large zucchinis or summer squashes  
2 medium onions, diced  
2 sweet red peppers, cubed  
2 large carrots, grated  
4 garlic cloves, minced  
1 (28 oz.) can Italian tomatoes (low-sodium), drained and cut up  
1 can kidney beans  
1 package *Morning Star* Vegetable Crumbles  
1 -cup Healthy Choice tomato sauce  
1 tsp. sugar  
2 tbs. chili powder  
1 tsp. cumin  
1 tsp. oregano  
1/2 tsp. cayenne pepper

3 cups cooked brown rice

1. In large saucepan sauté squash and onions olive oil until tender. Add, peppers, carrots, and garlic and continue to sauté 5 minutes.
2. Add chopped tomatoes, kidney beans, vegetable crumbles, tomato sauce, sugar, and spices. Simmer until cooked thoroughly, about 20-30 minutes, stirring occasionally.

Serve over brown rice

*Makes approximately 6 (1 cup) servings*

*To further reduce fat and calories use less olive oil*

**Calories 390**

**Total Fat 10 g**

**Saturated fat 1 g**

**Total fiber 18 g**

**Sodium 200 mg**