Hypertriglyceridemia
Diet for High blood levels of Triglycerides

Most fats in food are triglycerides. Triglycerides in your blood are stored as fat in your body. High levels of triglycerides in your blood may put you at a greater risk for heart disease and stroke.

Normal triglyceride levels are less than 150 mg/dL. Borderline high levels are 150-199 mg/dl. High levels are 200 - 499 mg/dL, and very high triglyceride levels are greater than 500 mg/dL. The decision to treat high triglycerides is generally based on the level. For people with borderline or high triglyceride levels, treatment includes weight loss and exercise. Drugs are recommended for people with very high triglyceride levels.

Many people who need treatment for high triglyceride levels have metabolic syndrome. This syndrome is a collection of disorders that often include: insulin resistance, high blood pressure, blood clotting problems, high cholesterol and triglycerides.

TESTING PROCEDURE FOR TRIGLYCERIDES

- You should not eat 4 hours before getting your triglycerides measured. The normal range of triglycerides is between 10 and 250 milligrams per deciliter (mg/dl). Some people may have extreme levels (1000 or above), but your triglyceride level may be too high if it is above 150 mg/dl, depending on what other risk factors you have for heart disease.
- People with high blood triglycerides may also have high blood cholesterol levels. If you have high blood cholesterol as well as high blood triglycerides, your risk for heart disease is probably greater than if you only had high triglycerides. High blood cholesterol is one of the main risk factors for heart disease.

CHANGING YOUR DIET

Your weight can affect your blood triglyceride level. If you are more than 20% above your ideal body weight, you may be able to lower your blood triglycerides by losing weight. Eating less and exercising regularly is the best way to combat this. Fat provides more calories than any other food. The best way to lose weight is to eat less fat. Only 30% of your total calories should come from fat. Less than 7% of your diet should come from saturated fat. A diet low in fat and saturated fat is the same as a diet to decrease blood cholesterol. By eating a diet lower in fat, you may lose weight, lower your blood cholesterol, and lower your blood triglyceride level.

Eating a diet low in fat, especially saturated fat, may also help you lower your blood triglyceride level. Ask your dietitian to help you figure how much fat you can eat based on the number of calories your caregiver has prescribed for you.

Exercise, in addition to helping with weight loss may also help lower triglyceride levels.

- Alcohol can increase blood triglycerides. You may need to stop drinking alcoholic beverages.
- Too much carbohydrate in your diet may also increase your blood triglycerides. Some complex carbohydrates are necessary in your diet. These may include bread, rice, potatoes, other starchy vegetables and cereals.
- Reduce "simple" carbohydrates. These may include pure sugars, candy, honey, and jelly without losing other nutrients. If you have the kind of high blood triglycerides that is affected by the amount of carbohydrates in your diet, you will need to eat less sugar and less high-sugar foods. Your caregiver can help you with this.
- Adding 2-4 grams of fish oil (EPA+ DHA) may also help lower triglycerides. Speak with your caregiver before adding any supplements to your regimen.

Following the Diet

Maintain your ideal weight. Your caregivers can help you with a diet. Generally, eating less food and getting

more exercise will help you lose weight. Joining a weight control group may also help. Ask your caregivers for a good weight control group in your area.

Eat low-fat foods instead of high-fat foods. This can help you lose weight too.

These foods are lower in fat. Eat MORE of these:

- Dried beans, peas, and lentils.
- Egg whites.
- Low-fat cottage cheese.
- Fish.
- Lean cuts of meat, such as round, sirloin, rump, and flank (cut extra fat off meat you fix).
- Whole grain breads, cereals and pasta.
- Skim and nonfat dry milk.
- Low-fat yogurt.
- Poultry without the skin.
- Cheese made with skim or part-skim milk, such as mozzarella, parmesan, farmers', ricotta, or pot cheese.

These are higher fat foods. Eat LESS of these:

- Whole milk and foods made from whole milk, such as American, blue, cheddar, monterey jack, and swiss cheese
- High-fat meats, such as luncheon meats, sausages, knockwurst, bratwurst, hot dogs, ribs, corned beef, ground pork, and regular ground beef.
- Fried foods.

Limit saturated fats in your diet. Substituting unsaturated fat for saturated fat may decrease your blood triglyceride level. You will need to read package labels to know which products contain saturated fats.

These foods are high in saturated fat. Eat LESS of these:

- Fried pork skins.
- Whole milk.
- Skin and fat from poultry.
- Palm oil.
- Butter.
- Shortening.
- Cream cheese.
- Bacon.
- Margarines and baked goods made from listed oils.
- Vegetable shortenings.
- Chitterlings.
- Fat from meats.
- Coconut oil.
- Palm kernel oil.
- Lard.
- Cream.
- Sour cream.
- Fatback.
- Coffee whiteners and non-dairy creamers made with these oils.
- Cheese made from whole milk.

Use unsaturated fats (both polyunsaturated and monounsaturated) moderately. Remember, even though unsaturated fats are better than saturated fats; you still want a diet low in total fat.

These foods are high in unsaturated fat:

- Canola oil.
- Sunflower oil.
- Mayonnaise.
- Almonds.
- Peanuts.
- Pine nuts.
- Margarines made with these oils.
- Safflower oil.
- Olive oil.
- Avocados.
- Cashews.
- Peanut butter.
- Sunflower seeds.
- Soybean oil.
- Peanut oil.
- Olives.
- Pecans.
- Walnuts.
- Pumpkin seeds.

Avoid sugar and other high-sugar foods. This will decrease carbohydrates without decreasing other nutrients. Sugar in your food goes rapidly to your blood. When there is excess sugar in your blood, your liver may use it to make more triglycerides. Sugar also contains calories without other important nutrients.

Eat LESS of these:

- Sugar, brown sugar, powdered sugar, jam, jelly, preserves, honey, syrup, molasses, pies, candy, cakes, cookies, frosting, pastries, colas, soft drinks, punches, fruit drinks, and regular gelatin.
- Avoid alcohol. Alcohol, even more than sugar, may increase blood triglycerides. In addition, alcohol is high in calories and low in nutrients. Ask for sparkling water, or a diet soft drink instead of an alcoholic beverage.

Suggestions for planning and preparing meals

- Bake, broil, grill or roast meats instead of frying.
- Remove fat from meats and skin from poultry before cooking.
- Add spices, herbs, lemon juice or vinegar to vegetables instead of salt, rich sauces or gravies.
- Use a non-stick skillet without fat or use no-stick sprays.
- Cool and refrigerate stews and broth. Then remove the hardened fat floating on the surface before serving.
- Refrigerate meat drippings and skim off fat to make low-fat gravies.
- Serve more fish.
- Use less butter, margarine and other high-fat spreads on bread or vegetables.
- Use skim or reconstituted non-fat dry milk for cooking.
- Cook with low-fat cheeses.
- Substitute low-fat yogurt or cottage cheese for all or part of the sour cream in recipes for sauces, dips or congealed salads.
- Use half yogurt/half mayonnaise in salad recipes.
- Substitute evaporated skim milk for cream. Evaporated skim milk or reconstituted non-fat dry milk can be whipped and substituted for whipped cream in certain recipes.
- Choose fresh fruits for dessert instead of high-fat foods such as pies or cakes. Fruits are naturally low in fat.

When Dining Out

- Order low-fat appetizers such as fruit or vegetable juice, pasta with vegetables or tomato sauce.
- Select clear, rather than cream soups.
- Ask that dressings and gravies be served on the side. Then use less of them.
- Order foods that are baked, broiled, poached, steamed, stir-fried, or roasted.
- Ask for margarine instead of butter, and use only a small amount.
- Drink sparkling water, unsweetened tea or coffee, or diet soft drinks instead of alcohol or other sweet beverages.

QUESTIONS AND ANSWERS ABOUT OTHER FATS IN THE BLOOD: SATURATED FAT, TRANS FAT, AND CHOLESTEROL

What is trans fat?

Trans fat is a type of fat that is formed when vegetable oil is hardened through a process called hydrogenation. This process helps makes foods more solid, gives them shape, and prolongs their shelf life. Trans fats are also called hydrogenated or partially hydrogenated oils.

What do saturated fat, trans fat, and cholesterol in foods have to do with heart disease?

Saturated fat, trans fat, and cholesterol in the diet all raise the level of LDL "bad" cholesterol in the blood. The higher the LDL cholesterol, the greater the risk for coronary heart disease (CHD). Saturated fat and trans fat raise LDL similarly.

What foods contain saturated fat, trans fat, and cholesterol?

High amounts of saturated fat are found in animal products, such as fatty cuts of meat, chicken skin, and full-fat dairy products like butter, whole milk, cream, and cheese, and in tropical vegetable oils such as palm, palm kernel, and coconut oil. Trans fat is found in some of the same foods as saturated fat, such as vegetable shortening, some margarines (especially hard or stick margarine), crackers, cookies, baked goods, fried foods, salad dressings, and other processed foods made with partially hydrogenated vegetable oils. Small amounts of trans fat also occur naturally in some animal products, such as milk products, beef, and lamb. Foods high in

cholesterol include liver, other organ meats, egg yolks, shrimp, and full-fat dairy products.

How can I use the new food label to make heart-healthy food choices?
Check the Nutrition Facts panel of the food label. Choose foods lower in saturated fat, trans fat, and cholesterol. For saturated fat and cholesterol, you can also use the Percent Daily Value (%DV): 5% DV or less is low, and 20% DV or more is high. (There is no %DV for trans fat.) Use the Nutrition Facts panel to choose foods low in saturated fat and cholesterol, and if the trans fat is not listed, read the ingredients and limit products that list shortening or hydrogenated or partially hydrogenated vegetable oil, which tend to be high in trans fat.

POINTS TO REMEMBER: YOU NEED A LITTLE TLC (THERAPEUTIC LIFESTYLE CHANGES)

- Discuss your risk for heart disease with your caregivers, and take steps to reduce risk factors.
- Change your diet. Choose foods that are low in saturated fat, trans fat, and cholesterol.
- Add exercise to your daily routine if it is not already being done. Participate in physical activity of moderate intensity, like brisk walking, for at least 30 minutes on most, and preferably all days of the week. No time? Break the 30 minutes into three, 10-minute segments during the day.
- Stop smoking. If you do smoke, contact your caregiver to discuss ways in which they can help you quit.
- **Do not** use street drugs.
- Maintain a normal weight.
- Maintain a healthy blood pressure.
- Keep up with your blood work for checking the fats in your blood as directed by your caregiver.

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