

# Diabetes and Cholesterol

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## What should I know about cholesterol if I have diabetes?

People living with diabetes are at a greater risk of heart disease than people who do not have diabetes. This increased risk is linked to higher levels of blood cholesterol.

## What should I know about blood cholesterol?

- The body makes cholesterol, and it is found in all cells of the body.
- Foods such as beef, veal, lamb, pork, liver and other organ meats, and egg yolk contain cholesterol.
- Cholesterol is only found in animal products.
- There are two main types of cholesterol. One type is called “LDL.” High levels of LDL are linked with greater risk for heart disease. The other type is called “HDL,” which is linked with lower risk of developing heart disease.

## What should I know about LDL cholesterol?

- People with diabetes tend to have higher levels of LDL cholesterol.
- LDL stands for low density lipoprotein. When there is too much LDL cholesterol in the blood, it sticks to the walls of your arteries and increases your risk for a heart attack.
- The higher the level of LDL cholesterol in the blood, the greater your risk for heart disease.
- People with diabetes may have excess glucose in the blood. The excess blood glucose sticks to the LDL cholesterol. This glucose-coated LDL stays in the blood stream longer and forms plaque, one of the first steps of heart disease.
- Lowering your level of LDL cholesterol lowers your risk of heart disease.
- The goal for a person with diabetes or heart disease is to have a blood cholesterol level below 70 mg/dL.

## How can I lower my LDL cholesterol?

- Choose foods high in trans fat, saturated fat, and cholesterol less often.
  - Sources of trans fat may include crackers, doughnuts, cookies, cakes, French fries, and onion rings.
  - Saturated fats are found in fatty meats, chicken skin, whole milk and whole milk products (ice cream, cheese), cream, butter and lard.
  - To reduce your intake of saturated fat, eat no more than six ounces of cooked lean meat, poultry, and seafood, such as shrimp, each day.
  - Trans fat and saturated fat raise blood levels of LDL cholesterol more than cholesterol from the food we eat. It is important to read food labels carefully so that you are aware of the foods that contain trans fat and saturated fat.
- Include oats, oatmeal, peas and beans, and fruits and vegetables in your diet daily. These foods are good sources of soluble fiber, which have been shown to lower LDL cholesterol.
- Physical activity for 30 minutes or more on five or more days a week is a good way to lower LDL cholesterol, maintain or lower weight, and support blood-sugar management. Find ways to move your body that you enjoy, which makes it more likely you will stick with it over time.
- Choose canola, safflower, sunflower, soybean, and olive oils more often. When possible, choose fewer solid fats, such as butter, lard, and shortening, when cooking and baking.
- Take medication if your doctor decides you need it. Sometimes making changes in your diet and increasing exercise is not enough to lower your level of LDL cholesterol. If this happens to you, your doctor will decide which type of medication is best to lower your cholesterol.





### What should I know about HDL cholesterol?

- HDL stands for high density lipoprotein. This cholesterol benefits heart health by moving cholesterol to the liver, where it can be removed from the body. This helps prevent arteries from getting clogged.
- An HDL level of 60 mg/dl or above helps protect against heart disease. The higher the level of HDL in the blood, the lower your risk for heart disease.
- People with diabetes tend to have low HDL cholesterol levels in the blood and this increases their chances of getting heart disease.

### How can I raise my HDL cholesterol level?

- Move your body in a way you enjoy for at least 30 minutes of physical activity on a minimum of five days a week.
- Avoid smoking. Smoking decreases your level of HDL.
- Use more olive and canola oils in cooking. These oils can raise your HDL level.
- Add more fiber to your diet. The fiber found in oats, fruits, vegetables, and peas and beans can raise HDL cholesterol and also lower LDL cholesterol.
- Include soy-based products such as tofu and soy milk in your diet.

### What should I know about triglyceride?

- Most of the fats in food and in our bodies are in the form of triglycerides.
- When diabetes is not managed over time, triglyceride levels are often high.
- People with high triglyceride levels also have high LDL and low HDL cholesterol levels.

### What is a normal triglyceride level?

- People with diabetes should have a blood triglyceride level less than 150 mg/dL.

### How can I lower my level of triglyceride?

- Be involved in physical activity such as walking, biking, dancing, and swimming for at least 30 minutes on five or more days of the week.
- Choose beef, beef fat, veal, lamb, pork, lard, and poultry skin less often.
- Use olive and canola oils and liquid margarine.
- If necessary, find ways to manage blood glucose appropriately.
- Limit alcohol. Even small amounts can raise triglyceride levels.

### Resources

American Heart Association: <https://www.heart.org>.

The American Diabetes Association at <https://www.diabetes.org>.

### References

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