

Spotlight on Health

Family Heart Health

Your heart beats about 115,000 times every day—roughly 3 billion beats over a lifetime. Having a healthy heart starts with a healthy lifestyle: getting exercise, reducing stress, not smoking, and having a healthy diet.^{1,2} Part of a healthy diet includes limiting the amount of fats and cholesterol you eat and drink. But even with a healthy diet, your genes can cause you to have high levels of cholesterol in your blood. This is not good for your heart.

This newsletter will focus on how fats, cholesterol, and genes affect your heart. You will also learn about a new way of having your cholesterol tested that does not require you to fast.

Your Heart Needs Blood, Too

Your heart pumps blood to every part of your body, including itself. The vessels that supply blood to the heart are called arteries. Because the heart is so active (beating 60 to 100 times a minute), it needs to have a good blood supply. This is especially important because when you are active, your heart rate can almost double! For the heart to have a good blood supply, the arteries should not have obstructions.

Fats, Cholesterol, and Heart Health

You have probably heard about good fats and bad fats, and good cholesterol and bad cholesterol. Unsaturated and monosaturated fats are good fats. When eaten in small amounts, they can help keep blood cholesterol low.^{1,2} Saturated and trans fats are bad fats. They raise the amount of bad cholesterol in your blood.^{1,2} Bad cholesterol is called LDL-C, and good cholesterol is called HDL-C. Cholesterol is found in foods, but your liver also makes it.

High levels of LDL-C and other fats can cause buildup of plaque in arteries. Over time, these plaques can grow until they block blood from flowing to the heart. This is called heart disease. You may not know the plaques are there until your heart is not getting enough blood and starts to fail—this is called a heart attack.

On the other hand, good fats in your diet can increase the good cholesterol in your blood, and this can help prevent plaques from growing. Lowering bad fats in your diet and increasing good fats can even reduce the size of plaques and improve blood flow to your heart. Many foods that can reduce bad cholesterol and increase good cholesterol in your blood (sidebar 1).³

Familial Hypercholesterolemia

Familial hypercholesterolemia (FH) is a disease that causes high levels of bad cholesterol. About 1 in 200 to 1 in 500 people has the condition.⁵ FH is inherited, meaning it can be passed from parents to children. It is caused by problems with genes that control blood cholesterol levels. People with FH can't remove bad cholesterol from their blood very well, so it builds up. This can cause heart attacks and stroke,⁴ even in young people. Recognizing and treating FH early are important to help reduce the risk of heart disease. However, over 90% of people with FH don't know they have it.⁵



Fats, Cholesterol, and Your Diet³

- Good fats are found in vegetable oils, certain fish, and other foods such as walnuts and olive oil.
- Bad fats are found in meats, poultry skin, dairy products, and coconut and palm oil (oils common in junk snack foods).
- Fruits, vegetables, and whole grains can help keep your bad cholesterol level low.

Two of the strongest signs that a person has FH are high levels of total cholesterol or LDL-C and family history. People with FH may also have buildups of cholesterol under the skin that appear as yellow spots. Finding these in a patient or relative can help with diagnosis. Genetic testing can help your healthcare provider more accurately diagnose FH and decide the best treatment. It can also help find other family members at risk of FH.

Knowing Your Cholesterol Level

It used to be that, in order to have your cholesterol levels tested, you had to fast for at least 8 hours. This is because fat in the food you eat can interfere with measuring cholesterol. Not anymore. With a newer approach for LDL-C testing used by Quest Diagnostics, you can have the blood test any time. This is helpful for people who have a hard time fasting, such as children and people with diabetes.

How Your Healthcare Provider Can Help

Your healthcare provider can help estimate the chances you will develop heart disease. Heart disease is based on factors such as:

- Your blood levels of good and bad cholesterol and fat
- How much exercise you get
- If you smoke
- Your weight
- Your diet

For people with high LDL-C, changes in lifestyle and diet are sometimes enough to keep cholesterol levels under control. Sometimes, drugs such as statins are needed. Your healthcare provider may also ask if there is a history of heart disease, or high levels of bad cholesterol, in your family members.

How the Laboratory Can Help

Quest Diagnostics offers tests that measure cholesterol in your blood. These tests can be performed at any time of day—you do not have to fast. Quest Diagnostics also has genetic tests for FH.

Additional Information

For more information, visit Quest Diagnostics at <http://questdiagnostics.com/home/patients/tests-a-z/heart-disease/heart-disease-testing.html> or these helpful websites:

- **Centers for Disease Control and Prevention:** <https://www.cdc.gov/cholesterol/index.htm>
- **WebMD: Understanding cholesterol numbers:** <https://www.webmd.com/cholesterol-management/guide/understanding-numbers#1>
- **Familial Hypercholesterolemia Foundation:** <https://thefhfoundation.org/>

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