

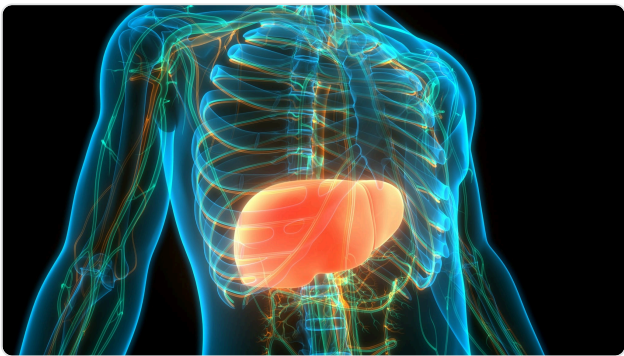


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# Type 2 Diabetes and Your Liver

## KEY POINTS

- Did you know that type 2 diabetes and overweight can increase your risk for liver disease?
- Learn more about this connection and how to care for your liver.



## All about your liver

Your liver is the largest internal organ in your body, and it's responsible for many vital functions, including:

- Filtering your blood to remove wastes like chemicals or toxins.
- Breaking down medicines and other substances.
- Producing bile, which helps you digest fat.
- Helping your [immune system](#) fight germs that could make you sick.


Your liver also plays a key role in balancing your blood sugar levels. When you eat, a hormone called [insulin](#) removes extra sugar from your bloodstream. This sugar is stored in your liver for future use. Between meals and overnight, your liver releases that sugar back into your bloodstream so your body has the energy it needs.

## Types of liver disease

Viral hepatitis is a liver infection caused by certain viruses. Liver damage or liver cancer can be caused by heavy alcohol consumption.

Other types of liver disease can be caused by chronic conditions like:

- Obesity (especially weight around your belly).
- High cholesterol.
- High blood pressure.
- Type 2 diabetes.

[Non-alcoholic fatty liver disease \(NAFLD\)](#)  happens when too much fat builds up in your liver. It's normal for your liver to store some fat. But if more than 5% of your liver's weight comes from fat, this can cause problems.

A more severe form of fatty liver disease is called **non-alcoholic steatohepatitis (NASH)**. This is when you have NAFLD and also have swelling, inflammation (an immune response to injury or illness), and liver damage. About 20% to 30% of people with NAFLD also develop NASH.

NAFLD and NASH can lead to more serious complications like **liver cirrhosis**, which is scarring and permanent damage to your liver. This damage could eventually lead to liver failure and the need for a liver transplant.

## The type 2 diabetes and liver connection

There is an often-overlooked connection between type 2 diabetes and your liver. Research on this connection is relatively new, but it's becoming clear that each condition increases the risk for the other.

When your blood sugar is high over a long time, it can damage your internal organs, including your liver. Similarly, NAFLD and NASH increase the risk of developing prediabetes or type 2 diabetes. A buildup of fat and damage in your liver can increase your blood sugar levels.

NAFLD and type 2 diabetes share many of the same risk factors. These include overweight or obesity, high blood pressure, and high cholesterol. Researchers are seeing increasing numbers of people with both type 2 diabetes and liver disease. In fact, up to 70% of people with type 2 diabetes also have NAFLD.

## Getting screened

NAFLD and NASH usually don't have any signs or symptoms and can develop over many years unnoticed. Some people may experience symptoms like:

- Loss of appetite.
- Fatigue.
- Yellowing of the skin and/or eyes.
- Right-sided pain in the belly.
- Unexplained weight loss.

Most people don't notice any changes during the early stages of liver disease. Because of this, screening and early diagnosis are crucial, even if you don't think anything is wrong. If you have diabetes, be sure to ask your doctor about your liver health at your next visit.

Your doctor can screen you for NAFLD by testing your liver enzymes (a measure of liver function) with simple blood tests. The test results along with your age are used to calculate your risk for liver damage. Your risk score, known as the Fibrosis-4 (FIB-4) Index, means the following:

- FIB-4 score less than 1.3: low risk.
- FIB-4 score of 1.3 to 2.67: medium risk.
- FIB-4 score higher than 2.67: high risk.

Your FIB-4 result shows your risk of liver disease. Your doctor may also perform a liver biopsy or imaging tests to diagnose liver disease if needed like:

- Ultrasound.
- Computed tomography (CT) scan.
- Magnetic resonance imaging (MRI).

Diabetes experts are noticing that chronic liver disease is a growing health concern. Early diagnosis and lifestyle changes for NAFLD can help to prevent more severe forms of liver damage like cirrhosis.

## Prevent or manage liver disease

There are no medicines available yet that cure NAFLD or NASH. But there's good news. Many of the same lifestyle changes that help manage prediabetes and type 2 diabetes also help with liver diseases, including NAFLD and NASH. With healthy lifestyle changes, you can prevent, slow down, or even reverse the buildup of extra fat in your liver.

**Losing weight** if you have overweight or obesity is a great place to start. Losing 5% to 10% of your current body weight (about 10 pounds for someone who weighs 200 pounds) can help reduce extra fat in your liver. This can also improve your blood sugar and take stress off all your internal organs.

**Healthy eating**, including balancing your carbohydrate intake and limiting sweets, is important for diabetes. It also matters for liver health since extra carbohydrates and sugars are stored in your liver. Limiting the amount of saturated fats in your diet helps protect your liver from fat buildup.

**Being physically active** helps improve the way your body uses blood sugar. It also helps reduce the amount of fat stored in your liver. Try getting at least 150 minutes of physical activity per week, but every active minute counts.

**Limiting alcohol** can also reduce the stress on your liver and slow the development of liver damage. Limit alcohol as much as you can if you have liver disease or are at risk for it.

SOURCES

CONTENT SOURCE:

National Center for Chronic Disease Prevention and Health Promotion; Diabetes