

# Non-alcoholic Fatty Liver Disease (NAFLD)

## What is the liver, and what does it do?

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- It helps process the food we eat.
- It removes waste and toxic substances from the blood.
- It helps make proteins and hormones that the body needs to function.

## What is non-alcoholic fatty liver disease (NAFLD), also known as “fatty liver”?

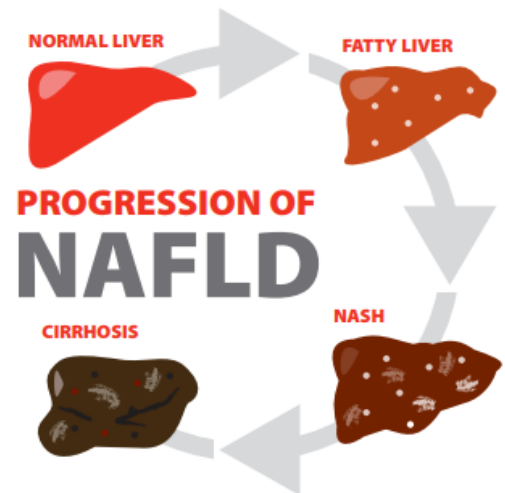
Non-alcoholic fatty liver disease (NAFLD) is a problem caused when too much fat stays in the liver. This can happen in children and in adults who do not drink alcohol.

- **Fatty Liver:** NAFLD is also referred to as simply “fatty liver”. NAFLD can be mild to severe.
- **NASH:** Some people with fatty liver have a more severe form that includes damage (inflammation) inside the liver. This is called non-alcoholic steatohepatitis (NASH).
- **Cirrhosis:** Over time, NASH can cause scar tissue to develop in the liver. Eventually, the scar tissue replaces healthy liver cells, and the liver cannot work. This is called cirrhosis.

## What causes fatty liver?

Fatty liver is a very common disorder affecting around one in ten children in the United States. The most common cause of fat build-up in the liver is **too much weight gain**.

Approximately half of overweight and obese children may have fatty liver. Children who gain more belly fat may have more risk of fatty liver. Other risk factors for fatty liver are having a family member with fatty liver, type 2 diabetes, insulin resistance, or polycystic ovary syndrome.



[HTTPS://LIVERFOUNDATION.ORG](https://liverfoundation.org)

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## How is fatty liver disease diagnosed?

Fatty liver is usually suspected in children who are overweight with a body mass index (BMI) >85%.

If your pediatrician suspects fatty liver, they will send a blood test to check your child's liver function. In a child with fatty liver, a blood test will frequently show elevated levels of a protein called ALT (alanine aminotransferase). This result suggests there is liver inflammation. Sometimes a pediatrician also will perform an abdominal ultrasound, which can show if there is too much fat in the liver.

Other conditions such as viral hepatitis, autoimmune hepatitis, and metabolic diseases can also cause fat accumulation in the liver. Your doctor will perform appropriate blood tests to make sure your child has no other liver diseases.

Once a diagnosis of fatty liver is confirmed, other tests can be used to measure how severe it is. An MRI (magnetic resonance imaging) scan can measure how much fat is in the liver and can look for scar tissue (fibrosis). A liver biopsy also can be helpful to measure inflammation and scar tissue.

## How is fatty liver treated?

The first treatment for fatty liver is to try changing the diet by reducing added sugars. This includes limiting things like sugar sweetened beverages, sugary foods, and all juices. The American Heart Association recommends 25 grams or less per day of added sugars for children, and kids with fatty liver may need even less.

In addition to changing the diet, increasing exercise may promote weight loss and reduce fatty liver. It can be helpful to increase daily physical activity like playing sports, going to a playground, walking, and other activities. Current recommendations suggest 30–60 minutes of activity per day, and kids with fatty liver may need even more.

Because fatty liver does not always improve with a better diet and exercise, sometimes fatty liver in kids is treated with medication. At this time, there is no approved medication for fatty liver. Research studies are currently testing medications to help with fatty liver, especially when there is inflammation and scar tissue. Ask your doctor about research studies in your area or visit **Clinicaltrials.gov**.

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➔ **Locate a Pediatric Gastroenterologist**

**IMPORTANT REMINDER:** This information from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) is intended only to provide general educational information as a definitive basis for diagnosis or treatment in any particular case. It is very important that you consult your doctor about your specific condition.

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