What Is Fatty Liver Disease?

Fatty liver disease is a common condition that occurs when excess fat builds up in the liver, potentially leading to inflammation, liver damage, and serious health complications if left untreated. Often linked to lifestyle factors such as poor diet, obesity, and lack of exercise, this condition may develop silently, showing few or no symptoms in its early stages.

Understanding what fatty liver disease is, what causes it, and how it can be prevented or managed is essential for maintaining long-term liver health and overall well-being. Here, Vikram Patel, MD, gastroenterologist with Salinas Valley Health, discusses the disease types, risk factors, symptoms, and treatment options associated with fatty liver disease.

Why Does Fatty Liver Disease Develop?

Fatty liver disease occurs when excess fat accumulates in the liver, interfering with its normal functions, such as processing nutrients and detoxifying the body. It falls under the broader category of "steatotic liver disease," which includes two main types: metabolic dysfunction-associated steatotic liver disease and alcohol-associated liver disease. For simplicity, both are commonly referred to as fatty liver.

The condition is often linked to conditions such as obesity, diabetes, high cholesterol, and high blood pressure. There's also a form caused by excessive alcohol use, which damages liver cells and leads to fat buildup. While some people develop simple fatty liver with no major damage, it can progress—causing liver inflammation, cell damage, and eventually fibrosis or scarring. Over time, this chronic inflammation may lead to cirrhosis, a serious and advanced form of liver disease.

"When there's advancement of this type of scarring, that's when it can lead to cirrhosis. Fatty liver can be reversible and generally cirrhosis is not," cautions Dr. Patel. "Think of cirrhosis as a form of end-stage liver disease."

When fatty liver disease progresses to cirrhosis or end-stage liver disease, the liver's essential functions are impaired. Severe liver damage can lead to serious complications, including liver failure, fluid buildup in the abdomen, enlarged veins in the esophagus that can bleed, and an enlarged spleen. Cirrhosis may also cause a buildup of ammonia, affecting brain function (hepatic encephalopathy), and increasing the risk of liver cancer, kidney failure, bleeding, and infections.

How Is Fatty Liver Diagnosed?

Fatty liver disease often has no noticeable symptoms, though some individuals may feel fatigue or discomfort in the upper right abdomen. Cirrhosis, a more advanced stage, can range from being asymptomatic to causing severe issues like abdominal fluid buildup or life-threatening bleeding.

While hepatitis C and alcohol were once the leading causes of cirrhosis in the United States, fatty liver is now becoming the most common—highlighting the importance of early screening. Fatty liver is usually detected incidentally through imaging like an ultrasound, often prompted by abnormal liver enzymes in blood work. However, while ultrasounds can confirm the presence of fat or possible scarring, they cannot determine the extent of either.

"One test we use to help better characterize and diagnose fatty liver is a test called the fibro scan. This is a special type of ultrasound that measures the amount of scarring and amount of fat, using high-

frequency sound waves to estimate the stiffness of the liver," explains Dr. Patel. "In general, it helps us keep tabs on overall liver health."

How to Reverse (and Prevent) Fatty Liver Disease

As mentioned, fatty liver disease—particularly in its early stages—can often be reversed through lifestyle changes. These include addressing underlying conditions including those mentioned earlier: obesity, diabetes, and high cholesterol.

Recommended steps include losing 5–10% of body weight, following a healthy diet rich in fruits, vegetables, and healthy fats, reducing sugar and refined carbs, increasing fiber intake, avoiding alcohol, and engaging in regular physical activity—about 150 minutes per week or 30 minutes per day. These measures can significantly improve liver health and help manage or reverse fatty liver disease.

"Diet is really the most important thing. The Mediterranean diet is probably the healthiest diet out there. You want to focus on nutrient-dense foods such as fruits, vegetables, whole grains like quinoa, lean proteins like chicken, fish, and beans," advises Dr. Patel. "Also, try eating healthy fats such as olive oil, avocados, and nuts. And fatty fish like salmon is good, too."

Finally, Dr. Patel assures there is some good news for coffee lovers: black coffee is beneficial for liver health and has been shown to offer protective effects when consumed in moderation—about three cups a day. However, adding sugar, creamers, or flavored syrups can counteract these benefits by contributing to fat buildup in the liver.



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