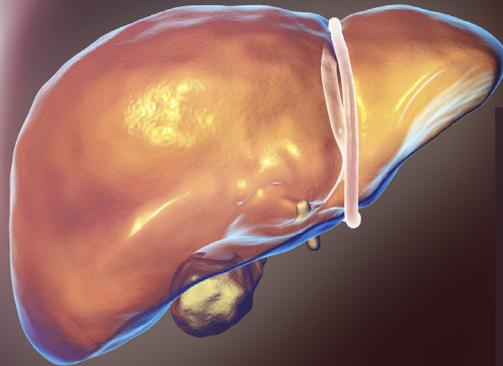


A Closer Look at NASH: A Rarely Discussed Obesity-related Condition

by Daniel Klein, MD



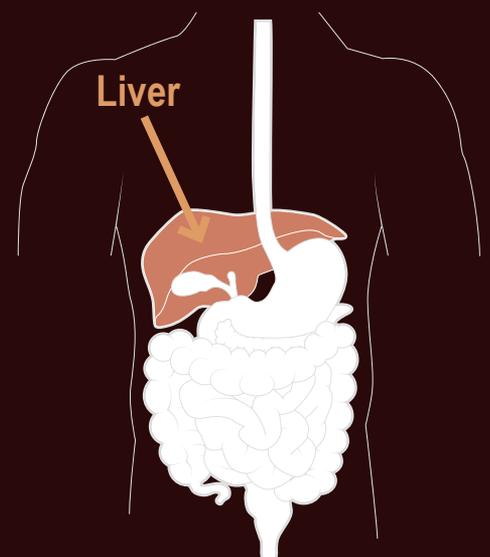
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Obesity has many related health conditions. Most of the time we discuss type 2 diabetes, high blood pressure and sleep apnea. However, there are many more that need to be talked about as well. One of them is nonalcoholic steatohepatitis, more commonly known as NASH. NASH is a type of fatty liver disease. It occurs when an accumulation of fat (steatosis) becomes inflamed (steatohepatitis).

What is NASH?

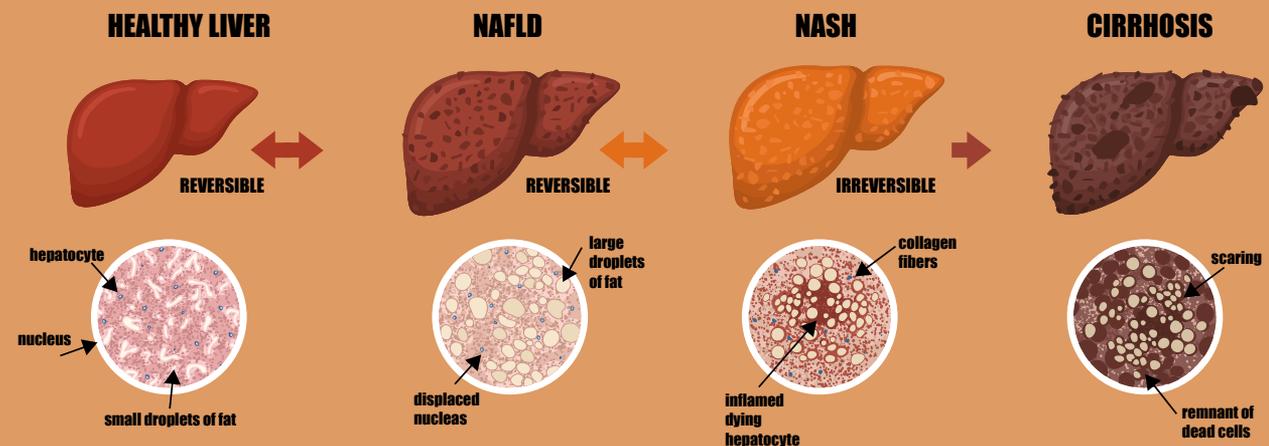
NASH is one of the most severe conditions known to be part of non-alcoholic fatty liver disease (NAFLD). People with NASH might (*at first*) appear to have liver damage caused by excessive alcohol consumption, but is actually caused by other factors such as excess weight and obesity. The presence of excess fat is typically not harmful. However, when it becomes inflamed, it can progress into more serious liver problems such as fibrosis, cirrhosis and possibly liver failure. Excess fat that turns into obesity increases someone's risk for developing NASH. Because of this, weight-loss and weight management is often the first suggested treatment for NAFLD.

While NAFLD is being seen more and more around the world, it is seen most often in countries such as the U.S. and Canada. This is because NAFLD is more common among people with a high rate of obesity, type 2 diabetes, high blood pressure and high cholesterol. Since NAFLD is not caused by excessive alcohol consumption, patients qualify for liver transplants and NAFLD is quickly becoming a reason for liver transplants.



A Closer Look at Liver Health

Below, you will find a series of images which shows the progression of fatty liver disease:



Symptoms of NAFLD and NASH

Most patients with NAFLD show no symptoms. As it progresses towards NASH, some people have a feeling of overall tiredness or experience pain in their upper abdomen. Even then, a healthcare provider (HCP) is often the first to notice a change. Signs of NAFLD are normally first seen in routine labs that include liver test results.

Fatty liver disease alone does not necessarily cause a rise in liver enzymes. However, once inflammation occurs (as in NASH), a HCP may notice elevated levels in liver tests. A HCP will explain what levels are elevated, how they relate to health and how to monitor them. It is also important to note that having a very high level does not always mean an individual has advanced NASH.

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How NAFLD and NASH are Diagnosed

Once elevated liver enzyme levels are found, a HCP may order other tests to determine the cause of the individual's fatty liver disease. Different causes need different treatments. Once excessive alcohol use is ruled out, other tests may include:

- Viral hepatitis (*types A, B, and C*)
- Iron levels
- Other autoimmune liver disorders

Depending on a patient's medical history, additional tests may be needed. A HCP might have an imaging test performed, usually a simple abdominal ultrasound. This test may be required to diagnose fatty liver disease because it looks for the presence of fat accumulation. It also tells the HCP if there are any signs of advanced disease. It's important to note that imaging alone cannot tell if inflammation is present, and additional tests might be ordered to look for that as well.

One of these additional tests may be a liver biopsy. While this is the “gold standard” of testing for fatty liver disease, it is not always required. Usually, a HCP can make a diagnosis based on a patient's medical history, laboratory testing and imaging findings. However, if there is still some doubt or signs of more advanced disease, a liver biopsy (*usually done with a needle through the skin*) may be ordered. A liver biopsy can reveal many things. The results can determine if inflammation is present, and how severe the disease is.

There are Several Things People with NAFLD Need to Know, Including:



- All patients with fatty liver disease should avoid heavy alcohol use (*less than 14 drinks per week for men or less than seven drinks per week for women*) as this can worsen fatty liver disease.



- Immunizations should be kept up to date, and new ones might be needed if there's evidence of advanced liver disease.



- The best treatment for fatty liver disease is weight-loss and weight management. Treating and monitoring other related problems such as elevated cholesterol, blood pressure and blood sugar can also help with the treatment of NAFLD.

Treating NAFLD and NASH

Weight-loss and weight management can improve overall health, including liver health. It is the first step in treatment, and includes lifestyle modifications such as healthy eating and increased physical activity.

The initial goal for patients with NAFLD is to lose 5-7% of their body weight. The suggested rate of weight-loss should be one to two pounds per week. If there is evidence of inflammation, or NASH, a 7-10% weight-loss is often recommended. Once this is achieved, liver enzymes will be rechecked. If they are still elevated, further weight-loss may be needed. Medications for weight-loss are an option and can be helpful for some patients.

If someone is unable to meet their weight-loss goals and they have a BMI greater than 35, bariatric surgery should be considered. This is particularly true for patients with NASH or fibrosis. Studies show that fatty liver disease improves after surgery a majority of the time, and about half of patients also see a decrease in inflammation.

Some medications prescribed for NASH can directly target the liver. They show promising results, but do not work well for all patients. Examples include:

- Patients without type 2 diabetes may benefit from daily vitamin E, but this depends on their medical history.
- Patients with type 2 diabetes may be started on medications such as pioglitazone or liraglutide.

There are other FDA-approved medications specifically for weight-loss. A HCP can discuss them and help an individual decide if they would be beneficial based on the patient's medical history.



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If you have fatty liver disease, your HCP will likely require regular bloodwork and follow-up visits every three to six months. He or she can also monitor your liver enzyme levels and help you achieve your weight goals. If you had a biopsy that diagnosed NASH, your HCP may want to schedule more tests to see if you are getting better.

Drug companies are working to make the first FDA-approved medication for the specific treatment of NASH. Unfortunately, there is no telling when it will become available. As with many other health issues, weight-loss and weight management are the primary treatments for fatty liver disease. Anyone interested in reducing their risk for NAFLD and NASH is encouraged to talk with their HCP to determine a treatment plan that will work best for them.

About the Author:

Daniel Klein, MD, is a physician currently training in Obesity Medicine under Christopher D. Still, DO, (a Founding Board Member and Emeritus Member of the OAC Board of Directors) at Geisinger Medical Center in Danville, Pennsylvania. He has a particular interest in the pharmacologic and surgical management of weight loss. A native of Florida, Dr. Klein completed his Internal Medicine training in Fort Lauderdale before moving to Pennsylvania.