

Non-Alcoholic Fatty Liver Disease

Fatty liver (steatosis) is a buildup of fat in the liver. Nonalcoholic fatty liver disease (NAFLD) is fatty liver in someone who does not drink alcohol and for whom no other cause for fatty liver disease can be found. It is the most common cause of chronic liver disease in the U. S.

NAFLD increases a person's risk of early death. The most common cause of early death in individuals with NAFLD is cardiovascular disease, such as heart attack or stroke. About 1 of every 5 persons with NAFLD can develop non-alcoholic steatohepatitis (NASH).

NASH occurs when fatty liver disease has progressed to inflammation in the liver and can lead to severe scarring (cirrhosis). In cirrhosis, the liver does not work very well and a person can develop liver failure, liver cancer, and even die from liver related illness. Currently there are no good tests to determine who has NASH without a liver biopsy.

Cause of fatty liver disease

We don't know what causes fatty liver disease, but research shows that it occurs more often in people who have:

1. Obesity
2. Type 2 diabetes
3. High cholesterol or high triglycerides (Triglycerides are the chemicals that carry fats in the blood)
4. Metabolic syndrome, which is diagnosed when a person has at least 3 of the following:
 - a waist measurement of 35 inches or more in a woman or 40 inches or more in a man,
 - blood pressure 135/85 or higher,
 - triglycerides 150 or higher,
 - fasting blood sugar of 110 or higher,
 - HDL cholesterol less than 40 in a man or less than 50 in a woman. (HDL stands for "high density" lipoprotein and low levels of this make someone more likely to get heart disease.)

Diagnosing fatty liver disease

Blood tests - Routine blood tests usually done for other reasons may show that liver tests called ALT and AST are high, but sometimes these blood tests are normal in a person who has fatty liver. More blood tests may be done to check for other liver problems. These tests look for autoimmune (the body fighting itself) and viral (hepatitis A, B, and C) markers.

Ultrasound, CT, or MRI - These tests are done in radiology. A picture of your liver is taken and may show excess fat.

Liver biopsy - This test is only done if it is unknown what is causing your liver disease or if there is concern that you might have scarring (cirrhosis). A needle is put through the skin to obtain a small amount of liver tissue. This is then examined under a microscope to see if there is fat or scarring present.

Treatment for fatty liver

Treatment for fatty liver focuses on taking care of your liver and any other conditions you have that may be causing extra fat in your liver. The American Association for the Study of Liver Diseases has released a guideline with recommendations for persons with fatty liver. Following these may decrease the fat in your liver and prevent liver disease, cirrhosis, and liver cancer.

1. **Limit your alcohol.** Not drinking will help you lose weight and protect your liver. More than 1 drink per day for a woman or 2 drinks per day for a man is considered too much. This website can help you learn if you are over drinking.

<http://rethinkingdrinking.niaaa.nih.gov/IsYourDrinkingPatternRisky/WhatsARiskOrHeavyDrinking.asp>

2. **Lose weight** if you are overweight. Studies show that weight loss can improve liver blood tests and result in less fat in the liver. Losing 3-5% of your body weight can decrease liver fat, but a 10% loss will decrease inflammation in the liver. Gradual weight loss is recommended; no more than 1 pound per week.

3. **Exercise** daily for 30 minutes for a total of at least 2 ½ hours per week. Exercise will decrease fat in the liver, but may not decrease inflammation without weight loss. The U. S. Surgeon General recommends walking 10,000 steps a day. Look at this website for walking advice:
<http://www.shapeup.org/resources/10ksteps.html>
4. **Eat a healthy, low calorie diet** for weight loss. You can get a healthy weight loss diet plan from a nutritionist. Ask your primary care provider for a referral to a nutritionist.
5. If you have **high cholesterol or triglycerides**, lower them through a healthy plant-based diet, exercise, and if needed, medication.
6. **Vitamin E 800 IU daily** may help your liver if you have NASH and do not have diabetes.

For more information visit:

- <http://www.anthctoday.org/community/hep/patients/>
- <http://www.mayoclinic.org/diseases-conditions/nonalcoholic-fatty-liver-disease/basics/definition/con-20027761>
- <http://www.liverfoundation.org/abouttheliver/info/naflid/>

Here are some applications for your phone or tablet that can help you make healthy food choices and track your exercise:

- Lose It! – A weight loss app that allows you to track your calories and exercise. Set a weight loss goal and this app will help you achieve it.
- Fooducate – A weight loss app that will help you choose healthy foods.
- Pedometerfree – This is one of many pedometer apps available. Try tracking your daily step count for a few days and then increase your daily steps by 1,000 every week to a goal of 10,000 steps daily.

If you have questions or concerns about your liver health or would like to schedule an appointment to be seen in the Liver Clinic, call us at 729-1560.

Follow Up

Be sure to see your primary care provider for regular check-ups and blood tests to monitor your liver health.