What is nonalcoholic fatty liver disease, and how can we treat it?

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What is this article about?

• Nonalcoholic fatty liver disease (NAFLD) is caused by too much fat building up in the liver.
• The extra fat can cause the liver to become inflamed and lead to liver damage. This is known as nonalcoholic steatohepatitis (NASH). NASH may also cause scar tissue to form (fibrosis) in the liver.
• If NASH gets worse, it can lead to severe scarring (cirrhosis) or liver cancer. A liver transplant may then be needed.

• NAFLD occurs in 25 in 100 people worldwide, and 2 to 6 people out of every 100 have NASH.
What are the risk factors for developing NAFLD/NASH?

- Having excess weight in relation to one’s height is the most common risk factor for developing NAFLD/NASH.
- Other risk factors include having type 2 diabetes, metabolic syndrome, and high levels of fat in the blood.
  - A person has metabolic syndrome if they have 3 or more of the following conditions:
    - High level of triglycerides*
    - Low level of good cholesterol*
    - High blood pressure
    - Large waist size
    - Type 2 diabetes

What are the symptoms of NAFLD and NASH?

- People with early-stage NAFLD or NASH may not have any symptoms. Or they may have non-specific symptoms, like feeling tired or having discomfort in the stomach area (abdomen). People often do not realize that they have NAFLD or NASH until the condition becomes more advanced.
- As the liver becomes more damaged, people may have abdominal pain and swelling. Also, their urine often becomes dark-colored, the skin and whites of the eyes turn yellow (jaundice), and they have itchy skin.
- People with severe liver scarring (advanced cirrhosis) have worsening jaundice. Their legs, feet, and abdomen may swell up. They may bruise or bleed more easily. They may also lose their appetite, and feel very tired/lack energy (fatigue).
How are NAFLD and NASH diagnosed?

- NAFLD/NASH may be diagnosed when a person visits a doctor about a different condition. Or a doctor may suspect a person might have NAFLD/NASH because risk factors are present.
- The doctor will perform a physical exam, and order blood tests to check how well the liver is working.

- Liver imaging tests, such as an ultrasound scan or magnetic resonance imaging (MRI), will also be done.

- The doctor will also check to see if a person has other risk factors for developing NAFLD/NASH (such as obesity, type 2 diabetes).
- Doctors can work out the chances of someone having NASH fibrosis by using special risk assessment scores.

- Some people may need to have a liver biopsy.
  - Here, people have a local anesthetic to numb the skin over the liver. Doctors then remove a tiny piece of liver tissue (using a special needle) to look at with a microscope.

Are any other conditions associated with NAFLD/NASH?

- People with NAFLD/NASH have a higher risk of developing certain other conditions, such as:
  - Heart diseases including abnormal heart rhythms, high blood pressure, and narrowing of blood vessels that supply the heart (coronary heart disease). Also, damage to the heart muscle (cardiomyopathy and heart failure) and risk of blood clots
    - Heart disease is the most common cause of death in people with NAFLD/NASH
  - Chronic kidney disease
  - Liver cancer, as well as other types of cancer, such as cancer of the pancreas, bowel (colon), stomach, and womb (uterus)

How can we treat people with NAFLD/NASH?

Treatment focuses on lifestyle changes that help people lose weight, including:

- Eating fewer calories
- Eating healthy foods
- Increasing physical activity
A person with NAFLD will need to lose at least 5% of their body weight to reduce the amount of fat build-up in the liver. A person with severe NASH (fibrosis) will need to lose at least 10% of their body weight to improve liver scarring.

If lifestyle changes are not enough to achieve the weight loss needed, surgery may be an option—but it does have risks.

If a person with NAFLD/NASH has other medical conditions, such as type 2 diabetes, high blood pressure, high blood fats, or kidney disease, these will also need to be treated.

Currently, no medicines are approved to treat people with NAFLD/NASH, but several clinical trials are in progress to investigate potential new medicines.

A person with NASH (or NAFLD that is getting worse quickly), may be given vitamin E (unless they have diabetes). If they have type 2 diabetes, they could take a medicine called pioglitazone.

A person with advanced NASH, where the liver scarring (cirrhosis) is so severe it is causing liver failure, will eventually need a liver transplant.

**What are the authors’ main conclusions?**

- It is important for doctors to be aware of NAFLD and NASH, so they can recognize when a person has the disease or if they may have a higher risk of developing the condition.
- Early diagnosis and treatment of NAFLD/NASH are important to avoid liver damage becoming worse.
- The main treatment for NAFLD/NASH are lifestyle changes leading to weight loss, but medicines may be available in the future.

**How to say:**

- Cirrhosis (sih-roh-sis)
- Fibrosis (fibe-roh-sis)
- Inflammation (in-flam-ay-shun)
- Jaundice (jawn-dis)
- Pioglitazone (pie-oh-glit-ah-zone)
- Steatohepatitis (stee-at-oh-hep-a-tite-iss)

**Where can I go for further information?**

You can find more information on NAFLD/NASH here:

- [https://www.the-nash-education-program.com/what-is-nash/who-is-at-risk-for-nash/](https://www.the-nash-education-program.com/what-is-nash/who-is-at-risk-for-nash/)
- [https://www.niddk.nih.gov/health-information/liver-disease/nafld-nash](https://www.niddk.nih.gov/health-information/liver-disease/nafld-nash)
- [https://healthunlocked.com/fatty-liver-nash](https://healthunlocked.com/fatty-liver-nash)
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