



NONALCOHOLIC STEATOHEPATITIS

WHAT IS NASH?

NASH is a serious form of fatty liver disease that causes the liver to swell and become damaged due to the fat deposits in the liver. NASH may get worse and may lead to serious liver scarring, called cirrhosis, and even liver cancer. This damage is like the damage caused by heavy alcohol use.

SYMPTOMS

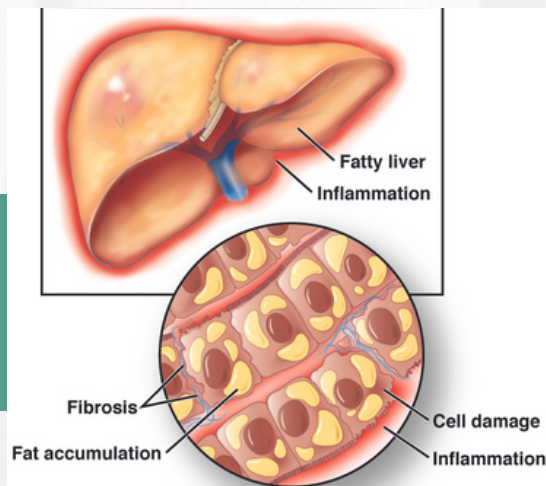
- Itchy skin.
- Abdominal swelling, also called ascites
- Shortness of breath.
- Swelling of the legs.
- Red palms
- Spider-like blood vessels just beneath the skin's surface.
- Enlarged spleen.
- Yellowing of the skin and eyes, or jaundice.

CAUSES

- Genetics.
- Overweight or obesity.
- Insulin resistance, which happens when your cells don't take up sugar in response to the hormone insulin.
- Type 2 diabetes, sometimes called high blood sugar or hyperglycemia.
- High levels of fats, especially triglycerides, in the blood.

RISK FACTORS

- People older than 50.
- People with certain genetic risk factors.
- People with obesity.
- People with diabetes or high blood sugar.
- People with symptoms of metabolic syndrome, such as high blood pressure, high triglycerides and a large waist size.



COMPLICATIONS

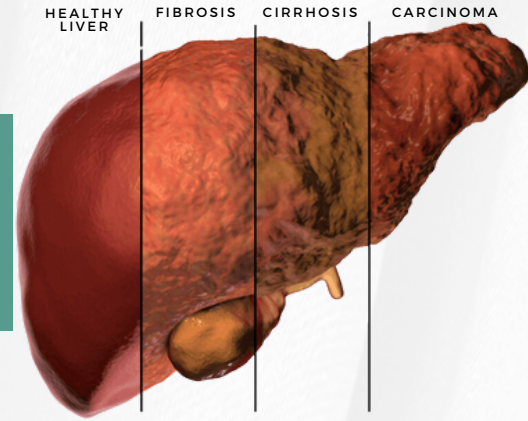
- Severe liver scarring and cirrhosis are the main complications of NASH. Cirrhosis happens because of liver injury due to inflammation in NASH.
- As the liver tries to stop the inflammation it creates scarring (fibrosis) which spreads with ongoing inflammation.
- If nothing is done it can lead to:
 - Fluid build up in the stomach (ascites)
 - swollen veins in your esophagus, esophageal varices which can rupture and bleed
 - Confusion, sleepiness and slurred speech (hepatic encephalopathy)
 - Overactive spleen which can cause decreased platelets
 - Liver cancer
 - End-stage liver failure

PREVENTION

- Eat a healthy diet rich in fruits, vegetables, whole grains and healthy fats
- Limit alcohol, simple sugars and portion sizes
- Keep a healthy weight
- Exercise



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HOW IS NASH DIAGNOSED?

• Blood Tests

- Complete blood count.
- Iron studies, which show how much iron is in your blood and other cells.
- Liver enzyme and liver function tests.
- Tests for chronic viral hepatitis (hepatitis A, hepatitis C and others).
- Celiac disease screening test.
- Fasting blood sugar.
- Hemoglobin A1C, which shows how stable your blood sugar is.
- Lipid profile, which measures blood fats, such as cholesterol and triglycerides

• Imaging Procedures

- Abdominal ultrasound, which is often the first test used when liver disease is suspected.
- Magnetic resonance imaging (MRI) or computerized tomography (CT) scanning.
- Transient elastography, a newer type of ultrasound that measures the stiffness of your liver. Liver stiffness is a sign of fibrosis or scarring.
- Magnetic resonance elastography, which combines MRI imaging with sound waves to create a visual map, or elastogram, showing the stiffness of body tissues.

• Liver biopsy

- Procedure to remove a small piece of tissue from your liver. Usually done using a needle through the abdominal wall and the sample is looked at for signs of Inflammation and scarring

TREATMENT

- Weight loss
 - Healthy diet
 - Limiting portion sizes
 - Exercise
 - Weight loss surgery or medicine
- Liver transplant

LIFESTYLE AND HOME REMEDIES

- Lose weight
- Choose a healthy diet
- Exercise and be more active
 - aim for at least 150 minutes of exercise a week
- Manage your diabetes
 - Take medication as instructed and monitor blood sugar closely
- Lower your cholesterol and blood pressure
- Protect your liver
 - Don't drink alcohol
 - Follow instructions on all medication and nonprescription drugs
 - Check with provider before using herbal supplements