



NASH
Non-alcoholic steatohepatitis



How's your liver?

A potentially life-saving question you've probably never asked yourself

NASH is a common but often 'silent' liver disease that ultimately leads to devastating consequences for many. Although similar to alcoholic liver disease, it is not caused by drinking too much alcohol.

What is NASH?

NASH stands for non-alcoholic steatohepatitis. NASH occurs when there is a build-up of too much fat in the liver, accompanied by inflammation and damage. It often occurs in people who have obesity and other health issues such as diabetes and high cholesterol.

NASH has become more common. It is estimated that around 30% of the general population have excess fat in their liver and up to 30% of these people have NASH.*

NASH is not caused by drinking alcohol excessively. However, under the microscope the liver damage can appear similar to that caused by high alcohol intake.

What does the liver do?

The liver is the largest internal organ and sits on the right hand side of the belly. It is important for the liver to stay healthy because it has hundreds of functions. The liver turns the nutrients in our diets into important substances that the body needs. It also stores energy for use throughout the day and helps remove toxic substances from the body.

How can NASH affect my health?

NASH is a chronic disease, which means that it affects your health over the course of many years. If left unchecked, NASH can worsen, causing injury to and scarring of the liver. Eventually the liver may not be able to work properly and the damage may lead to liver cancer or death for some people. In the end stages, a liver transplant may be needed, though access to transplantation is severely limited and not guaranteed. NASH also leads to a higher rate of death from heart disease and other illnesses.

Am I at risk?

NASH is most common in people who are both middle-aged, especially over 50 years of age, and overweight or obese. However, people who look healthy with a normal weight can still have NASH, and the disease can even occur in children.

You are also more likely to develop NASH if you have type 2 diabetes, high cholesterol or triglycerides, or a combination of these health issues known as 'metabolic syndrome.'

How do I know if I have NASH?

In the early stages, you may have few or no symptoms at all. In the later stages, you could experience fatigue, weight loss, and weakness.

NASH might first be suspected in patients who have abnormal liver tests, but have no obvious reason for liver disease (for example, the use of certain medications, viral hepatitis, or consuming too much alcohol). Sometimes, ultrasound or MRI tests conducted for a different reason can show enlargement of the liver or detect the presence of fat. These findings can suggest a NASH diagnosis.

NASH is usually diagnosed by taking a small sample of your liver, known as a biopsy, and examining it under a microscope. Blood tests and scans for NASH are currently being developed.

If you are interested in participating in a NASH trial, please ask your doctor about FLIGHT-FXR.



NASH causes damage to the liver

Additional information regarding this trial is available at ClinicalTrials.gov with the study Identifier: NCT02855164 and at <http://www.trials.novartis.com/en/clinical-trials/nash-clinical-trial/>

*Dyson JK, et al. Non-alcoholic fatty liver disease: a practical approach to diagnosis and staging. *Frontline Gastroenterol.* 2014;5(3):211-218.



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