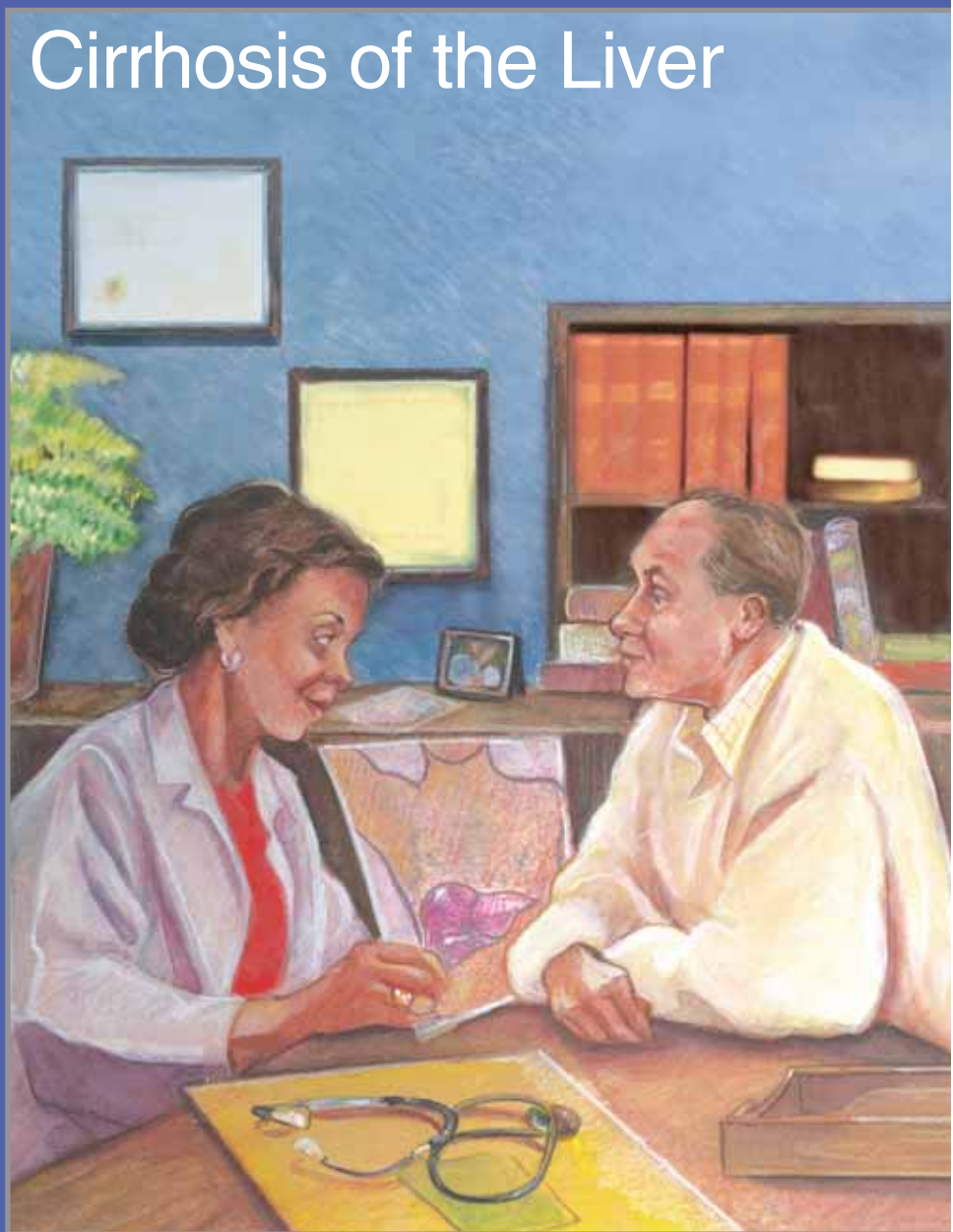


What I need to know about Cirrhosis of the Liver



NATIONAL INSTITUTES OF HEALTH
National Digestive Diseases Information Clearinghouse



U.S. Department
of Health and
Human Services

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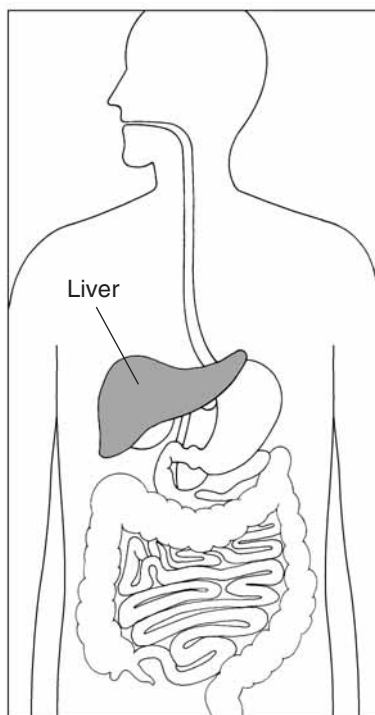
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What is cirrhosis of the liver?

Cirrhosis refers to scarring of the liver. Scar tissue forms because of injury or long-term disease. It replaces healthy tissue.

Scar tissue cannot do what healthy liver tissue does—make protein, help fight infections, clean the blood, help digest food, and store energy for when you need it. Scar tissue also blocks the normal flow of blood through the liver. Too much scar tissue means that your liver cannot work properly. To live, you need a liver that works.

Cirrhosis can be life-threatening, but it can also be controlled if treated early.



What are the symptoms of cirrhosis?

You may have no symptoms at all in the early stages. As cirrhosis progresses you may

- feel tired or weak
- lose your appetite
- feel sick to your stomach
- lose weight

Cirrhosis can also lead to other problems.

- You may bruise or bleed easily, or have nosebleeds.
- Bloating or swelling may occur as fluid builds up in the abdomen or legs. Fluid build up in the abdomen is called ascites (ah-SI-teez) and in the legs is called edema.
- Medications may have a stronger effect on you because your liver does not break them down as quickly.
- Waste materials from food may build up in the blood or brain and may cause confusion or difficulty thinking. For example, protein that you eat breaks down into chemicals like ammonia. When red blood cells get old, they break down and leave a substance called bilirubin (bil-ih-ROO-bun). A healthy liver removes these byproducts, but a diseased liver leaves them in the body.

- Blood pressure may increase in the vein entering the liver, a condition called portal hypertension.
- Enlarged veins, called varices (VARE-ah-seez), may develop in the esophagus and stomach. Varices can bleed suddenly, causing vomiting of blood or passing of blood in a bowel movement.
- The kidneys may not work properly or may fail.

As cirrhosis progresses, your skin and the whites of your eyes may turn yellow, a condition called jaundice (JON-diss). You may also develop severe itching or gallstones.

In the early stages, cirrhosis causes your liver to swell. Then, as more scar tissue replaces normal tissue, the liver shrinks.

About 5 percent of patients with cirrhosis also get cancer of the liver.

What causes cirrhosis?

Cirrhosis has many causes, including

- alcohol abuse (alcoholic liver disease)
- chronic viral hepatitis (hepatitis B, C, or D)
- autoimmune hepatitis, which is destruction of liver cells by the body's immune system
- nonalcoholic fatty liver disease or nonalcoholic steatohepatitis (NASH), which is fat deposits and inflammation in the liver

- some drugs, toxins, and infections
- blocked bile ducts, the tubes that carry bile from the liver
- some inherited diseases such as
 - hemochromatosis (HEE-moh-KROH-muh-TOH-sus), a disease that occurs when the body absorbs too much iron and stores the excess iron in the liver, pancreas, and other organs
 - Wilson disease, which is caused by the buildup of too much copper in the liver
 - protoporphyria (PROH-toh-pour-FEAR-ee-uh), a disorder that affects the skin, bone marrow, and liver

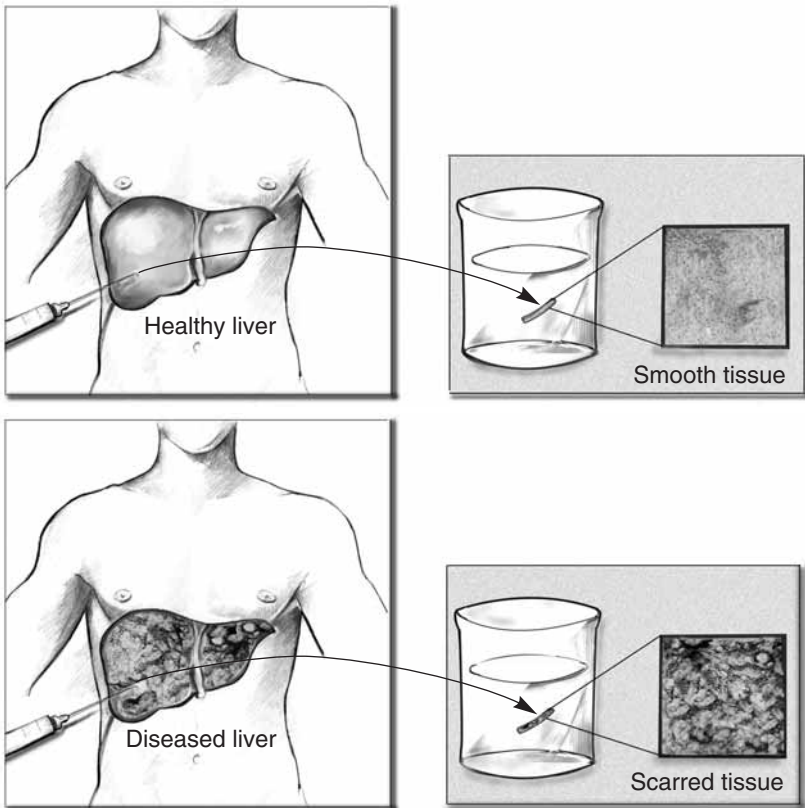
Sometimes the cause of cirrhosis remains unknown even after a thorough medical examination.

How is cirrhosis diagnosed?

Your symptoms, a physical examination, and certain tests can help your doctor diagnose cirrhosis. Some tests are

- Blood tests to see whether your liver is working properly. Routine blood tests may be normal in cirrhosis. However, with advanced cirrhosis, blood tests may reveal abnormal levels of bilirubin and other substances.

- X rays, magnetic resonance imaging, or ultrasound images, which are pictures developed from sound waves, may show an enlarged or shrunken liver.
- Liver biopsy, an examination of a piece of your liver under a microscope, to look for scar tissue. This is the most accurate way to diagnose cirrhosis.



In a liver biopsy, a needle is used to take a small piece of liver tissue. That sample is then examined under a microscope.

How is cirrhosis treated?

Once you have cirrhosis, nothing can make the scar tissue go away completely. However, treating the cause will keep cirrhosis from getting worse. For example, if cirrhosis is due to alcoholic liver disease, the treatment is to completely stop drinking alcohol. If cirrhosis is caused by hepatitis C, then that disease may be treated with medication.

Your doctor will suggest treatment based on the cause of your cirrhosis and your symptoms. Early diagnosis and carefully following an appropriate treatment plan can help many people with cirrhosis. In very advanced cirrhosis, however, certain treatments may not be possible. In that situation, your doctors will work with you to prevent or manage the complications that cirrhosis can cause.

What if the treatment doesn't work?

If too much scar tissue forms, your liver could fail. Then you may need to consider a liver transplant. A liver transplant can return you to good health. For information about liver transplantation, please see the *What I need to know about Liver Transplantation* booklet from the National Institute of Diabetes and Digestive and Kidney Diseases.

How can I prevent cirrhosis if I already have liver disease?

- See your doctor for treatment of your liver disease. Many of the causes of cirrhosis are treatable, and early treatment may prevent cirrhosis.
- Follow a healthy lifestyle, eat a healthy diet, and stay active.
- Try to keep your weight in the normal range. Being overweight can make several liver diseases worse.
- Do not drink alcohol. Alcohol can harm liver cells, and chronic alcohol use is one of the major causes of cirrhosis.
- Stay away from illegal (street) drugs, which can increase your chances of getting hepatitis B or hepatitis C.
- See your doctor if you have chronic viral hepatitis. Effective treatments for both hepatitis B and hepatitis C are available. If you are on treatment, follow your treatment directions exactly.
- If you have autoimmune hepatitis, take medications and have regular check-ups as recommended by your doctor or a liver specialist (hepatologist).

What can I do to keep cirrhosis from getting worse?

- Stop drinking alcohol completely.
- Do not take any medications, including those you can buy without a prescription such as vitamins and herbal supplements, without discussing them with your doctor. Cirrhosis makes your liver sensitive to certain medications.
- Get vaccinated against hepatitis A and hepatitis B. These forms of liver disease are preventable. Also, ask your doctor about getting a flu shot and being vaccinated against pneumonia.
- Avoid eating raw oysters or other raw shellfish. Raw shellfish can harbor bacteria (*Vibrio vulnificus*) that cause severe infections in people with cirrhosis.

For More Information

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24-hour helpline (7 days/week): 1-800-465-4837
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Phone: 1-800-676-9340 or 212-668-1000

Email: info@liverfoundation.org

Internet: www.liverfoundation.org

Hepatitis Foundation International

504 Blick Drive

Silver Spring, MD 20904-2901

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Internet: www.hepfi.org

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The National Digestive Diseases Information Clearinghouse (NDDIC) is a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health under the U.S. Department of Health and Human Services. Established in 1980, the Clearinghouse provides information about digestive diseases to people with digestive disorders and to their families, health care professionals, and the public. The NDDIC answers inquiries, develops and distributes publications, and works closely with professional and patient organizations and Government agencies to coordinate resources about digestive diseases.

Publications produced by the Clearinghouse are carefully reviewed by both NIDDK scientists and outside experts.

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This booklet is also available at www.digestive.niddk.nih.gov.



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National Institute of Diabetes and
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