COMMUNITY LIVER ALLIANCE ™

GLOBAL AWARENESS. LOCAL IMPACT.

Cirrhosis Toolkit

Remember, small acts of kindness and positive reinforcement can make a significant difference for individuals facing end-stage liver disease.

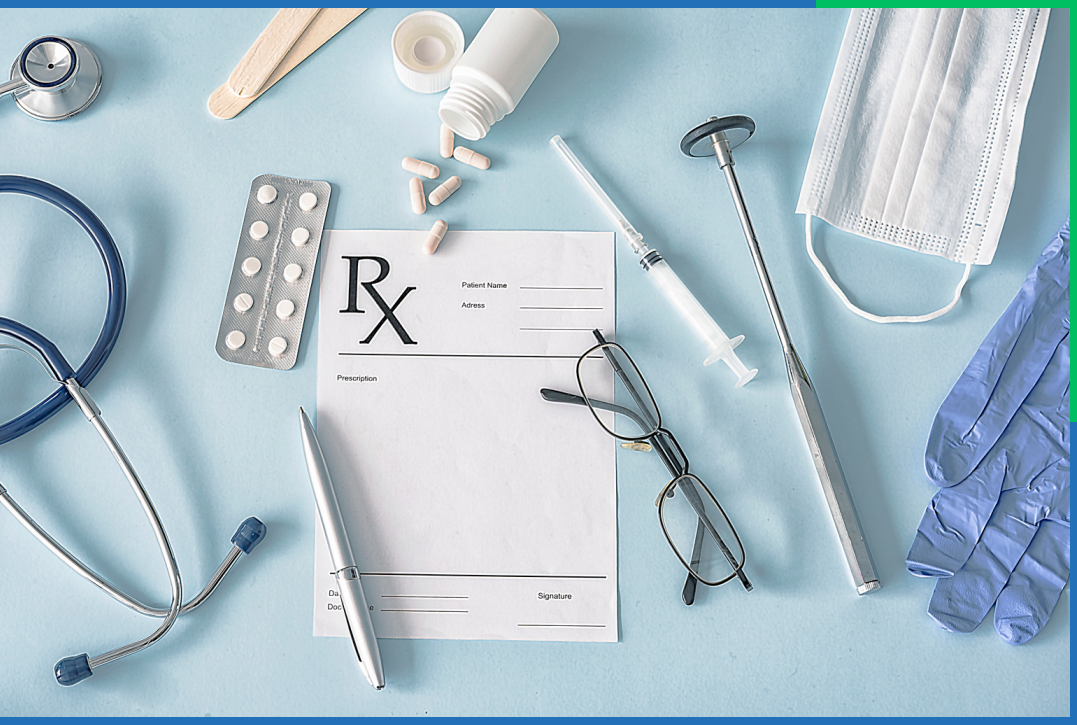


GOALS

- Help you make informed decisions about your treatment options and how to manage your symptoms.
- Help you understand cirrhosis.
- Help you talk to your doctors, caregivers and family members about cirrhosis.
- Provide resources and access to clinical trial opportunities.

Cirrhosis Guidelines for Patients

The CLA Cirrhosis Toolkit is a resource tool to help you learn more about the disease. You can download this kit and the informational videos to help you educate yourself more thoroughly on your diagnosis, potential treatments and management of cirrhosis. Our tools will also help you prepare for doctor visits and will offer ideas on how to manage your symptoms.



communityliveralliance.org

The Liver and Its Function

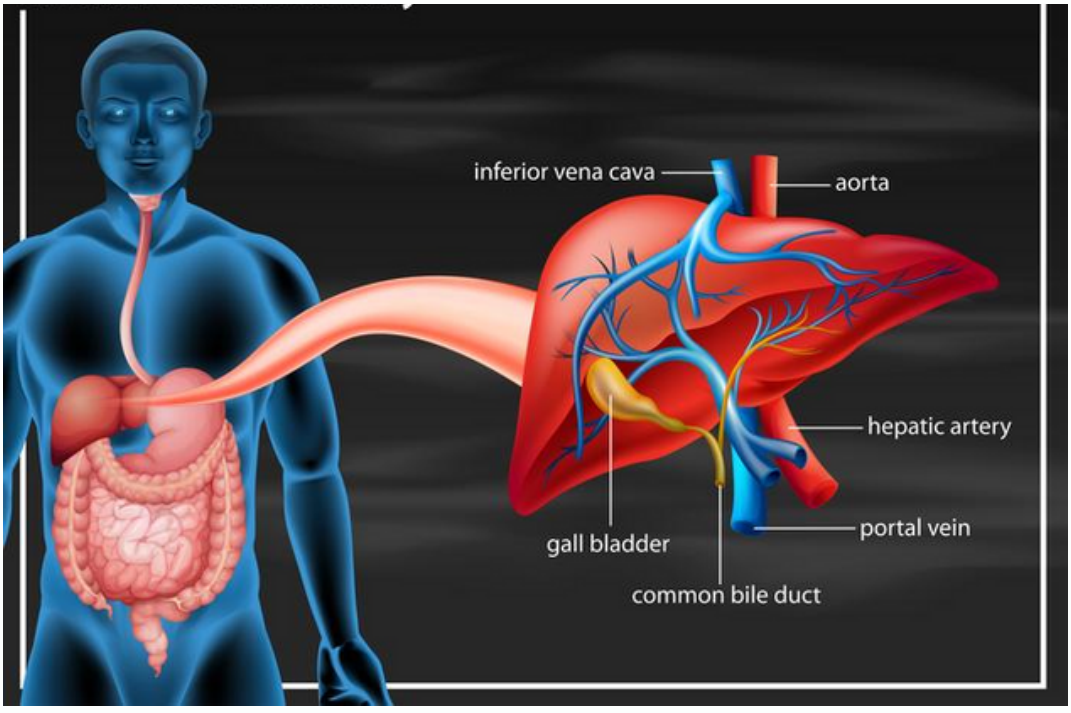
The liver is located in the upper right-hand portion of your abdominal cavity, beneath your diaphragm, and on top of your stomach, right kidney and intestines.

Shaped like a cone on the front side and like a triangle on the back, the liver is a dark reddish-brown organ that weighs about 3 pounds.

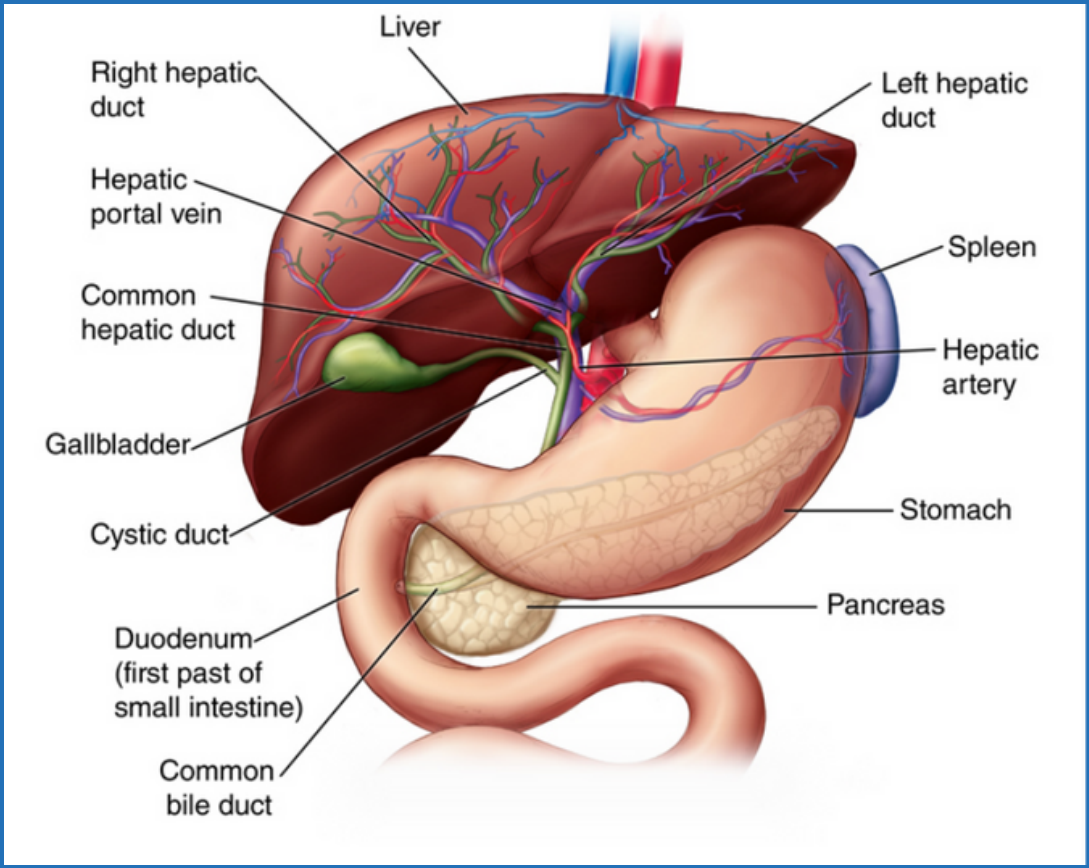
There are 2 distinct sources that supply blood to the liver:

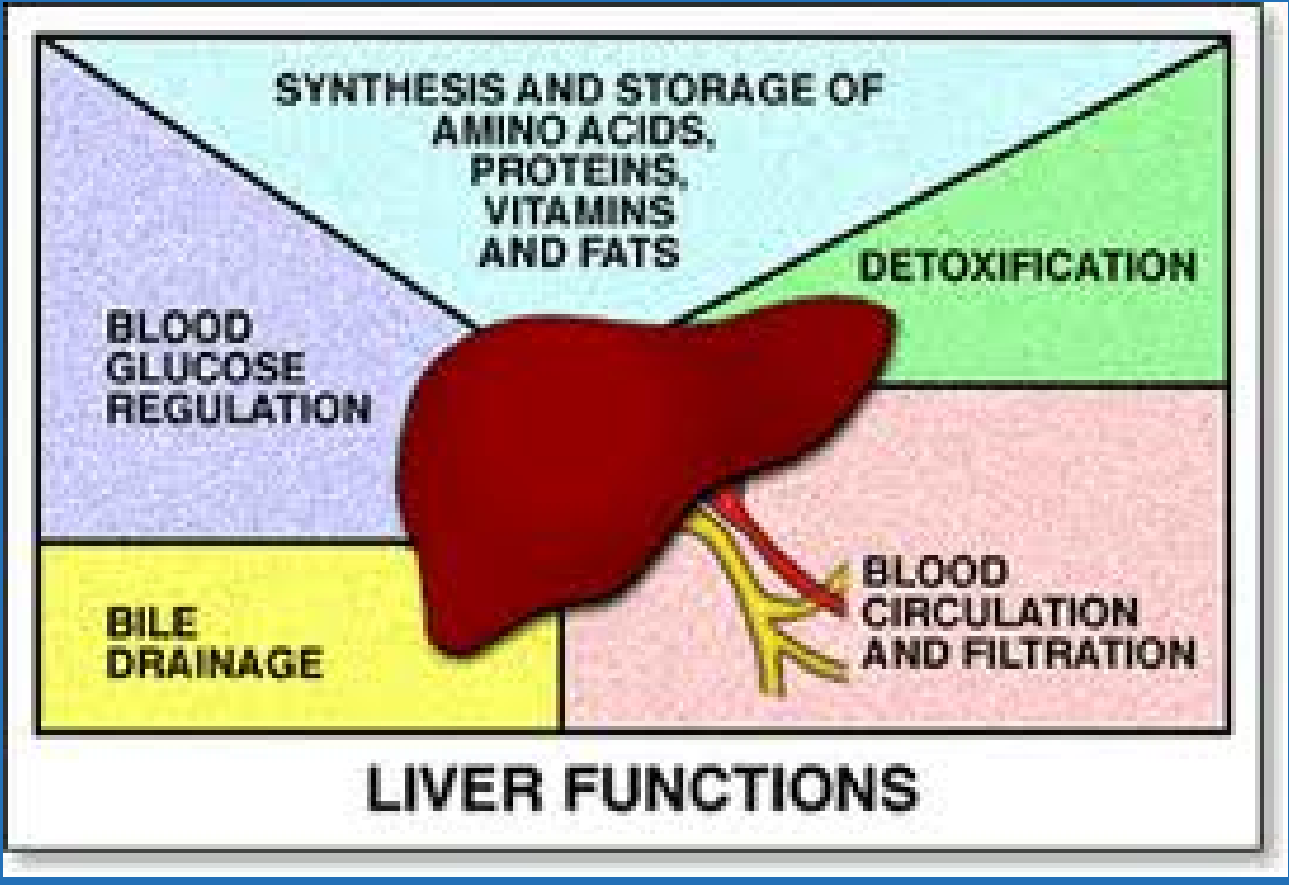
Oxygenated blood flows in from the hepatic artery

Nutrient-rich blood flows in from the hepatic portal vein



The Liver and Its Function





Did You Know...

Your liver holds about one pint (13%) of the body's blood supply.

Your liver has 500 functions.

Your liver consists of 2 main lobes made up of 8 segments that consist of 1,000 lobules (small lobes).

These lobules are connected to small ducts (tubes) that connect with larger ducts to form the common hepatic duct.

Your liver regulates most chemical levels in the blood and excretes bile to help carry away waste products from the liver.

The liver processes this blood to create nutrients and metabolizes drugs that are nontoxic and easier for the rest of the body.

These ducts transport the bile made by the liver cells to the gallbladder and the first part of the small intestines.

All the blood leaving the stomach and intestines passes through the liver.

LIVER DISEASE refers to any condition that negatively impacts your liver. There are more than 100 different types of liver disease and a variety of factors that can lead to liver disease.

Common causes of liver disease include:

- Viral infections such as hepatitis B and C
- Genetics
- Underlying autoimmune disease
- Alcohol abuse
- Obesity
- Poor diet/lifestyle
- Certain drugs, medications, and chemicals
- Bile duct diseases

Causes of chronic liver disease

Viral	Metabolic	Vascular	Autoimmune
Alcohol	Hemochromatosis	Portal Vein thrombosis	Autoimmune hepatitis
Inherited	Wilson's disease	Hepatic Vein thrombosis	Primary biliary cirrhosis
Toxins CCl 4 Aflatoxin	α1antitrypsin deficiency	Non Alcoholic Fatty Liver Disease	Primary sclerosing cholangitis

Cirrhosis

Cirrhosis is severe scarring of the liver.

This serious condition can be caused by many forms of liver disease and conditions, such as

- Hepatitis
- Fat deposits in the liver cause by genetics and lifestyle (or a combination of both)
- Chronic alcoholism

Each time your liver is injured, it tries to repair itself. In the process, scar tissue forms. As cirrhosis gets worse, more and more scar tissue forms, making it difficult for the liver to do its job.

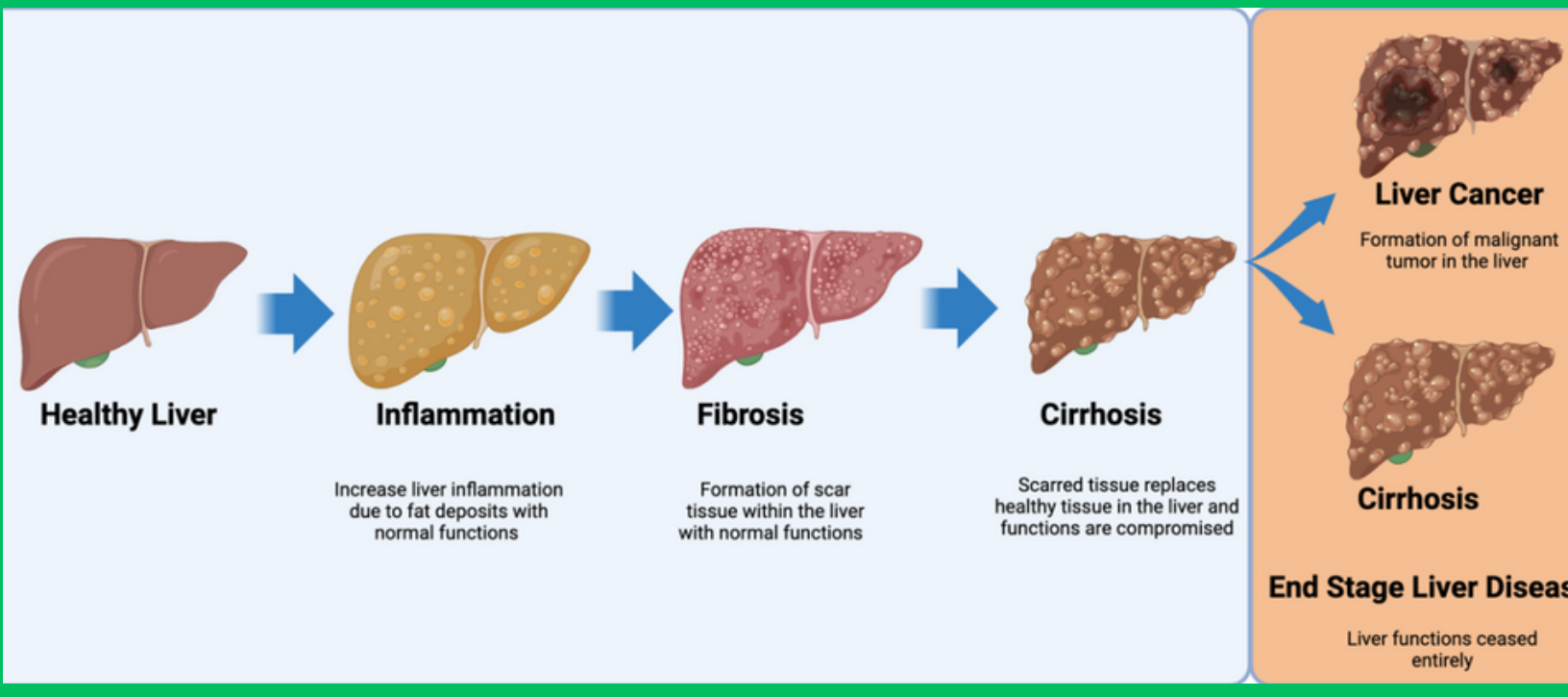
Advanced cirrhosis is life-threatening. The liver damage caused by cirrhosis generally cannot be undone. But if liver cirrhosis is diagnosed early and the underlying cause is treated, further damage can be limited. In rare cases, it may be reversed.

Cirrhosis often has no symptoms until liver damage is severe. When symptoms do occur, they may include

- Fatigue.
- Easily bleeding or bruising.
- Loss of appetite.
- Nausea.
- Swelling in the legs, feet or ankles, called edema.
- Weight loss.
- Itchy skin.
- Yellow discoloration in the skin and eyes, called jaundice.
- Fluid accumulation in the abdomen, called ascites (uh-SAHY-teez).
- Spider-like blood vessels on the skin.
- Redness in the palms of the hands.
- Pale fingernails, especially the thumb and index finger.
- Clubbing of the fingers, in which the fingertips spread out and become rounder than usual.
- For women, absence of or loss of periods not related to menopause.
- For men, loss of sex drive, testicular shrinkage or breast enlargement, known as gynecomastia.
- Confusion, drowsiness or slurred speech.

Stages of Liver Disease

While causes and types of liver disease may vary, the progression of the disease and damage that occurs is similar. Liver disease can generally be broken down into four stages ranging from minor to severe.



1 Inflammation

In the early stages of liver disease, the liver will become swollen or inflamed as the body's natural response to injury and as a result the liver accumulates tiny fat deposits in its cells.

Liver inflammation, or hepatitis, can also occur when there are more toxins in the blood than the liver is able to manage.

The earlier the diagnosis, the better. This is especially important because the liver is able to repair itself in the early stages of disease.

However, many people do not experience symptoms during the first stage of liver disease and are unaware of the damage as a result.

2 Fibrosis

Untreated inflammation leads to scarring of the liver, or fibrosis. This hinders the liver's abilities, as it can restrict blood flow through the organ.

Once healthy liver cells are replaced by scar tissue, those parts of the liver cannot be repaired on their own. If detected early enough, though, fibrosis is still treatable.

Because this stage is still mild to moderate, many people will still not experience symptoms.

3 Cirrhosis

Cirrhosis refers to severe, irreversible scarring of the liver. There can be several years—decades, even—between the second and third stages of liver disease, so act early if you have any reason to suspect you are at risk.

During this stage of disease, symptoms become more noticeable: pain and discomfort, fatigue, appetite loss, fluid retention, jaundice, and an itchy feeling around the liver. Those with cirrhosis are also more susceptible to developing liver cancer.

4 End Stage Liver Disease

When the liver is not capable of functioning fully, this refers to the final stage of disease.

At this stage, the liver cannot be repaired on its own or with treatments; a liver transplant is the only option for recovery.

End Stage Liver Disease happens gradually over time (weeks to a year) as the liver progresses to cease functioning.

The final stage of Liver Failure can be acute (48 hours), generally as a reaction to toxicity, infections or a drug overdose and this process is known as acute-on-chronic liver failure.

Causes of Cirrhosis

A wide range of diseases and conditions can damage the liver and lead to cirrhosis.

- Long-term alcohol abuse.
- Ongoing viral hepatitis (hepatitis B, C and D).
- Metabolic dysfunction-associated steatotic liver disease, a condition in which fat accumulates in the liver.
- Hemochromatosis, a condition that causes iron buildup in the body.
- Autoimmune hepatitis, which is a liver disease caused by the body's immune system.
- Destruction of the bile ducts caused by primary biliary cholangitis.
- Hardening and scarring of the bile ducts caused by primary sclerosing cholangitis.
- Wilson disease, a condition in which copper accumulates in the liver.
- Cystic fibrosis.
- Alpha-1 antitrypsin deficiency. is a genetic disorder that may result in lung disease or liver disease.
- Poorly formed bile ducts, a condition known as biliary atresia.
- Inherited disorders of sugar metabolism, such as galactosemia or glycogen storage disease.
- Alagille syndrome, a genetic digestive disorder.
- Infection, such as syphilis or brucellosis.
- Medications, including methotrexate or isoniazid.



Diagnosing Cirrhosis



You may be referred to a healthcare provider who specializes in the digestive system - called a **gastroenterologist** or who specializes in the liver - called a **hepatologist**

The provider will look for clues that might suggest a history of liver disease or damage.

Your provider should:

- offer you a physical examine to look for signs and symptoms of cirrhosis,
- ask you about when your symptoms began and whether they've changed over time,
- ask questions about your medical history, what medications, herbs or supplements you take, and your diet and lifestyle.



Diagnosing Cirrhosis



You provider will follow up with medical tests to look for evidence of cirrhosis of the liver.

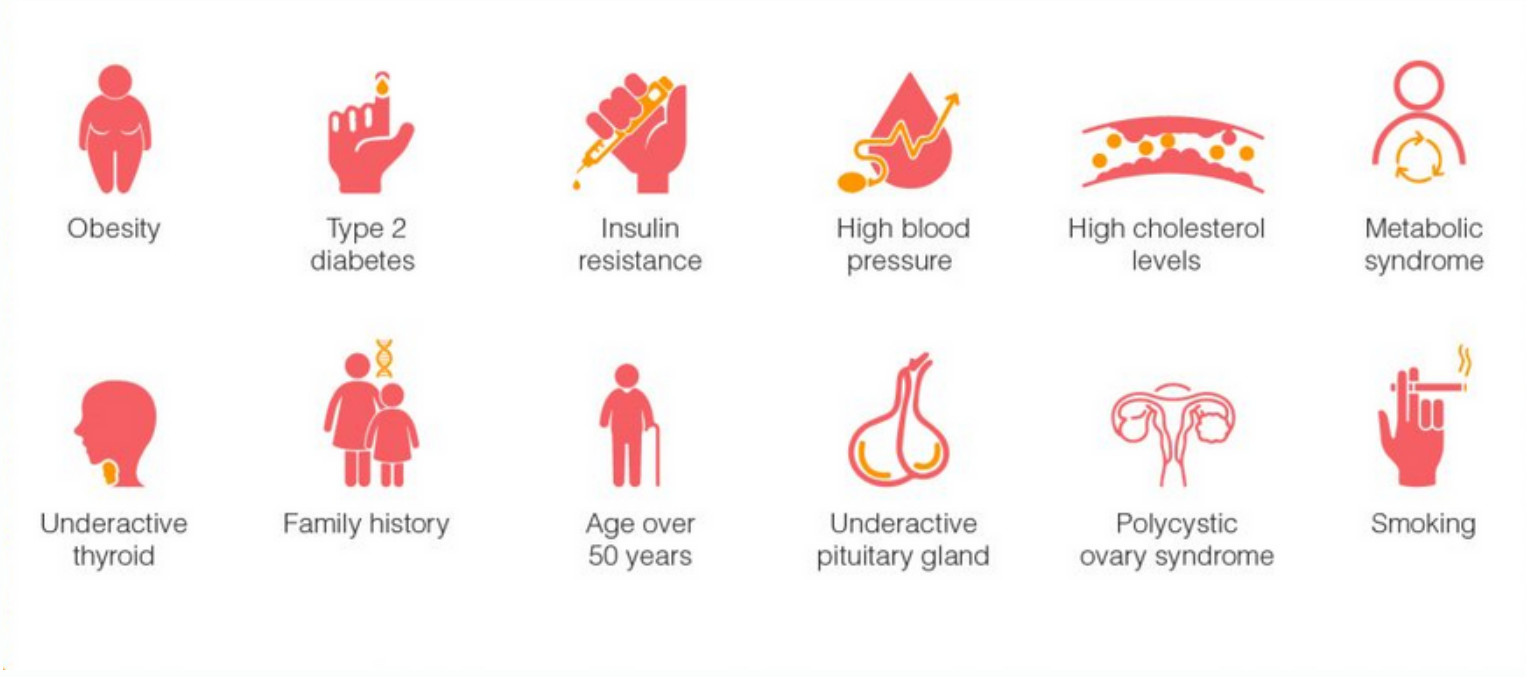
- Blood tests - A panel of liver function tests can show signs of liver disease and liver failure. These measure liver products like liver enzymes, proteins and bilirubin levels in your blood. Blood tests may also indicate specific diseases or known side effects, like reduced blood clotting.

- Imaging tests - Imaging tests like an abdominal ultrasound, CT scan or MRI can show the size, shape and texture of your liver. A special type of imaging test called elastography uses ultrasound or MRI technology to measure the level of stiffness or fibrosis in your liver.

- Liver biopsy - A liver biopsy is a minor procedure to take a small tissue sample from your liver to test in a lab. A healthcare provider can usually take the sample through a hollow needle. While not always necessary, a liver biopsy can confirm cirrhosis and may help determine the cause.

Risk Factors

- Drinking too much alcohol. Excessive alcohol consumption is a risk factor for cirrhosis.
- Being overweight. Being obese increases your risk of conditions that may lead to cirrhosis, such as nonalcoholic fatty liver disease and nonalcoholic steatohepatitis.
- Having viral hepatitis. Not everyone with chronic hepatitis will develop cirrhosis, but it's one of the world's leading causes of liver disease.



Complications of Cirrhosis

- High blood pressure in the veins that supply the liver - known as portal hypertension. Cirrhosis slows the regular flow of blood through the liver. This increases pressure in the vein that brings blood to the liver.

- Swelling in the legs and abdomen. The increased pressure in the portal vein can cause fluid to accumulate in the legs, called edema, and in the abdomen, called ascites. Edema and ascites also may happen if the liver can't make enough of certain blood proteins, such as albumin.

- Enlargement of the spleen. Portal hypertension can cause the spleen to trap white blood cells and platelets. This makes the spleen swell, a condition known as splenomegaly. Fewer white blood cells and platelets in your blood can be the first sign of cirrhosis.

- Bone disease. Some people with cirrhosis lose bone strength and are at greater risk of fractures.

Complications of Cirrhosis

- Acute-on-chronic cirrhosis. Some people end up experiencing multiorgan failure. Researchers now believe this is a complication in some people who have cirrhosis. However, they don't fully understand what causes it. But is often related to bacterial infections or active alcohol intake.

- Bleeding. Portal hypertension can cause blood to be redirected to smaller veins. Strained by the extra pressure, these smaller veins can burst, causing serious bleeding. Portal hypertension also may cause enlarged veins, called varices (VAIR-uh-seez), in the esophagus or the stomach. These varices also may lead to life-threatening bleeding. If the liver can't make enough clotting factors, this also can contribute to continued bleeding.

- Infections. If you have cirrhosis, your body may have a hard time fighting infections. Ascites can lead to bacterial peritonitis, a serious infection.

Complications of Cirrhosis

- Malnutrition. Cirrhosis may make it more difficult for your body to process nutrients, leading to weakness and weight loss.

- Buildup of toxins in the brain. A liver damaged by cirrhosis can't clear toxins from the blood as well as a healthy liver can. These toxins can then build up in the brain and cause mental confusion and difficulty concentrating. This is known as hepatic encephalopathy. With time, hepatic encephalopathy can progress to unresponsiveness or coma.

- Jaundice. Jaundice occurs when the diseased liver doesn't remove enough bilirubin, a blood waste product, from your blood. Jaundice causes yellowing of the skin and whites of the eyes and darkening of urine.

- Increased risk of liver cancer. A large proportion of people who develop liver cancer have pre-existing cirrhosis.



CIRRHOSIS MANAGEMENT AND TREATMENT OPTIONS

Cirrhosis involves permanent scarring in your liver, which can't be undone. While your liver has great healing powers in general, cirrhosis is a stage of disease where it doesn't have enough healthy cells left to heal itself with.

But you may be able to slow or stop cirrhosis from progressing further. This depends on what's causing it, how treatable the cause is, and how well you respond to the treatment.

How do healthcare providers treat cirrhosis of the liver?

- By managing the cause, if possible, to slow or reduce the damage.
- With general diet and lifestyle measures to reduce stress on your liver.
- By managing or screening for complications of cirrhosis.
- With liver transplantation.



TREATING THE COMPLICATIONS OF CIRRHOSIS

Once your healthcare provider has diagnosed cirrhosis, they'll also check for common side effects. Portal hypertension is the most common side effect and requires specific treatments. Treatments include:

- A procedure known as sclerotherapy, a minimally invasive, in-office treatment for varicose veins and spider veins. A chemical solution will be injected into your vein to close it off. Recovery is quick, but it may be weeks or months before seeing results.
- Blood transfusion to replace blood cell count
- Kidney dialysis
- Albumin infusions
- Paracentesis and antibiotics for ascites which is the abnormal build-up of fluid in the abdomen. Sometimes Albumin IV replacement is indicated after large volume paracentesis.
- Laxatives to absorb and purge toxins from your GI tract to address hepatic encephalopathy.

Primary liver cancer (hepatocellular carcinoma) is another possible complication of cirrhosis. Not everyone with cirrhosis develops liver cancer, but most people who do develop liver cancer have cirrhosis. If you develop cancer with cirrhosis, your provider might treat it with cancer therapies like radiation or chemotherapy, or a liver transplant.



LIVER TRANSPLANTATION

A liver transplant is a surgery that removes a liver that no longer functions properly (liver failure) and replaces it with a healthy liver from a deceased donor or a portion of a healthy liver from a living donor.

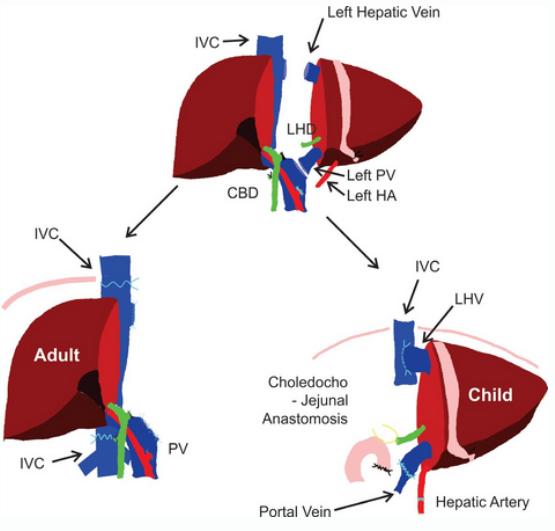
Liver transplant is usually reserved as a treatment option for people who have significant complications due to end-stage chronic liver disease.

Liver transplant may also be a treatment option in rare cases of sudden failure of a previously healthy liver.

Receiving a portion of a liver from a living donor is an alternative to waiting for a deceased-donor liver to become available.

Living-donor liver transplant is possible because the human liver regenerates and returns to its normal size shortly after surgical removal of part of the organ.

The number of people waiting for a liver transplant exceeds the number of available deceased-donor livers.



LIVER TRANSPLANTATION

Healthcare providers recommend liver transplantation when they feel that your health will continue to decline without one. This might be the case if you are in end-stage liver disease and your liver functions are ceasing, have liver cancer and/or you aren't responding to treatment for your liver disease.

If you meet the qualifications for a liver transplant, you'll join a national waiting list to receive one. Your condition will determine your place on the list.

Here is some information to help you get ready for your appointment and what to expect from your provider.

- Be aware of any pre-appointment restrictions, such as diet restrictions on the day before your appointment.
- Write down your symptoms, including when they started and how they may have changed or worsened over time.
- Take a list of all your medicines, as well as any vitamins or supplements.
- Bring results of medical tests done so far, including digital copies of CT, MRI or ultrasound images and biopsy slides if a liver biopsy has been done.
- Write down key personal and medical information, including any recent changes or stressors in your life or other diagnosis.
- Take a family member or friend along to help you remember things.



QUESTIONS TO ASK YOUR DOCTOR



Preparing and writing a list of questions can help you make the most of your time with your doctor.

Some basic questions to ask include:

What is most likely causing my cirrhosis?

Is there a way to slow or stop my liver damage?

What are my treatment options?

Are there medicines or supplements that can hurt my liver?

What signs and symptoms of complications should I watch for?

I have other health conditions. How can I best manage them together?

Don't hesitate to ask additional questions during your appointment.



QUESTIONS YOUR DOCTOR MAY ASK YOU



Your doctor will ask you questions, too.

Your doctor may ask:

- When did you first begin experiencing symptoms?
- Have your symptoms been continuous or occasional?
- How severe are your symptoms?
- What, if anything, seems to improve your symptoms?
- What, if anything, appears to worsen your symptoms?
- How often do you drink alcohol?
- Have you been exposed to or taken toxic drugs?
- Do you have a family history of liver disease, hemochromatosis or obesity?
- Have you ever had viral hepatitis?
- Have you ever had jaundice?
- Have you ever had a blood transfusion or used injection drugs?
- Do you have any tattoos?

Prevention

LOWER YOUR RISK OF CIRRHOSIS BY TAKING THESE STEPS TO CARE FOR YOUR LIVER:

- ***Do not drink alcohol if you have cirrhosis***. If you have liver disease, you should not drink alcohol.

- ***Eat a healthy diet*.** Choose a diet that's full of fruits and vegetables. Select whole grains and lean sources of protein. Cut down on the amount of fatty and fried foods you eat.

- ***Reduce your risk of hepatitis***. Sharing needles and having unprotected sex can increase your risk of hepatitis B and C. Ask your provider about hepatitis vaccinations.

- ***Maintain a healthy weight*.** Too much body fat can damage your liver. Talk to your health care provider about a weight-loss plan if you are obese or overweight.

- ***Review medications and supplements with your provider*.** Prevent infections. Receive vaccinations. Avoid unnecessary surgical procedures.

Health & Wellness

Even if your liver disease is from other factors, eliminating alcohol and drugs that damage your liver will help preserve your liver longer. The same is true of metabolic stress factors. Healthcare providers recommend that anyone with any type of liver disease should try to maintain eating healthy foods and achieve a weight that's healthy for you. In addition, some people might need dietary supplements to treat nutritional deficiencies.

Foods to eat:

- Low sodium diet
- Lean protein such as legumes or fish
- Whole grains, fruits, vegetables

Foods to avoid:

- Salt- Limit salt as it can increase fluid buildup in the body
- Raw seafood
- Fatty and fried foods
- Reduce or avoid consumption of red meat such as beef, pork and lamb

Healthy Meal Planning

VISIT COMUNITYLIVERALLIANCE.ORG FOR VIDEOS AND RECIPES TO HELP YOU ACHIEVE YOUR HEALTH AND WELLNESS GOALS

Resources

- Communityliveralliance.org
- Wellnesstoolbox.ca
- CirrhosisNutritionTherapy (umich.edu)
- https://www.drugs.com/answers/support-group/cirrhosis/
- https://transplantliving.org/community/support-groups/
- https://rarediseases.info.nih.gov/diseases/6610/hepatorenal-syndrome/living
- https://www.aasldfoundation.org/patients/patients
- https://www.hepatitis.va.gov/pdf/cirrhosis-patient-guide.pdf

Caregiver Resources

- Caregiver Action Network
- The National Alliance for Caregiving
- https://www.caregiver.org/
- https://giveanhour.org/
- https://www.caregiver.va.gov/
- https://www.aarp.org/

References

- Liver: Anatomy and Functions | Johns Hopkins Medicine
- Cirrhosis - Symptoms and causes - Mayo Clinic
- Cirrhosis of the Liver: Signs & Symptoms, Causes, Stages - Cleveland Clinic
- Treatment for Cirrhosis - NIDDK/nih.gov

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www.communityliveralliance.org

COMMUNITY LIVER ALLIANCE™

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GLOSSARY

Ascites (a-sigh-tees)

A normal liver is able to filter a large amount of blood. A liver with cirrhosis is stiffer and has trouble filtering blood properly, which builds up pressure. The extra pressure causes fluid to build up inside your belly, in the space around your liver, stomach, intestine and other organs. This fluid in the belly is called ascites. It can cause your belly to stretch out like a balloon filled with water and cause your legs to get swollen too. Large amounts of fluid can be painful and cause you to have low appetite, nausea or constipation. It can also make your breathing more difficult, especially when you lie down. Ascites can be controlled by keeping a low salt diet and by using medications prescribed by your doctor to pee out extra water. These are called diuretics, or water pills, like Spironolactone and Lasix©(furosemide). If the ascites is severe, a small needle can be used to drain the fluid out from the belly (paracentesis, or tap).

Edema (Ed-dee-ma)

This is the medical term for swelling caused by a collection of fluid in the spaces that surround the body's tissues and organs. Edema can occur nearly anywhere in the body. Some of the most common sites are:

- The lower legs or hands (also called peripheral edema)
- Abdomen (also called ascites)
- Chest (called pulmonary edema if in the lungs, and pleural effusion if in the space surrounding the lungs)

Ascites and peripheral edema can be uncomfortable and can be a sign of a more serious condition. Pulmonary edema, which makes it difficult to breathe and can be life threatening, is a symptom of heart failure and is discussed in more detail separately.

GLOSSARY

Hepatorenal_(heh-pah-toh-ree-nal) syndrome 1 or HRS-1

"Hepato" means liver, and "renal" means kidney. Hepatorenal syndrome (HRS) is what happens when the balance between the liver and kidneys gets out of sorts – the kidneys do not receive enough blood to filter from the liver, and they begin to shut down. If this is not caught early, it can result in complete kidney failure and/or death. HRS can be triggered by many things, but the most common are infections and being dehydrated. There can be very few symptoms of HRS. You should watch for a sudden decrease in the amount of pee you make each day, nausea, drowsiness and confusion. If you have these symptoms or are worried, you should seek medical attention right away.

Hepatocellular (heh-pah-toh-sell-u-lar) carcinoma (car-see-no-mah) or HCC

Hepatocellular carcinoma (HCC) is a type of liver cancer. It can happen when sick liver cells start to multiply abnormally. The risk is about 1 in 100 per year. Because anyone with cirrhosis is at risk of HCC at any point in their disease, it is important to get screened regularly. There may be no signs of this cancer until it grows very large and causes pain. Your liver specialist will talk to you about screening which involves taking images of your liver every 6 months to look for early signs of cancer. HCC screening You should have imaging of your liver every 6 months to look for early signs of HCC. Typically, this is done with an ultrasound, but there may be reasons your doctor chooses CT or MRI. Remember, it is easier to cure a small cancer – regular screening is very important.

GLOSSARY

Hepatic (heh-pah-tik) encephalopathy (en-sef-ah-lop-ah-thee) or HE
The liver is responsible for getting rid of toxins in the body, such as ammonia. When the liver is working poorly, these toxins can build up in the blood stream and affect the brain causing confusion. The degree of confusion varies and it can present itself in different ways.

It is important to recognize the symptoms of confusion to treat it before it becomes severe as it can lead to coma and death.

Symptoms of hepatic encephalopathy include:
• Difficulty thinking clearly (“fogginess”)
• Forgetfulness
• Personality or mood changes
• Bizarre behavior
• Shortened attention span
• Drowsiness during the day
• Trouble sleeping at night • Slurred speech
• Poor judgment
• Anxiety
• Slow reaction time
• Worsening of fine motor movements, e.g. handwriting People with cirrhosis and hepatic encephalopathy can have a hard time doing their usual day to day tasks (working, driving, sleeping).

t is helpful for your family members to know and recognize these symptoms if you develop them. They may need to help look after you if you are becoming more confused. You may need help with more complex things like paying bills, etc. You MUST NOT DRIVE if you have any symptoms of hepatic encephalopathy. If you vomit blood, or have black and tarry stool, go to the emergency room right away.

GLOSSARY

Portal hypertension

Portal hypertension mot commonly develops in the setting of chronic liver injury with cirrhosis and typically is the result of a combination of an increase in resistance to portal blood flow and an increase in portal blood flow. Other less common causes of portal hypertension include noncirrhotic portal hypertension and extrahepatic portal vein thrombosis. Portal hypertension may lead to complications such as the following:

- Variceal hemorrhage
- Ascites
- Portal hypertensive gastropathy (PHG)

Spontaneous bacterial peritonitis_(perry-toe-ny-tus)

Bacteria are part of the normal digestive tract. Cirrhosis can cause bacteria to leak out of the intestines and infect the fluid in your belly (ascites). This is called spontaneous bacterial peritonitis, or SBP for short. SBP can be silent (no symptoms) or may cause you to develop a fever, nausea, vomiting, decreased appetite, belly pain, and/or confusion. It can be life threatening if not treated. If you suspect you have this infection, seek medical attention right away. Your doctor(s) can confirm if there is an infection by using a small needle to take a sample of the fluid in your belly (diagnostic paracentesis). SBP can be treated with antibiotics. If you have had this infection, you will be asked to take antibiotics as long as you have fluid in your belly (ascites) to prevent infection from coming back.

GLOSSARY

Varices_(vah-ree-seas)

The same pressure buildup that causes ascites can also lead to stretching out of blood vessels in other places, like the lining of your esophagus (the tube that connects the mouth to the stomach) and/or stomach. The stretched blood vessels (varices) do not cause any pain, or problems with swallowing or digestion. They can threaten your life if they start to bleed . The only way to find out if you have varices is to look with a camera scope "endoscopy". It is important to take regular looks because varices can develop over time, even if you did not previously have them. If you have varices, tell your doctor if you are planning to fly anywhere.

Variceal (vah-ree-sea-all) bleeding

When too much pressure builds up in varices, they can burst and cause you to lose a lot of blood very quickly – this is life threatening if not treated immediately. If this happens, you might vomit large amounts of blood, have dark mushy poops (like tar) called melena, feel weak and dizzy, or any combination of those things. When the gut breaks down blood in people with cirrhosis, it can cause confusion. New or worsening confusion can be a sign of slow bleeding and should be investigated by your doctor. Bleeding of varices can be prevented in a few ways. It is important to regularly look for varices with endoscopy, and tie them off with banding, or variceal ligation to make them disappear. If the varices are small, taking a medication (beta blocker, e.g. nadolol) helps decrease the pressure in the varices and can help prevent bleeding. There is also a special procedure called TIPS that can help get rid of varices.

ENCEPHALOPATHY SYMPTOM TRACKER

You and your caregivers at home can use this symptom tracker once a week to help recognize mental and physical symptoms of hepatic encephalopathy. Place an "x" in the box if you notice any of the symptoms listed. If you notice new or worsening symptoms, call your doctor for an urgent appointment or go to the emergency room. **Please bring this record to every doctor's appointment.**

	Date __/__	Date __/__	Date __/__	Date __/__	Date __/_
Confusion					
Forgetfulness					
Poor judgement					
Extra nervousness or excitement					
Not knowing where you are					
Unusual behaviour					
Severe personality changes					
Breath with a musty or sweet smell					
Change in sleep patterns					
Worsening of handwriting					
Loss of small hand movements					
Shaking/flapping of hands or arms					
Slurred speech					
Slowed/sluggish movement					

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