Liver Foundation

Understanding Liver Cirrhosis

A guide to diagnosis and management

Learn more at liver.org.au

Liver Foundation acknowledges the Traditional Custodians of this land. We pay our respects to Elders past, present and emerging.

Introduction

Welcome to your guide to understanding liver cirrhosis. This booklet will help you and your loved ones understand your illness and learn about how to manage it. It covers the possible complications you might get, what to look out for, and how to look after your health so you can live well.

HOW WE CAN HELP:

1. You can use this booklet to talk to your medical team. It will help you understand what they are telling you about how to take care of your damaged liver.
2. You do not have to read the whole booklet at once. You can start by reading the sections that apply to you and your symptoms. Then make your way through the rest of the booklet slowly.
3. At the end of the booklet, you will find a list of medical terms *(glossary on page 52),* resources for you to explore *(page 46),* and contact details for further support *(page 51)*.

Cirrhosis is serious, but there's still plenty you can do to protect your liver. The reason you have developed cirrhosis is not going to affect the care you get; your doctors and nurses just want you to be well.

Please contact us if you need any advice or support along the way.

VISIT: liver.org.au or talk to an expert liver nurse
CALL: 1800 841 118

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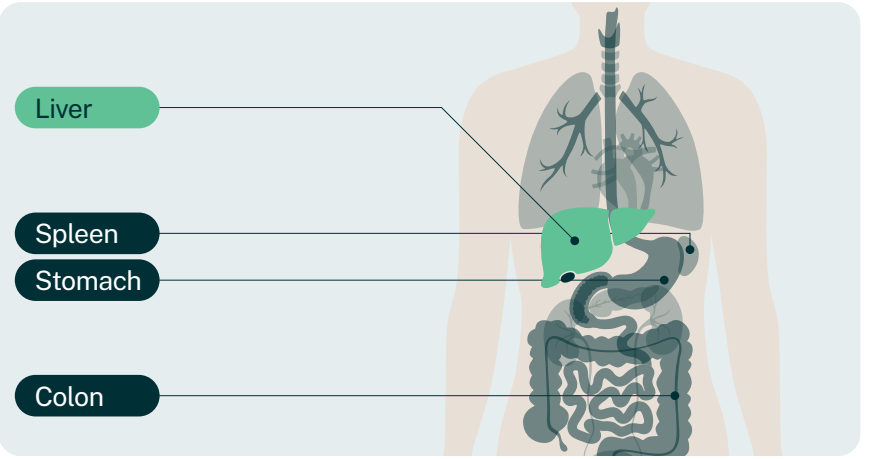
About your liver

Your liver is the largest organ in your body. It is in the top right corner of your abdomen (belly), below your lungs and inside your rib cage.

Your liver has a lot of very important jobs. Everything you eat or drink is digested (broken down) in your stomach and intestines. Your blood then carries the digested products into your liver.

The liver works like a factory. The cells in the liver break down, purify and make useful products, and get rid of harmful products. Your liver:

1. Filters and removes toxins (like alcohol) and medications (like paracetamol).
2. Produces important proteins and albumin (to help your blood clot, or to deliver important substances around your body).
3. Makes a substance called bile, which helps to digest food in your intestine.
4. Stores and sends out vitamins, minerals, fats and sugars for your body to use when it needs to.
5. Helps to keep your immune system healthy.



Getting a virus such as hepatitis B or C, drinking too much alcohol, being overweight, or having type 2 diabetes can all damage your liver over time. Your liver has an incredible ability to repair itself. But each time it repairs itself, its structure changes. Healthy tissue in the liver is replaced by stiff scar tissue.

If your liver keeps being damaged, eventually the scar tissue becomes too much and the liver can't repair itself any longer. This can happen slowly over many years. Usually there are no symptoms until the liver disease is at an advanced stage.

WHAT IS CIRRHOSIS?

Cirrhosis (si-roe-sis) simply means scarring of the liver. Cirrhosis is the stage when your liver has become very scarred and can't repair itself anymore. When you have cirrhosis, your liver is hard and lumpy. The scarring means your liver can't do all its normal jobs properly.

WHY IS THIS A PROBLEM?

If your liver can't do all its jobs, you can become seriously ill.

Because your liver shrinks and is hard and lumpy, less blood can flow through it. Toxins that your liver would normally filter can remain in your blood and cause problems.

See page 6 to read more about this.

When you have cirrhosis, the scarring in your liver narrows the blood vessels that run through it. An important vein that runs through the liver is called the portal vein. It takes blood from your intestines (gut) to your liver. If blood can't flow through the portal vein properly, there can be a build-up of pressure, like when you kink a hose. This is called **portal hypertension.** Instead, the blood has to go through other veins around the liver.

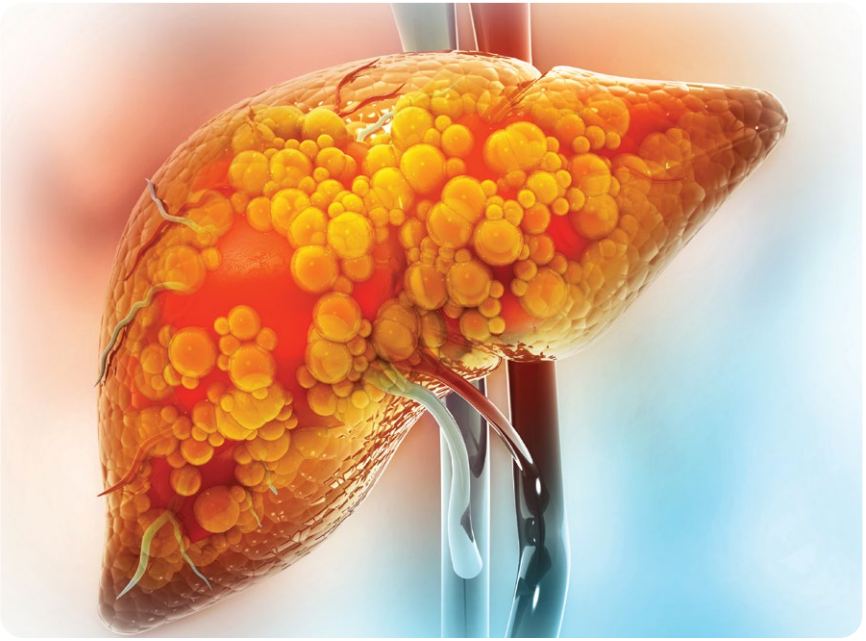
The extra blood in these other veins can cause varices. These are varicose veins (enlarged veins) in your oesophagus (feeding tube) or stomach. These veins can swell and burst, causing heavy and dangerous bleeding. The varices can allow toxins from the gut straight into the blood stream, which can cause confusion and drowsiness.

Portal hypertension also makes your spleen get very big. It can cause pain on the left-hand side of your belly. It can also reduce the numbers of cells in your bloodstream that circulate around your body. Portal hypertension can also cause fluid to leak from your liver into your abdomen (belly).

See page 18 for more information on these complications and how to manage them.

HOW COMMON IS CIRRHOSIS?

It's estimated that cirrhosis affects at least 1 in every 200 Australians. However, around 1 in every 3 Australians has a liver disease that could lead to cirrhosis if it's not managed well.



How does cirrhosis develop?

Cirrhosis is the end stage of liver damage caused by many different types of liver disease. It can happen slowly over many years. It develops in stages:

- **Inflammation** or build-up of fatty tissue
- **Fibrosis** (fi-bro-sis), where your liver starts to become stiff and develops scarring. Fibrosis can have four stages – you may have heard your doctor or nurse mention one of the below:

F0 No fibrosis

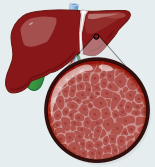
F1 Minimal fibrosis

F2 Moderate fibrosis

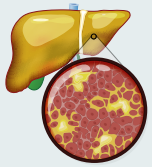
F3 Bridging fibrosis – this is where the scar tissue starts to join together

F4 Cirrhosis – this is when the structure of the liver is affected by the scar tissue and the liver becomes lumpy and firm. Over time, the liver may start to struggle to do its normal functions.

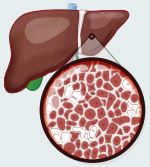
STAGES OF LIVER DISEASE



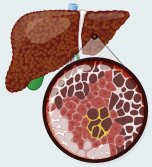
Healthy Liver
Healthy hepatocytes



Fatty Liver
Excess fat builds up in the liver



Fibrosis
Connective tissue (white) replaces normal tissue



Cirrhosis
Formation of nodular texture surrounded by fibrosis

There are many causes of liver damage that can lead to cirrhosis.

The most common ones are:

- **Hepatitis C:** If you know you have Hepatitis C and have not been treated, you should talk to your liver team or GP. The current treatments have a cure rate of over 95% and have very few side effects. **Even if you have been treated for hepatitis C, if you are still injecting drugs or having tattoos, you are at risk of developing a new hepatitis C infection. It's important to be tested regularly so that you can be treated quickly if you are reinfected. Never share injecting equipment including needles, syringes and spoons.**
- **Hepatitis B:** If you have hepatitis B, it's very important for you to have regular check-ups with your liver team. You may need to be on treatment to keep the liver damage from getting worse, and you must always keep taking this medication as prescribed.
- **Alcohol:** Frequently drinking more than the recommended amount of alcohol can put you at risk of developing liver damage. The recommended amount of alcohol for healthy adults is no more than 10 standard drinks a week and no more than 4 standard drinks on any day.
- **Fatty liver (Metabolic Associated Fatty Liver Disease or MAFLD):** Fat build up in your liver can cause scarring and cirrhosis.
- **Genetic disorders:** Inherited conditions such as haemochromatosis (increased iron storage) or alpha-1 antitrypsin deficiency can damage the liver.
- **Autoimmune hepatitis**
- **Primary Biliary Cholangitis**
- **Primary Sclerosing Cholangitis**

Cirrhosis is the end stage of liver damage caused by many different types of liver disease. It can happen slowly over many years and develops in stages.

How does cirrhosis develop?

COMPENSATED AND DECOMPENSATED CIRRHOSIS

You may hear your doctor or nurse talk about compensated or decompensated cirrhosis:

- **Compensated cirrhosis** is the early stage of cirrhosis. You may have only mild (or no) symptoms. Your liver can still function and compensate (make up) for the damage from the scarred tissue. **At this stage, it's important to keep your liver as healthy as you can and avoid anything that may make it worse (such as alcohol). It's also important to have regular health checks to make sure you haven't developed cancer in the liver, and that your liver is still working well.**
- **Decompensated cirrhosis** is the advanced stage of cirrhosis. Your liver is very badly damaged and unable to do its jobs properly. **At this stage you will be getting symptoms and will need medical attention.**

Cirrhosis symptoms

If you have **compensated cirrhosis,** you may not have any symptoms at all. Or you may have mild symptoms such as:

- Feeling tired
- Not feeling hungry

If you have **decompensated cirrhosis,** you may be very unwell and notice that you are feeling sicker quite quickly. The symptoms include:

- Jaundice (yellow skin or whites of your eyes)
- Very dark urine and pale stools (poo)
- Ascites (swelling due to fluid build-up in your belly)
- Swelling in your lower legs, thighs or scrotum
- Feeling very tired (fatigue)
- Poor concentration, memory problems and confusion (encephalopathy)
- Feeling itchy (pruritus)
- Vomiting blood
- Black tarry (sticky) poo or fresh blood in the toilet
- Feeling breathless
- Feeling sick (nausea) and vomiting

We will discuss how to manage these symptoms on page 18.

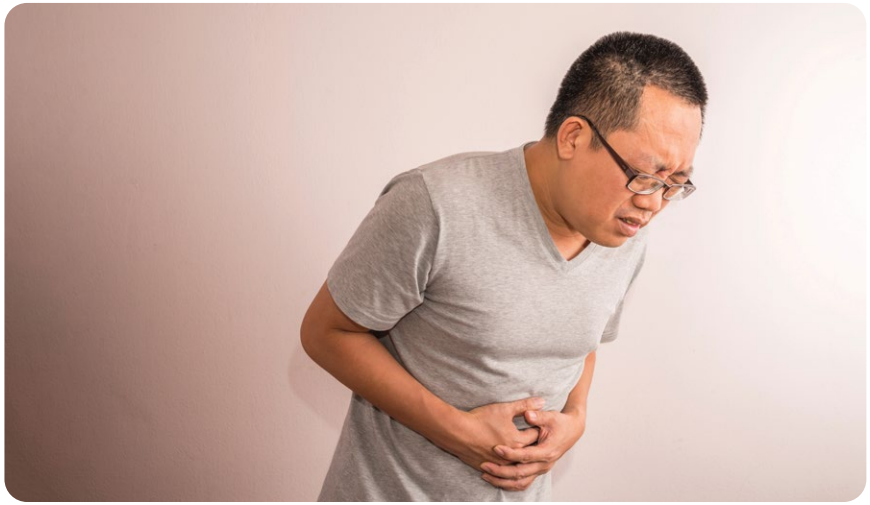
People who have compensated cirrhosis can progress to decompensated cirrhosis and get very sick very quickly. If your doctor has told you that you have cirrhosis, even if you still feel well, it is really important to start looking after your health so that you stay as healthy as you can. Making some small changes can help your liver health and your overall health.

Even if you still feel well, it is really important to start looking after your health so that you stay as healthy as you can. Making some small changes can help your liver health and your overall health.

WHEN TO SEEK URGENT MEDICAL HELP?

If any of the following happen, call Triple Zero 000 and get to hospital as quickly as possible:

- Vomit blood or have a large amount of blood in your poo, or have black, sticky poo. This could mean you have burst and bleeding veins.
- Have a high fever, especially if you also have vomiting and abdominal (belly) pain. This could mean you have a serious infection in the fluid in the belly.
- Are confused, disorientated (for example, you can't tell what day it is or where you are), are very drowsy or can't be woken up.
- Have severe abdominal (belly) pain with or without fever.



Some people are only diagnosed with cirrhosis when they go to hospital with one of the serious complications listed above.

If you have a known risk factor *(see page 9)*, you should be having regular check-ups to assess if your liver is damaged and how damaged it is. Some of the ways cirrhosis may be diagnosed and monitored by your GP are:

BLOOD TESTS

Your doctor may do blood tests if they think you might have cirrhosis. These might include:

Liver Function Tests (LFTs)
These tests measure the levels of several substances in your blood that show how well your liver is working. These tests will usually be done at every appointment you have.

Blood clotting tests
These will check if the liver is making enough of the proteins that help blood to clot. If these levels are low, your risk of bleeding and bruising is increased.

Full blood count
This checks the number of blood cells circulating in your body. A falling platelet count in particular might indicate that you have developed cirrhosis.

IMAGING (SCANS)

Ultrasound
The most common scan used to diagnose and monitor cirrhosis is an ultrasound of your liver. This uses soundwaves to take a picture inside your body. It shows the size and shape of your liver. This scan can show the doctor if you have cirrhosis. It also shows how well the veins and bile ducts are working and whether there is fluid in your belly. If you have cirrhosis, an ultrasound should be done every 6 months to make sure you haven't developed a cancer in the liver.

Fibroscan
A quick, non-invasive scan that uses sound waves to measure how stiff your liver is. A probe is placed on your skin between your ribs on the right-hand side, and small vibrations are sent into the liver. It's painless and takes about 5-10 minutes. The results will give a number for how stiff your liver is. The stiffer your liver, the more likely you have fibrosis or cirrhosis. The Fibroscan will also indicate how much fat is in your liver. Fibroscan is available in most specialist liver units of public hospitals. It may also be available in some private practices and GP centres where you will have to pay a fee. Once you have had your Fibroscan, your individual results will be discussed with you by your doctor or nurse.

Shear Wave Elastography
This is a procedure that uses ultrasound waves to measure the stiffness in your liver. It can be done in some public hospitals, but it is most often done in a private radiology clinic, and you will have to pay a fee. It may be bulk billed through Medicare if you have a referral from a doctor.

How is cirrhosis diagnosed?

LIVER BIOPSY

Sometimes a liver biopsy is done to work out the cause of cirrhosis, if it's not already known. You will have a local anaesthetic then a small amount of liver tissue is removed through a needle that is placed between the ribs on the right-hand side of your chest. This procedure is done in hospital, and you will usually be able to go home the same day.

The tissue from your liver biopsy will be looked at under a microscope by a specialist doctor called a histopathologist, who will be able to tell what has caused your liver disease. The results from the liver biopsy can also show how severe or advanced your liver damage is.

Sometimes a liver biopsy will be taken through the jugular vein in the right side of your neck (this is called a trans jugular liver biopsy).

ENDOSCOPY

An endoscopy is a procedure where a thin, flexible tube with a tiny video camera at the end is passed through your mouth all the way down to just past your stomach. It looks for any swollen veins (varices) or ulcers that may cause bleeding. It's usually done under sedation so you are sleepy and comfortable during the procedure, and you can go home the same day.

Cirrhosis treatment

Once you have cirrhosis, treatment is aimed at avoiding or managing the complications.

If you have mild to moderate fibrosis, there are steps you can take to stabilise or even reverse the damage that has been done. *Ways to manage complications of cirrhosis are discussed further on page 18.*

REMOVE THE CAUSE

The best way to stop cirrhosis getting worse is to remove the cause:

- Stop all alcohol, even if alcohol is not the cause of your cirrhosis
- Take your Hepatitis B medication
- Have your Hepatitis C treated if it has not been
- If you have MAFLD (fatty liver disease), then losing weight, having a healthy diet (such as the Mediterranean Diet), and keeping physically active will all help protect your liver
- If you have diabetes, then make sure your blood sugar is really well controlled
- If you have MAFLD and advanced cirrhosis, your nutrition needs will be different. *Please see the section on nutrition on page 25.*
- Take any medications exactly as your medical teams tell you to. Never stop medications without talking to your medical team first.

ASCITES

Ascites (a-sigh-tees) means a build-up of fluid in the belly. It can happen because of increased pressure in the liver veins.

Your abdominal cavity (belly) contains all your digestive organs such as your stomach, intestines and liver. The inside of your belly is usually moist, but there is no fluid present. If you have cirrhosis, the build-up of pressure in and around your liver (portal hypertension) causes fluid to leak from the liver into your belly.

If you have ascites, you will notice that your belly becomes very large and tight. Your weight will increase quickly and you may find it hard to eat, move around or breathe easily.

Your doctor can give you medications to help remove the fluid. These are called diuretics (fluid tablets) and they will make you need to wee more often. It's important to take them as directed and let your doctor or nurse know if you are having any side effects, such as feeling very dry and thirsty.

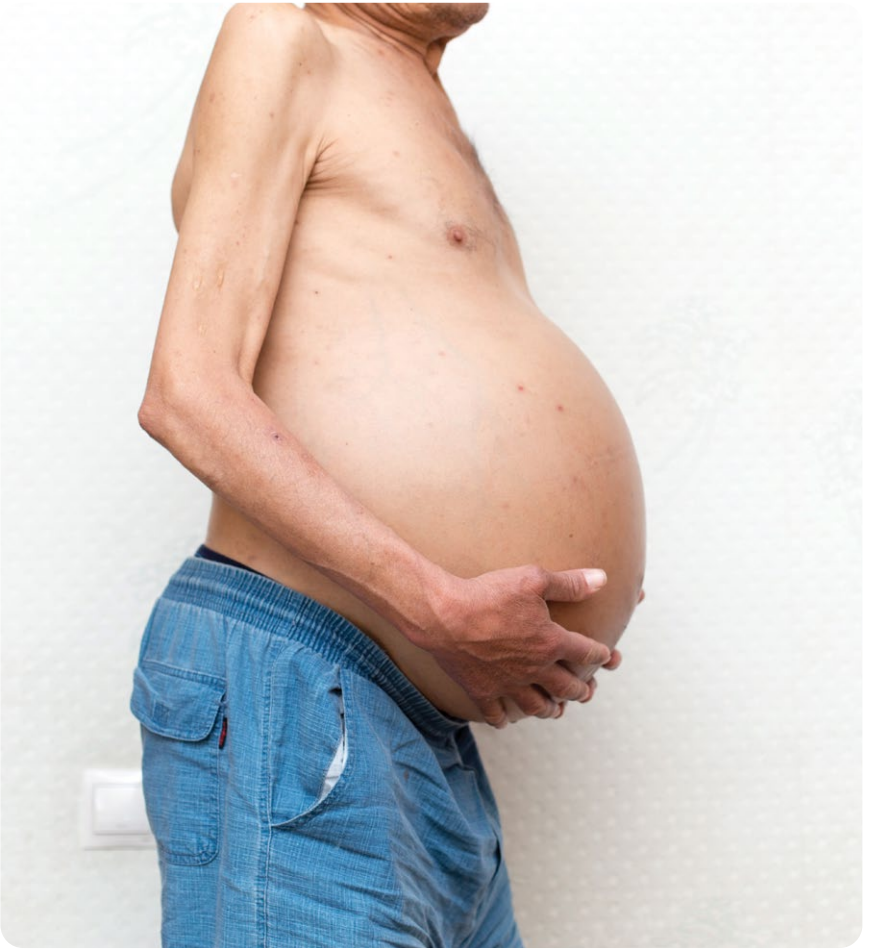
Ascites can get worse if you have extra salt in your diet. That's because the body can't get rid of salt properly if the liver isn't working. So, it's very important to stay on a low salt diet (less than 2 grams or 1 teaspoon per day). **The more salt you have, the worse your ascites will get.** Sometimes, drinking less water is recommended to help manage your ascites.

Occasionally, the fluid tablets do not work, and you may need to have the ascites drained out of your belly through a small plastic tube. This procedure is called a paracentesis, commonly known as a 'tap'. It's done as a day case in hospital under local anaesthetic. It involves a small needle being put into your belly and then attached to a drain to remove the fluid. You will have a product called albumin given through a drip to replace the proteins that you are losing and to keep your blood pressure stable while you have the procedure. The drain may be left in for up to 6 hours, and you can usually go home soon after. Some people may need to have this done as often as every 2 weeks.

If you have ascites, your doctor may recommend you have a weekly infusion of albumin. This involves giving you 2 bottles of concentrated albumin via a vein in your arm once a week. This may reduce the amount of fluid build-up and keep you out of hospital with complications of cirrhosis.

You should weigh yourself every day at the same time (usually first thing in the morning and in minimal or no clothing) so you can track if your weight is increasing quickly.

If you have ascites and you develop severe belly pain or a fever, this can be a sign of a very serious infection. You should go to a hospital emergency department straight away.



PERIPHERAL OEDEMA (LEG SWELLING)

When your liver isn't working well, it sends a signal to the kidneys to not release salt into your urine. This can cause fluid to build-up in your legs and feet so they become swollen and puffy. This condition is called peripheral oedema.

Peripheral oedema is treated with diuretics (medications to help remove the fluid). They will make you need to wee more often. It's important to take them as directed and let your doctor or nurse know if you are having any side effects, such as feeling very dry and thirsty.

Salt in food will make peripheral oedema worse, so you will also need to cut back on salt in your diet.

Often the swelling in your legs and feet can get worse over the day. If you lay flat or have your legs slightly raised, the fluid will decrease slightly.

BLEEDING VARICES

Because of the increased pressure in the liver veins (portal hypertension), the blood vessels in your oesophagus (food pipe) can become swollen. These are called varices. If they become too big, they can burst and bleed. If this happens, you may vomit up red or black blood, or you may notice that your poo has become black and sticky or tarry. **If this happens, you must call an ambulance on 000 immediately as this is a life-threatening complication.**

Varices can be treated when you have an endoscopy *(see page 16)*. Tiny rubber bands are placed over the varices to shrink them. This is called 'banding'. You will also be put on a medication called a beta-blocker, which lowers your blood pressure and the pressure in the veins around the liver, and therefore the pressure in the varices. It's important to take this medication every day.

Salt in food will make peripheral oedema worse, so you will also need to cut back on salt in your diet.

HEPATIC ENCEPHALOPATHY

Hepatic encephalopathy (en-cef-a-lop-a-thy) is a state of confusion. It can happen when your liver is not able to filter toxins like it normally would. This leads to toxins like ammonia being present in your blood stream. Eventually the toxins enter your brain and cause confusion.

Encephalopathy can start off as a mild problem. First you might notice you don't sleep well at night but feel very tired and sleepy during the day. It can progress to problems with concentration, mood and forgetfulness. If encephalopathy gets really bad, it can lead to being unconscious and going into a coma. **This is life threatening.**

Often family or carers notice changes in your mood or concentration before you do. It's important to report any changes to your doctor or nurse as soon as possible.

Encephalopathy can be treated with a medicine called lactulose. Lactulose is an artificial sugar that goes straight from your stomach to your large bowel, where it helps to trap toxins and improve your confusion. It will make you poo more than usual and have less solid poo. It's very important to have 2 to 3 poos a day to help keep your encephalopathy from getting worse. You and your family can be taught to adjust the amount of lactulose you have to keep from either getting constipated or going to the toilet too much.

You may also be prescribed a type of antibiotic (Rifaximin) that only works in your intestine (gut) to help kill the bacteria that produce the toxins.

It's very important that you never stop taking either of these medications without talking to your doctor first. Your GP can prescribe Rifaximin once it has been prescribed by a specialist gastroenterologist or hepatologist. Lactulose is available over the counter at your pharmacy.

Encephalopathy can get worse if you have an infection, are dehydrated, or have a bleed such as a variceal bleed. You will be asked not to drive if you have had an episode of encephalopathy, in case it happens again.

Encephalopathy can be dangerous. If your loved ones notice that you have become very drowsy or confused, they must get you to a hospital emergency department as soon as possible. If they can't get you into a car safely they must call an ambulance on 000.

JAUNDICE

Bilirubin is a yellow-coloured substance that is produced during the breakdown of red blood cells. A healthy liver processes bilirubin and carries it to the bowel where it is removed from the body.

When your liver isn't working properly, it can't get rid of bilirubin. The bilirubin builds up in your blood stream and turns your skin and eyes yellow.

If you, or someone else, notices that you have jaundice, you must see a doctor immediately. It is a sign your liver isn't functioning properly. You may also have very dark urine and pale poo, and feel tired and itchy.

Sometimes jaundice can improve if the cause is removed (for example, stopping drinking alcohol or treating hepatitis virus infection). If you have jaundice, you will probably be feeling very unwell, so it's important to rest and have plenty of fluids and good nutrition.

PRURITUS (ITCHING)

Feeling itchy is a common symptom of cirrhosis, especially if your bilirubin levels are high and you are quite jaundiced. Itching can be all over your body, but it is most common on arms, legs, palms of hands and soles (bottom) of feet. You won't have any rash, but some people are so itchy they can get scratch marks and skin damage. The itching may be worse when you are hot, or with certain types of clothing.

Sometimes you may be given a medication to help with the itching, but it doesn't always work, and your doctor may need to try a variety of medications. Itching is a symptom that can affect your quality of life significantly, so it is important to discuss with your doctor or nurse to help you manage it.

TIPS TO MANAGING ITCHING

- Use warm or cool water in the bath / shower
- Use mild, fragrance free soap and moisturisers
- Put a cool compress over the itchy area
- Wear loose fitting, cotton clothes
- Avoid heat and chemicals such as chlorine or spa water

Feeling itchy is a common symptom of cirrhosis, especially if your bilirubin levels are high and you are quite jaundiced.

Managing cirrhosis complications

BRUISING

People with cirrhosis tend to bruise more easily. This is because your liver isn't producing enough of the proteins used to clot your blood. Even a slight knock can cause a big bruise, or a scratch might bleed for longer than you would expect it to.

Bruising isn't normally serious, but it can affect your quality of life as you may be self-conscious about your bruised skin.

LIVER TRANSPLANT

Not everyone will need a liver transplant or be suitable for one. If you have compensated cirrhosis, you won't need a transplant.

If you have decompensated cirrhosis and you have had a severe complication such as a variceal bleed, ascites or encephalopathy that cannot be controlled with medication, or if you develop a liver cancer, your doctor may refer you to a hepatologist to talk about liver transplant.

A liver transplant may not always be an option. There can be many reasons that it isn't the most suitable treatment for you and your liver team would talk with you about this.

Looking after yourself

Even though cirrhosis can't be reversed, there are things that you can do to keep your liver as healthy as you can for as long as possible. In some people with decompensated cirrhosis, treatment can improve the function of the liver so that it goes back to normal (compensated cirrhosis).

GOOD NUTRITION

People with cirrhosis are at risk of malnutrition. So, it's very important to have a healthy diet.

Malnutrition is a serious health condition that happens when you don't have enough of the right nutrients to meet your body's needs. It can increase the risk of infections and other complications of your liver disease. Even if you are overweight, you can still suffer from malnutrition. Signs of malnutrition include:

- Muscle weakness and fatigue
- Small wounds and bruises taking longer to heal
- Brittle hair and nails (they break easily)
- More infections
- Slow or foggy thinking
- Loss of muscle mass, especially in the face, upper arms, chest and thighs

If you have cirrhosis, you're at greater risk because your liver can't do its jobs properly, including filtering and using the nutrients from food and drink. Other symptoms of cirrhosis may also make it difficult to eat. For example, ascites might make you feel full quickly. You might forget to eat due to encephalopathy, or you won't want to eat because of the side effects of some medications, or you generally feel unwell and not hungry.

When you have cirrhosis, your body needs more protein and calories because it's working hard to keep your muscles healthy and get the nutrients it needs.

If you have cirrhosis, you're at greater risk of malnutrition because your liver can't do its job properly.

TIPS FOR NUTRITION

You should aim to eat around 1.2–1.5 grams of protein for every kilogram of body weight per day. For example. If you weigh 70kg, you should aim for about 84g to 105g of protein each day. See the list below for good sources of protein.

Protein Sources	Weight	Protein
Lean meat (beef or pork)	100g cooked	30g
Chicken or turkey	100g cooked	30g
Fish	100g cooked	25g
Low salt canned fish in water	1 small tin	21g
Eggs	50g	6
Milk	250ml	9
Skim milk powder	35g	9
Custard	250ml	9
Cheddar cheese	40g	10
Cottage or Ricotta Cheese	3 tablespoons	8
Yoghurt	200g	10
High protein yoghurt (such as Pauls Protein Plus)	160g	16
Legumes – lentils, chickpeas, black beans, cannellini beans	¾ cup	6
Tofu	100g	10
Unsalted nuts and seeds	30g	8

Things that can help with your diet and liver health include:

Get enough nutrients

- Eat 6 to 7 small meals each day rather than 3 large meals (aim to eat every 2 to 3 hours).
- Have a high protein and high energy snack before bed, so your body isn't fasting for as long and has some nutrients to work on. If you wake during the night have another small snack.

These snacks could include:

- A nutritional supplement drink as advised by your doctor or dietitian
- Low salt peanut butter on toast
- A glass of full cream milk mixed with a scoop of skim milk powder
- Full fat Greek yoghurt and fruit
- Hummus, unsalted crackers or pita bread
- A handful of unsalted nuts

Eat more protein

- Make sure you have protein with each meal and snack
- Add protein by mixing skim milk powder or protein powder into yoghurt, porridge or smoothies
- Add ingredients like pulses (chickpeas or beans) and lentils to soups and salads
- Eat high-protein yoghurts

DAILY SERVING

Fruit, vegetables, bread, pasta, rice, other grains, potatoes, olive oil, beans, nuts, legumes, seeds, herbs and spices.

OFTEN, AT LEAST TWICE PER WEEK

Fish and seafood.

REGULARLY

Be physically active and enjoy meals with others.

MODERATE PORTIONS, DAILY TO WEEKLY

Lean meat, poultry, eggs, cheese, milk and yoghurt.

LESS OFTEN

Alcohol and sugary drinks.

LESS OFTEN

Sweet, fatty and salty foods, takeaways.

Cut right down on salt

- You should have less than 2 grams (less than 1 teaspoon) of salt per day
- Avoid adding salt in your cooking or at the table
- Avoid salt substitutes and stock cubes
- Check food labels for the amount of sodium (see below for more information on this)
- Use pepper, herbs and spices to flavour food
- Avoid cured meats such as ham, salami and bacon
- Avoid salty snacks like potato chips (crisps), and packaged foods like tinned or packet soup
- Avoid salty takeaway food

WAYS TO LIMIT SALT INTAKE

Eat	Avoid	Try Instead of Salt
Fresh whole foods	Salty canned and processed foods	Black pepper
Use low or no-added salt foods such as frozen vegetables	Don't add salt or salt substitutes to your meal	Lemon, lime and other citrus
Make your own stock and do not add salt	Stock cubes, bouillon cubes and gravy powder	Vinegar and balsamic vinegar
Cold, cooked fresh meat and poultry or eggs	Deli meats and cured or pickled foods	Oil or butter
Use unsalted butter or salt reduced margarine	Bottled water with added sodium	Fresh or dried herbs
Multigrain, wholemeal, rye, Lebanese and Turkish breads	Breads containing olives, sun-dried tomatoes, pickles or chutney	Chilli
Rolled oats, natural muesli	Packaged chips and crisps	Ginger, garlic, shallots and spring onions
English muffins, crumpets, plain bagels	Salted bagels, breads with added cheese/bacon/ham	Toasted and ground sesame seeds
Rice, pasta, noodles, couscous, burghal	Instant noodles, potato chips with added salt or sauce	Spices such as mustard or cumin

Looking after yourself

No alcohol

- Even a small amount of alcohol can cause further damage
- Look for mocktail (non-alcoholic cocktail) recipes (but watch for sugar content)
- Try non-alcoholic wines and beers
- Drink sparkling water with lemon or lime juice
- Don't add alcohol to your cooking
- Talk to your doctor or nurse if you are having trouble stopping alcohol

Clean up your diet

- Choose healthy fats such as extra virgin olive oil, avocado and nuts over butter, coconut oil and other oils
- As much as possible, eat fresh and unprocessed foods, such as a range of fruit and vegetables, lean meat, chicken and fish and complex carbohydrates (such as oats, whole grains and legumes)
- Avoid takeaway and convenience foods as much as you can, as these are usually very high in salt and unhealthy fats
- Take any vitamin supplements that have been recommended by your doctor
- If you have been asked to limit fluids, make your fluid intake count with nutritious drinks as well as water, tea and coffee. If you have been asked to cut back on fluids, your prescribed supplement drinks will not be included in that fluid restriction.

Even though cirrhosis can't be reversed, there are things that you can do to keep your liver as healthy as you can for as long as possible.

Make sure your food is safe

- When you have cirrhosis, you are at more risk of infections. This can include food poisoning.
- It's important to fully cook any meat, poultry or seafood, and avoid raw or undercooked shellfish, as this can carry a bacteria that can make you very ill.
- Wash your fruit and vegetables before eating them.

You may be able to see a dietician who specialises in liver disease to help you with your nutrition or speak to your doctor or nurse about ways to help.

Read food labels

You should try to start reading the Nutrition Information Label on any food and drink you buy. Advertising and health benefits named on the front of a packet may be misleading. For example, a product claiming to be low fat may be very high in sugar. Reading the label can help you to understand if a food or drink is going to be suitable.

Always look at the 'Quantity per 100g', as serving sizes vary between products. Looking at this panel will help you to quickly know if the product is good for you.

A product is considered low salt if it has less than 120mg of sodium per 100g food.

In Australia, you will often see the Health Star Rating panel on the front of food or beverage packages (see next page). This can be a quick and easy way to skim a product and determine if it is suitable for you to have.

EXAMPLE NUTRITION LABEL

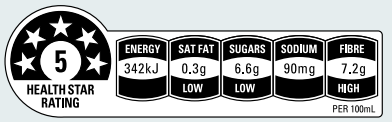
Servings per package: 3

Serving size: 150g

	Quantity per Serving	Quantity per 100g
Energy	608kJ	405kJ
Protein	4.2g	2.8g
Fat, total	7.4g	4.9g
– Saturated	4.5g	3.0g
Carbohydrate	18.6g	12.4g
– Sugars	18.6g	12.4g
Sodium	90mg	60mg
Calcium	300 mg (38%)	200mg

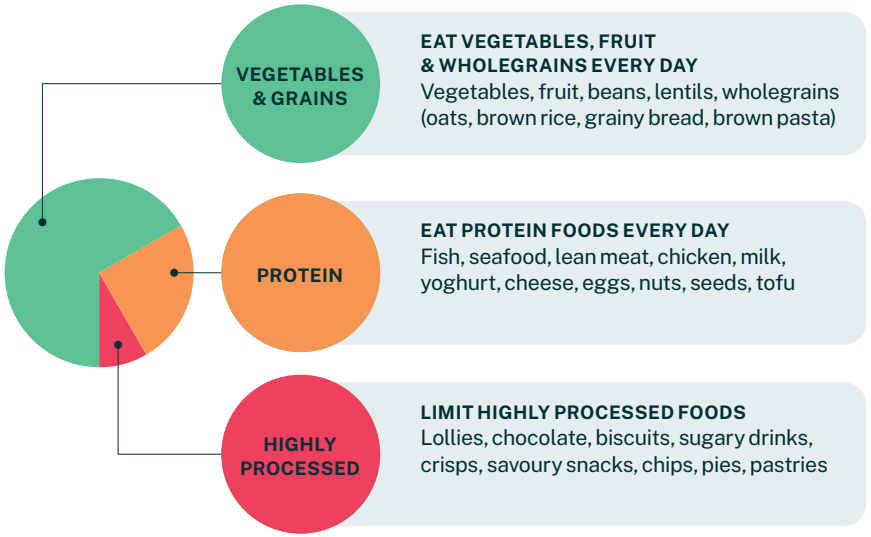
*Percentage of recommended dietary intake

EXAMPLE HEALTH RATING LABEL



Always look at the 'Quantity per 100g', as serving sizes vary between products.

Compare numbers in the per 100g column	Best choice	OK sometimes	Too high
Total fat	Less than 3g	3–10g	More than 10g
Saturated fat	Less than 1.5g	1.5g–3g	More than 3g
Sugar	Less than 5g	5–15g	More than 15g
Sodium	Less than 120mg	120–400g	More than 400g
Fibre	Choose high fibre. Use the per serving column and choose more than 3g fibre per serving.		
Drinks	Choose water first		



Plus small amounts of unsaturated oils (olive, canola, sunflower, safflower, sesame)

SLEEP

Poor or disturbed sleep is common with cirrhosis. You might have insomnia (not being able to fall asleep or stay asleep) or not feel refreshed even after you have slept. If you have encephalopathy your sleep patterns may be reversed, meaning you feel very sleepy during the day but wide awake at night.

Symptoms such as pain, nausea, itching and ascites can all affect your sleep as well, making it difficult to get a good night's rest and leaving you feeling tired, lethargic and irritable.

Some tips for managing your sleep include:

- Creating a routine: try to get up and go to bed at the same time each day
- Make sure your bedroom is ready for sleeping – make it as dark as possible, maintain a temperature that is not too hot or cold, and have a comfortable mattress and pillow
- Do something relaxing before bed, like having a bath, listening to music, reading or meditating. You can use a relaxation app to help with this
- Exercise each day if you can, but not too late in the day
- Try not to nap in the day
- Avoid caffeine and alcohol, if you have caffeine have it in the morning
- Try not to spend time watching TV or looking at screens just before bed.

If poor sleep is becoming an issue for you, talk to your doctor. They can assess for encephalopathy, which can be treated or support you to have healthy sleep hygiene.

TIPS FOR SLEEPING

If you are struggling to get to sleep, try getting up for about 20 minutes and doing something relaxing in a dark space before trying again. If you get anxious and irritable about not getting to sleep, it will make it even harder.

MUSCLE CRAMPS

Muscle cramps are common when you have advanced liver disease. Even though they are not a dangerous complication, they can be really painful and impact your sleep and quality of life. Cramping can cause a lot of distress, especially when it's impacting your rest. Cramps happen most often in your lower legs and feet but can also occur in your hands and arms.

It isn't clear what causes people with liver disease to get cramps, but possible causes include problems with the electrolytes in your body, nutrition, fluid and nerves. When you have cirrhosis all these things are affected.

If you are getting cramps, there are things you can do to try and ease them:

- **Stretching** — gently stretch the muscle that is cramped until it eases
- **Massage** — gently massage the area that is cramped
- **Walking** — Stand and walk around to ease the cramp
- **Magnesium** — try taking magnesium tablets or powder at night, this can help with cramps and relaxation. If your magnesium levels are normal, it's unlikely that extra magnesium will help with cramps, but it may still help with general relaxation
- **Zinc** — zinc tablets may also help cramps, however you should have your zinc levels checked before you start taking them. Zinc is unlikely to be helpful if you have normal zinc levels
- **Taurine** — this is an amino acid supplement that is available over the counter or online. It can be taken as a tablet or powder to reduce the frequency and severity of cramps in people with cirrhosis
- **Pickle juice** — this is the liquid in a jar of pickles. It contains vinegar, some salt and spices. Just a sip of pickle juice taken as soon as a cramp starts has been shown to reduce the severity of cramps in people with cirrhosis

As always, talk to your medical team before you start any new medications (including over the counter) to make sure they are safe.

EXERCISE

Exercise is good for your health in general, but it's especially important if you have cirrhosis caused by fatty liver disease and you need to lose weight. Exercise can also help anyone with cirrhosis prevent muscle wasting and frailty (weakness).

You should aim for some physical activity on most days of the week. The current Australian recommendations for weekly exercise are:

- 2½ to 5 hours of moderate intensity activity — such as a brisk walk, golf, mowing the lawn or swimming, OR
- 1¼ to 2½ hours of vigorous activity — such as jogging, aerobics, cycling, soccer or netball
- It is also recommended that muscle strengthening exercises make up part of your exercise at least 2 days per week.

It can be hard to exercise when you are feeling unwell or have ascites or encephalopathy. It's important to start slowly and build up your exercise as you can, but even a little bit is better than nothing.

TIPS FOR EXERCISE

- Start slow — you don't have to be doing an hour a day when you are unwell!
- Take a walk around the block 2 to 3 times each day
- Try water aerobics, or walking laps at your local pool
- Do bodyweight exercises to help your muscles, such as push-ups, squats and lunges, and do household talks that involve lifting, carrying and pulling
- Invest in some light weights and a resistance band and ask your physio to design a program for you to do at home

MEDICATIONS

You may be on many medications to help manage the symptoms of your cirrhosis. It's very important that you take all your medications as your doctors has told you to. Speak to your doctor or nurse if you are having any side effects. You should never stop taking a prescribed medication without speaking to your doctor first.

You should never take an 'over the counter' medication or herbal supplement without discussing it with your doctor. Some natural supplements can make your liver disease worse or have other unwanted side effects.

If you have pain, it's safe to take paracetamol at half the usual dose (2 tablets twice a day). If this doesn't settle pain, you should discuss other safe options with your doctor.

Always check the ingredients on any pain medications or cold and flu medications. They might also contain paracetamol and you must avoid having more than the safe dose.

Never take non-steroidal anti-inflammatory (NSAIDS) medications such as ibuprofen, naproxen or diclofenac if you have cirrhosis.

TIPS FOR TAKING MEDICATIONS

If you find it hard to remember to take your medications, try setting an alarm on your phone. You could also use a medication box or ask a family member to remind you when it is time to take your medication. You can also ask your chemist to put your tablets into a blister pack for you.

You should never stop taking a prescribed medication without speaking to your doctor first.

SURGERY

Surgery can be dangerous if you have cirrhosis. When you have cirrhosis, especially decompensated cirrhosis, there can be many complications from surgery including increased risk of bleeding, poor wound healing, kidney problems and sepsis (infection). You may have a higher chance of dying from surgery than someone with a healthy liver. If you need to have surgery, it's very important to discuss it with your liver doctor to make sure that it's safe to go ahead. You can also ask your surgeon to speak directly to your liver doctor.

If you need to have surgery, it's very important to discuss it with your liver doctor to make sure that it's safe to go ahead.

OTHER TIPS

Stop Smoking

- Smoking has been associated with an increased risk of cirrhosis and can also worsen fibrosis and cirrhosis leading to complications. It can increase the risk of liver cancer and other cancers.
- If you smoke, try to cut down and stop — you can talk to your doctor about ways to help with this, or contact Quitline on 13 78 48.

Vaccinations

- When you have cirrhosis, you are at increased risk of infections, including the flu and COVID.
- Have a flu and COVID vaccine every year.
- If you have not been vaccinated for hepatitis A and B, see your GP to get these.

Medications

- Take all the medications your doctor has prescribed for you and never stop a medication without talking to your doctor first.
- Don't take any over the counter, herbal medications or liver tonics (including traditional medicines) without discussing with your doctor first. Some over the counter and herbal medications can damage your liver even more.

Travel

- Most of the time you will be able to travel, especially if your cirrhosis is well controlled and you haven't had any complications.
- If you have decompensated cirrhosis, you may be advised not to fly, particularly if you have varices that haven't been treated, or your doctor thinks your risk of bleeding is high. The force of speeding up and slowing down, and the low pressure inside an airplane, can increase pressure on varices and increase the risk of bleeding.
- You may find it difficult to get travel insurance for any illnesses or complications related to your liver, which means if you get very unwell overseas you will have large bills.
- Make sure you carry any medications in your hand luggage so you are not separated from them if your checked luggage gets lost. Carry medications in original named packaging or take a letter from your doctor containing a list of your medications.

Other Suggestions

- Go to all your appointments and have all the blood tests and other investigations you're asked to have. This will allow the doctors to monitor your health and decide on the best treatment for you.
- Don't drive if you have had an episode of encephalopathy. This is a legal requirement, and you may be reported to your state licensing centre if you ignore the doctor's advice. Once you have had an episode of encephalopathy, the risk of having it again is high, and it can come on very quickly. This rule is to keep both you and other road users safe. You should discuss with your doctor if it's safe for you to drive once you are under treatment for encephalopathy.

Once you have had an episode of encephalopathy, the risk of having it again is high.

Cirrhosis is a serious diagnosis. But following the advice in this booklet will help you manage it and be as healthy as you can.

It' s very important to look after yourself and have regular appointments with your doctor, including regular blood tests and an ultrasound every 6 months to make sure that cancer hasn't developed in your liver.

1. If liver cancer is found early before any symptoms develop, it can be treated very well and can even be cured. If liver cancer is found late when symptoms develop, there may be fewer treatment options available to you and these treatments may not cure the cancer. Even missing one scan can lead to a very small cancer growing and becoming harder to treat.

2. More information on liver cancer (also known as hepatocellular carcinoma or HCC) can be found on the Liver Foundation website. If you would like to talk to a nurse about liver cancer, you can contact the Liver Foundation nurse support line on: **1800 841 118, or email support@liver.org.au**

You will see a range of health professionals during the management of your cirrhosis and liver disease.

Aboriginal health worker	If you identify as Aboriginal or Torres Strait Islander, you can ask to see an Aboriginal health worker. They will help you work your way through the health system and give you any advice you need.
Diabetes services	If you have liver disease, it's also important to get your diabetes under control if you have it. The National Diabetes Services Scheme (NDSS) is available to help you understand and manage diabetes.
Dietitian	An accredited practising dietitian is a health professional who provides expert advice on nutrition and dietetics (how the diet can affect health). You may see a dietitian for help to eat a healthier diet, or if you need to eat a special diet because of your cirrhosis.
Drug and alcohol services	If you are finding it difficult to stop drinking alcohol or taking drugs, you may be referred to a drug and alcohol service. Here you'll see doctors, nurses and counsellors who are specially trained in addiction medicine. You can talk to them about the best way to change your relationship with alcohol or drugs.
Exercise physiologist	Exercise physiologists are health professionals who treat diseases with exercise. You can talk to them to get specific exercise or movement plans that are tailored to your preferences and current fitness.
Gastroenterologist	A gastroenterologist is a specialist doctor who is trained in the digestive system, including the liver, stomach, intestines, pancreas and gallbladder. A gastroenterologist can diagnose and treat liver disease.
General practitioner (GP)	Your GP is the first health professional you're likely to see if you have symptoms or are worried about your liver. A GP's job is to look after your overall health, not just your liver condition.
Hepatologist	A hepatologist is a specialist gastroenterologist who is trained to prevent, diagnose and treat diseases of the liver, gallbladder, biliary tree and pancreas. You will probably see a hepatologist if you have cirrhosis. You can talk to them about anything to do with your liver – they are the most highly specialised doctors you will meet during the management of your liver disease.
Liver nurse	A liver nurse, also called a hepatology nurse, is a clinical nurse consultant who is highly trained in liver conditions. You can talk to them about your symptoms, any side effects you are getting from a treatment you might be on, your worries about your liver disease, and anything else that you feel you need to know. The liver nurse is often your first port of call and will help you to navigate the healthcare system. They will liaise closely with other specialties.
Nurse	Nurses will be involved in all aspects of your care, from admission to discharge. Nurses will assist with personal care but will also be involved in monitoring you closely for any signs of infection or complications from procedures and will give you medications.

Health professionals

Obesity services	Obesity services, or weight management programs, can be offered by a GP, dietitian or other health professional to help you get your weight under control. Losing even a little bit of weight will improve the health of your liver. You can talk to them to get advice and support that works for you to help you manage your weight.
Oncologist or Radiation oncologist	An oncologist is a specialist doctor who is trained to treat cancer. An oncologist treats cancer with medication, and a radiation oncologist treats cancer with radiation. You may see an oncologist if you have liver cancer. You can talk to your oncologist about medical treatment or radiology treatment for cancer.
Pathologist	A pathologist is a specialist doctor who is trained in how to diagnose disease by looking at the blood and tissues. Whenever you have a blood test or a biopsy, it's interpreted by a pathologist. You will most likely not meet your pathologist, but their work will closely inform decisions about your care.
Psychiatrist	A psychiatrist is a doctor who specialises in mental health. Some mental health conditions are more likely in people with liver disease. You may see a psychiatrist to help with diagnosing conditions like depression or anxiety, managing your medications to protect your liver, and referring you for therapy or other treatments to help you cope with your diagnosis.
Radiologist	A radiologist is a specialist doctor who is trained to carry out and interpret imaging tests like X-rays, ultrasounds, CT scans and MRI scans. An Interventional Radiologist is a radiologist who has received specialist training to carry out procedures such as biopsies and treatments for liver cancer.

Social worker	A social worker is an allied health professional who works in a hospital or the community to help people who need support. Social workers are available to help patients, their families and carers with personal and practical challenges. You can talk to a social worker for many reasons, for example if you need help managing finances while you are ill, if you feel like you are not being treated fairly, if you would like a referral to another service, or if you need some advice on how to cope.
Surgeon	A surgeon is a specialist doctor who is trained to perform surgery. There are different types of surgeons who specialise in operating on different parts of the body. The type of surgeon who operates on the liver and digestive tract is called a General Surgeon or a Hepatobiliary Surgeon. You might see a surgeon if you need surgery for liver cancer, or a liver transplant.

Caring for someone with cirrhosis

People with advanced, or decompensated, cirrhosis can be very unwell and need both physical and emotional support.

If you are caring for someone with cirrhosis it can be physically and emotionally draining for you too. It's easy to get caught up caring for your loved one and forget to take care of yourself. You may feel guilty for taking time for yourself, frustrated that you can't seem to help make your loved one feel better, or feel like you can't trust anyone else to care for your loved one while you are not there. Some of the roles that carers carry out include:

- Providing support at home with housework, cooking and personal care
- Managing finances or financially supporting your loved one
- Providing emotional support
- Advocating for your loved one
- Managing medications and medical appointments
- Monitoring for symptoms of worsening liver disease, such as encephalopathy

Carers play a vital role, but it's also very important that you look after yourself. If you feel healthy, you will be able to better care for your loved one. There are some simple things you can do to make sure that you are able to manage your own health and wellbeing:

- **Ask for help –** ask a family member or trusted friend to help out, even if it's just to sit with your loved one so you can get out and have coffee or a walk.
- **Take some time out for yourself every day.** If your loved one is very unwell, they may sleep a lot – you can use some of this time to read a book, have a bath or do some exercise.
- **Build a support network –** there are many carer support groups.
- **Have a healthy diet** and try to get enough sleep.
- **Take it one day at a time,** and if things get too overwhelming make sure you talk to someone about it.

Cirrhosis and mental health

Mental health challenges are also common in people with liver disease. That's because when the liver doesn't work properly, the brain doesn't work properly either. You might find you feel quite depressed and/or anxious. You might develop problems with your sleep, memory and ability to understand things.

Here are some tips that anyone can do to protect their mental health.

- Notice what makes you upset or angry and try to make changes to avoid these feelings
- Express your feelings – but not in a way that could hurt others
- Think before you act. Cool down and remain calm
- Cope with stress – breathe deeply, do some exercise, try yoga or meditation
- Do things you enjoy – make time for things you really like to do and that give you a sense of purpose
- Connect with family and friends
- Take care of your physical health to improve your mental health, such as by eating healthy meals and getting enough sleep
- Avoid alcohol and drugs. They'll make things worse
- Try to stay positive. Stop putting yourself down

You can read more about the liver and mental health on our website at: liver.org.au/living-well/mental-health

Where to get support

We understand a diagnosis of cirrhosis can feel quite overwhelming. You're not alone — people with cirrhosis often experience:

- **Fear** — about how your illness is going to develop and also around any symptoms you may be having
- **Stress** — about how you're going to manage, your family and your finances
- **Anger** — at your diagnosis or yourself
- **Grief** — over loss of the life you had before
- **Shame or guilt** — if you or others think your diagnosis is 'your fault'
- **Depression, anxiety and sadness**
- **Loneliness and social isolation**
- **Feelings of loss of control** — over your health and your relationships

It can be even harder if you live somewhere where it's hard to access medical care and support.

Everyone is different. Some people will carry on as normal, others might find it hard to do everyday tasks. It might take you some time to get your head around your diagnosis — and that's ok.

Here are some tips to help you face the challenge:

- Take your time to learn as much about your condition as you can. There's a lot of information to help you on our website: liver.org.au
- Make a plan. How are you going to manage your health? Write down all your questions, a list of your health professionals and their contact details, a list of your medications, your appointments.
- Think about the changes you can make to protect your liver. Set goals you think you can achieve. Remember, you don't have to do everything all at once.
- Think about how you've dealt with difficult situations in the past. Those strategies will help you now.
- Get help where you can — from your GP, your community, your family or friends. You can always contact us on:

  Telephone: 1800 841 118
  Email: support@liver.org.au
- And most important — look after yourself. Take time for self-care every day. Do things you enjoy, relax when you can, set boundaries, and make sure you follow the instructions of your medical team.

You don't have to do this alone. We're here to support you.

WHERE TO GET SUPPORT IF YOU ARE LIVING WITH CIRRHOSIS:	
Liver Foundation Nurse-Led support line This is a free, confidential line for patients with primary liver cancer or liver disease and their carers to receive advice and support.	1800 841 118 support@liver.org.au
Lifeline Australia Help for anyone experiencing a personal crisis, 24/7.	13 11 14
13 Yarn Talk with an Aboriginal or Torres Strait Islander Crisis Supporter 24/7.	13 92 76
Cancer Council Australia Find information and support around cancer.	13 11 20
Hello Sunday Morning Support to review your relationship with alcohol.	hellosundaymorning.org
Alcoholics Anonymous Help with alcoholism.	1300 222 222
Beyond Blue Support service for issues related to depression, suicide, anxiety disorders and other related mental illnesses.	1300 224 636

WHERE TO GET SUPPORT IF YOU ARE A CARER OF SOMEONE WITH CIRRHOSIS:	
Carer Gateway Counselling Service A free service for carers. It operates weekdays from 8am – 6pm. The website has a range of information on emotional and practical support, as well as an online peer support forum.	1800 422 737 carergateway.gov.au
Carer Help Provides information and support for people caring for someone approaching the end of their life.	carerhelp.com.au

Glossary

Abdomen [ab–doh-men]	the belly.
Albumin [al–byoo–min]	the main protein made by the liver. Low levels of albumin may mean liver disease.
ALP: alkaline phosphatase [al-kuh-lahyn fos-fuh-teys]	a chemical mostly produced in the bile ducts. High levels of ALP in the blood may mean liver injury.
ALT: alanine aminotransferase [al–uh-neen uh-mee-noh-trans-fuh-reys]	a chemical mostly produced by liver cells. Raised levels of ALT may mean liver inflammation.
Ascites [a-sigh-tees]	fluid in the belly, sometimes from liver failure.
AST: aspartate aminotransferase [uh–spahr-teyt uh-mee-noh-trans-fuh-reys]	high levels of AST in the blood can mean liver damage.
Autoimmune [aw-toh-i-myoon]	when the body gets attacked by its own immune system.
Bile	yellow-green liquid that is put out from the liver, stored in the gallbladder and passes into the small intestine help digest food by breaking down fat.
Bile duct	tube that carries bile from the liver to the gallbladder and then to the intestines.
Bilirubin [bil–i-roo-bin]	a colouring made from breaking down a chemical (haemoglobin) in red blood cells. The liver takes bilirubin from the blood in bile.
Biopsy [by-op-see]	a small operation to get tiny sample of liver tissue to look at under the microscope. It's used to see what is causing the liver disease and how much fibrosis (scarring) of the liver is there.
Chronic [kron-ik]	disease or condition that lasts a long time and usually gradually gets worse.

Cirrhosis [si–roh-sis]	scarring and damage to the liver. Cirrhosis stops the liver from working properly.
Chemotherapy [kee-moh-ther–uh-pee]	drugs to treat cancer.
Clinical trial [klin-i-kuhl tri–uhl]	research study to answer medical questions and solve health problems.
CT: computerised tomography [kuhm-pyoo-tuh-rahyz-d tom-og-ruh-fee]	a type of imaging that uses X-rays to make detailed pictures of the body.
Fatty liver disease [fat-ee liv-er dih-zeez]	too much fat in the liver cells, stopping the liver from working properly.
FibroScan® [fy-broh-skan]	an ultrasound scan to check how much fibrosis (scarring) and fat are in the liver.
Fibrosis [fy-broh-sis]	scarring in the liver.
Gastroenterologist [gas-troh-en-tuh–rol–uh-jist]	a doctor who specialises in the digestive system.
Hepatic [he-pat-ik]	about the liver.
Hepatic artery [he-pat-ik ahr-tuh-ree]	the blood vessel that brings blood, oxygen, and nutrients to the liver.
Hepatic encephalopathy [he-pat-ik en-kef-uh–lop–uh-thee]	a nervous system disorder brought on by severe liver disease. When the liver doesn't work properly, toxins build up in the blood. These toxins can travel to the brain and affect brain function.
Hepatitis [hep-uh–tahy-tis]	inflammation of the liver.
Hepatitis A	a liver condition caused by the hepatitis A virus; you get it from infected food or water. There is a vaccine for hepatitis A.

Glossary

Hepatitis B	a liver condition caused by the B virus; you get it from body fluids of someone infected with hepatitis B. There is a vaccine for hepatitis B.
Hepatitis C	a liver condition caused by the hepatitis C virus; you get it from body fluids of someone infected with hepatitis C. There is a cure for hepatitis C.
Hepatocellular carcinoma – HCC [hep-uh-toh-sel–yuh-ler kahr-suh–noh-muh]	the most common form of cancer that starts in the liver.
Hepatologist [hep-uh–tol–uh-jist]	a doctor who specialises in liver health and disease.
Hepatology [hep-uh–tol–uh-jee]	study of the liver.
Hepatomegaly[hep-uh-toh-meg–uh-lee]	when the liver gets too big; you can feel it below the ribs.
Jaundice [jawn-dis]	yellowing of the skin and whites of the eyes caused by too much bilirubin in the blood. Jaundice is a sign the liver isn't working properly.
Liver function test [liv-er funk-shuhn test]	blood tests that check how well the liver and bile ducts are working. Also called a liver enzyme test.
Metabolic Associated Fatty Liver Disease (MAFLD) [met-uh–bol-ik fat-ee liv-er dih-zeez]	is a type of fatty liver disease caused by problems of the metabolism, often in people who have a poor diet or are overweight.
MELD Score: Model for End-Stage Liver Disease	a score for working out the risk of dying in people with end-stage liver disease.
MRI: magnetic resonance imaging [mag-net-ik rez–uh-nuhns im–uh-jing]	a type of imaging that uses magnets, radio waves and computers to take detailed pictures of the inside of the body.

Portal Hypertension [paw-tal hy-puh-ten-shuhn]	a disease affecting the liver, portal system of veins, and also the oesophagus and spleen. The portal vein takes blood from the gut to the liver. In the case of liver cirrhosis and a few other causes, there is an impedance to portal blood flow to the liver which causes an increase in pressure in the portal vein. This causes the spleen to enlarge, for fluid to drain into the abdomen (ascites) but also the formation of enlarged veins. You can watch a video about it here.
PSC: primary sclerosing cholangitis [pry-muh-ree scle-rose-ing kuh-les-stey-sis]:	an autoimmune condition usually found in people who also have inflammatory bowel disease. It may lead to liver failure, infections or tumours in the bile duct or liver (cholangiocarcinoma or hepatocellular carcinoma).
Pruritus [proo–ry-tuhs]	severe itching.
Tumour [tyoo-mer]	a cancer growth made of abnormal cells.
Transplant	surgery that takes out a diseased liver and puts in a new healthy liver, or part of a liver, from a donor.
Ultrasound [uhl-truh-sound]	a type of imaging that uses high-frequency sound waves and computers to take detailed pictures inside the body.
Varices [va-ri-seez]	when veins are stretched and thinned out because the liver doesn't work properly. Varices are often found in the oesophagus (food pipe).
Viral hepatitis [vy-ruhl hep-uh–ty-tis]	liver inflammation caused by a virus.

Contact

Call our free, confidential Nurse-Led Support Line, available Monday to Friday, 8:00am–6:00pm (AEST), and speak with a caring, expert liver nurse.

LIVER FOUNDATION

Call: 1800 841 118
Email: support@liver.org.au
—
liver.org.au

About Liver Foundation

Liver Foundation is Australia's leading national organisation dedicated to improving liver health for all. Since 1995, we have been working to make liver cancer and liver disease a national health priority by raising awareness, supporting early detection, research and improving access to care.

Funded by the Australian Government, and staffed by expert hepatology nurses, the Liver Cancer Nurse-Led Support Line is an integral part of the Australian Cancer Nursing and Navigation Program that aims to ensure all people affected by cancer are empowered with education, resources, and the support they need to better navigate the health system.

Liver Foundation