

# The Treatment of Decompensated Cirrhosis: Managing Ascites

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## What is ascites?

One common problem caused by high pressure in the veins of the liver is **ascites**. Fluid leaks out into the belly and begins to fill it up. This can make the abdomen (belly) enlarge like a balloon filled with water. The legs can get swollen too. This can be very uncomfortable.

## What are the causes of ascites?

Portal hypertension (a buildup of pressure in the portal vein) due to cirrhosis is the most common cause of ascites.

The main thing that causes the extra fluid build-up in people with portal hypertension is salt intake (sodium). For this reason, your doctor will review with you the need for a low sodium diet.

## What are the signs and symptoms of ascites?

In mild cases, there are usually no symptoms. As more fluid collects, the abdomen swells and you may experience:

- Increase in abdominal size
- Loss of appetite or difficulty eating, because there is less room for food
- Frequent heartburn
- Abdominal pain
- Back pain
- Changes in bowel function
- Fatigue
- Swelling (edema)



- Difficulty breathing, especially when you are lying down
- The most dangerous problem associated with ascites **is infection**, which can be life threatening. **Go to the emergency room immediately if you have ascites and experience a fever or new severe belly pain.**

### **How do you treat ascites?**

- **Avoid further liver damage**

Stop all alcohol consumption.

- **Low salt (sodium) diet**

The buildup of fluid is the result of too much salt (sodium) intake. **Most** of the salt in a person's diet comes from **processed foods**, even for people who do not use a salt shaker. For this reason, it is important to reduce your salt intake by carefully reviewing how much sodium is in your food and drink. We usually aim for less than 2000mg of sodium per day. Often you will be asked to work with a nutritionist. **Please note:** even though fluid is building up, this is not a problem with water or fluid intake! It's the salt/sodium that causes the fluid to build up in the belly. The key is to limit your salt intake, not your fluid intake.

- **Diuretic medications ("Water Pills")**

These medications help the body get rid of the extra salt and fluid through the kidneys. Common medications include spironolactone (Aldactone®), and furosemide (Lasix®). One treatment plan begins with 100 mg of spironolactone and 40 mg of furosemide every morning. Weight (fluid) loss is often slow. If there is no weight loss in the first 2 weeks, the dose is gradually increased. Response to treatment varies and finding out which treatment plan works best for you takes time, as the doctor adjusts the dose of medications over a period of weeks or months.

- **Paracentesis (Tap)**

Paracentesis is draining fluid out of the abdomen with a needle. This is done using local anesthetic (lidocaine). Taps provide relief of ascites symptoms,

but the fluid eventually returns. You must follow strict sodium restriction and diuretic therapy in order to slow down the build-up of fluid. Frequent taps can increase the risk of infection, and cause an imbalance of nutrients (potassium and sodium) levels in the blood. It can also worsen kidney function.

- **Monitor progress**

During treatment, it is important that both you and your doctor monitor your weight and blood tests. This is especially true if you are taking diuretics (which may cause reduced kidney function and changes in your blood levels of sodium and potassium). The best way you can help the doctors manage your fluid problem is by recording your weight and dose of water pills (diuretics) every day. Use the log available to record your weight and diuretic dose daily:

<http://www.med.umich.edu/1libr/hepatology/Cirrhosisweightlog.pdf>

In addition, keep track of dates when you have taps (paracentesis).

- **Transjugular intrahepatic portosystemic shunt, or TIPS procedure**

**TIPS** is the placement of a shunt (internal tunnel) within the liver to improve blood flow. A TIPS procedure is performed through the veins and does not require surgery. TIPS can help control bleeding from varices if other simple measures fail. In some cases, it can also help to decrease fluid buildup (ascites). About 30 out of 100 (30%) of patients develop mental confusion after TIPS, and in some cases the shunt must be closed back down. Rarely, jaundice and liver failure develops after a TIPS procedure.

- **Liver transplant**

Developing ascites as a complication of cirrhosis of the liver is a concerning sign. Liver transplant is the best treatment if you are an appropriate candidate, but unfortunately, not all people qualify for this procedure. Talk to your doctor about liver transplant if you have decompensated cirrhosis.

## **Special risks and considerations in ascites**

- **Spontaneous bacterial peritonitis**

This condition occurs when ascites becomes infected, and it can be life threatening. Symptoms include fever and abdominal pain but you may not have these symptoms in the early stages. If you have an infection of ascites, you will need to be admitted for IV (intravenous) antibiotics. After the first episode of peritonitis is treated, you will take an antibiotic pill to prevent future episodes of peritonitis. Sometimes we recommend antibiotics to prevent peritonitis even in people who have never had it.

- **Hepatic hydrothorax**

This condition occurs when ascites fluid ends up in the chest. There are small holes in the **diaphragm** - the broad muscle that separates the chest and belly. Fluid bubbles up and surrounds the lung, filling the space between the ribs and the lung. This happens to about 1 in 20 people with ascites. It causes shortness of breath that can be severe. It can also become infected which can be life threatening with symptoms just like spontaneous bacterial peritonitis. The treatment is the same as ascites. Sometimes a treatment called thoracentesis is needed, where a needle is passed between the ribs to drain fluid.

- **Hepatorenal syndrome**

This refers to serious, life threatening kidney failure that sometimes develops in people with cirrhosis and ascites. To treat the condition your doctor will stop diuretic medications, and will search for a cause that can be reversed such as dehydration or infection.

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