



# Gallbladder Surgery

## A common problem

If you have had a painful attack of gallbladder symptoms, you are not alone. Gallbladder disease is a very common problem. Most often, the symptoms are caused by stones that form in the gallbladder. To treat the problem, you will likely need to have your gallbladder removed. This eliminates pain and prevents future attacks. Best of all, you will be able to live a full, healthy life without your gallbladder.

## Symptoms of gallbladder problems

Gallbladder problems can cause painful attacks, often after a meal. Some people have only one attack. Others have many. The most common symptoms of gallbladder attacks include:

- ❖ Severe pain in the upper abdomen. The pain may come and go. Or, it can remain constant
- ❖ A dull ache beneath the ribs or breastbone
- ❖ Back pain, or pain in the right shoulder blade
- ❖ Nausea, upset stomach, heartburn, or vomiting



## How gallbladder problems are treated

To remove gallstones and prevent new ones from forming, the gallbladder is removed. The operation is called a cholecystectomy. It can be done in one of two ways. Most often, a type of surgery called laparoscopy is used. In other cases, open surgery is used. The next page will help in explaining more about these methods.

## Questions and answers about gallbladder surgery

It is normal to have some concerns about surgery. Below are answers to common questions:

**What is the difference between laparoscopy and open surgery?**

Laparoscopy is done using a laparoscope – a long, thin device that contains a small light and camera. It sends images to a video monitor so your doctor can see inside the abdomen during surgery. Only small incisions are needed to insert the scope and other instruments. In contrast, open surgery uses a single, larger incision to reach the gallbladder.

**Will I need to change my diet?**

No. Once you have fully recovered from the surgery, you can still eat all the things you like.

**Which type of surgery will I have?**

Laparoscopy is the most common method for removing the gallbladder. But certain factors may mean open surgery is safer for you. There is also a chance that during surgery your doctor will need to switch from a laparoscopic to an open procedure.

**Why not just remove the gallstones?**

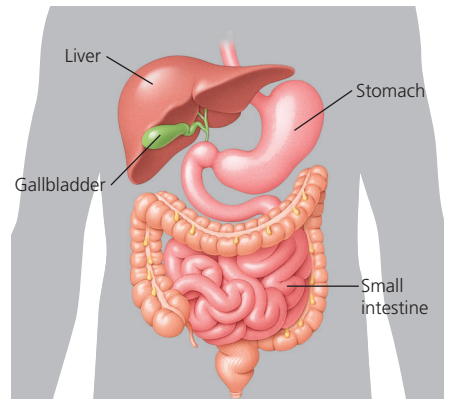
Unless the gallbladder is removed, more stones are likely to form. The gallbladder may also need to be removed for reasons other than gallstones.





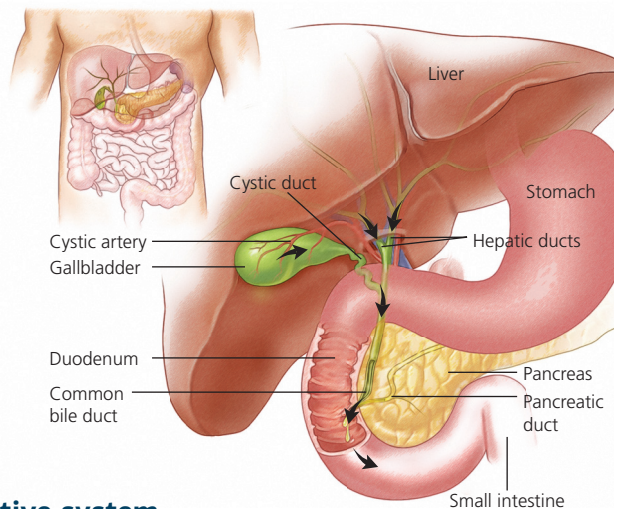
## Understanding the gallbladder

The gallbladder is a small, pear-shaped organ in the abdomen. Its job is to store and release bile, a fluid made by the liver. Bile helps break down fats in the food you eat. Normally, bile moves smoothly through the digestive system. But if stones form in the gallbladder, they can block the release of bile. This can cause pain and lead to serious complications.



## A healthy gallbladder

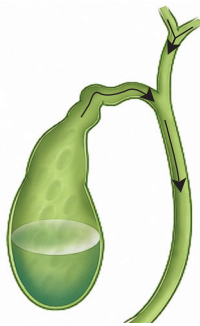
The gallbladder sits just beneath the liver in the upper right side of the abdomen. When the gallbladder is healthy, it stores and concentrates some of the bile made by the liver. After a meal, the gallbladder squeezes bile into ducts (small tubes). The bile then travels to the small intestine where it helps aid digestion.



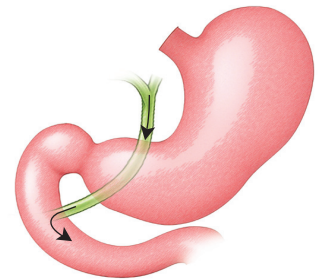
## How bile enters the digestive system



Your liver makes bile. Most of the bile is sent through a network of ducts to the duodenum (first part of the small intestine). A small amount of bile is also sent to the gallbladder for storage.



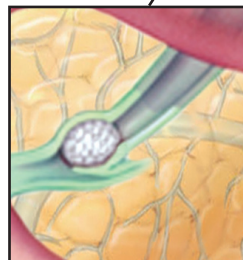
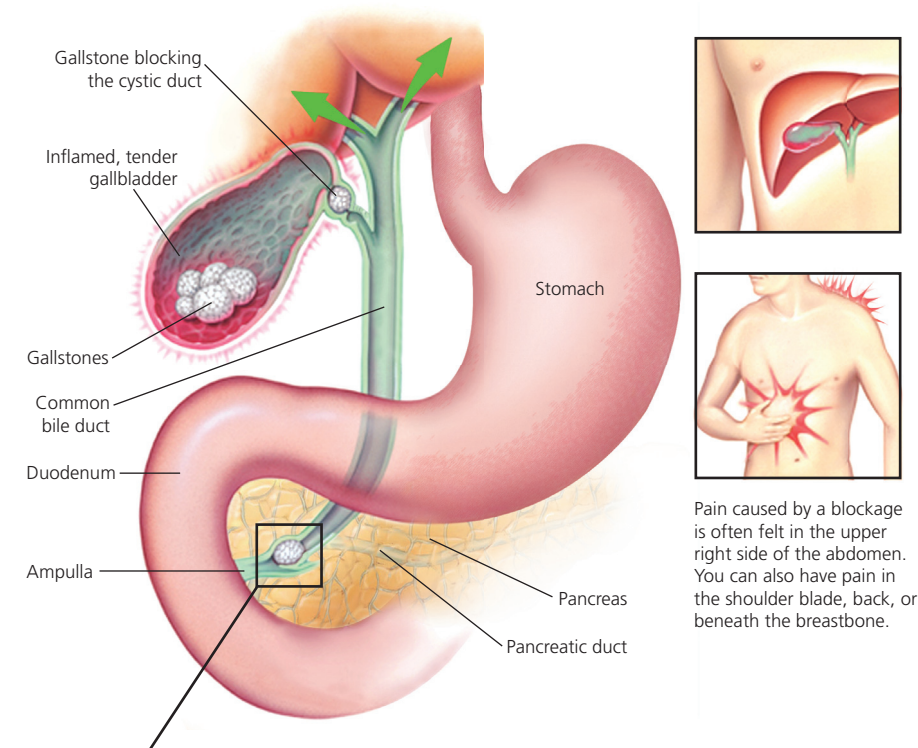
The gallbladder stores some bile. The gallbladder concentrates the bile by removing water. When bile is needed to digest fats, hormones (chemical messengers) signal the gallbladder to squeeze bile out through the cystic duct.



Bile is sent to the duodenum. The bile moves through the common bile duct to the duodenum. There, it mixes with food. The pancreas adds other digestive juices. Digestion continues in the small intestine.

## When gallstones form

Most gallbladder problems are caused by gallstones. These form when substances in the bile crystallise and become solid. In some cases, the stones do not cause any symptoms. In others, they irritate the wall of the gallbladder. More serious problems occur if the stones move into nearby ducts and cause blockages. This stops the flow of bile and can lead to pain, nausea, and infection. Jaundice (a buildup of bile chemicals in the blood) can also occur. Symptoms include yellowing of the skin and eyes, dark urine, and itching.



A stone in the common bile duct can block the flow of bile and cause inflammation, infection, and jaundice.

## Problems in the common bile duct

The common bile duct is formed by the junction of ducts leading from the liver and gallbladder. It is also a common place for problems to occur. This most often happens when a stone moves from the gallbladder and blocks a section of the duct. This can make bile the back up into the liver, causing jaundice. If a gallstone blocks the junction with the pancreatic duct, it can inflame the pancreas and cause pancreatitis. This is a serious medical condition that requires immediate treatment.

## Your evaluation

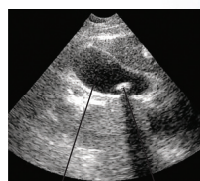
You'll need to have a thorough medical evaluation before any treatment is done. Your doctor will ask about your health and symptoms. You will then have a physical exam. If needed, your doctor may also order other tests. Once the evaluation is complete, your doctor will talk with you about the treatment options.

### Medical history and physical exam

Your doctor will ask about your symptoms. Be sure to mention the location and frequency of any pain. Also mention any other health problems you have. In addition, you may be asked about your diet and any medications you take. You will then have a blood test and physical exam. During the exam, your doctor may press on your abdomen to check for pain.

### Ultrasound scan

If your doctor suspects you have gallstones, you will be scheduled for an ultrasound scan. This test uses painless sound waves to check for gallstones.



Gallbladder Gallstone



### Other tests

To learn more about your gallbladder problem, your doctor may order one or more of the tests below.

### CT scan ('CAT scan')

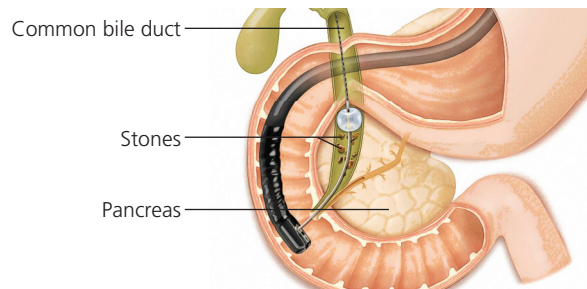
A CT scan uses a series of X-rays to produce detailed images of the body. These let your doctor view structures in the abdomen and can help rule out other causes of abdominal pain.

### HIDA (Hepatobiliary scan)

A HIDA scan uses a radioactive fluid (marker) to check gallbladder function. It can also show whether any bile ducts are blocked. After the test, the fluid safely passes from the body.

### Endoscopic retrograde cholangiopancreatography (ERCP)

This test uses a thin, flexible scope that is guided through the mouth and stomach to the bile duct. The scope helps to find and remove stones from the duct. ERCP can also be performed after gallbladder surgery to check for stones in the duct.



## Planning your treatment

After the evaluation, your doctor will talk with you about treatment options. If your stones are not causing symptoms, you may choose to delay surgery. But if you have had one or more painful attacks, your doctor will likely recommend removing your gallbladder. This prevents more stones from forming and causing attacks. It also helps prevent complications. And after the gallbladder is removed, your liver will still make bile to aid digestion.



## Getting ready for surgery

Your doctor will talk with you about preparing for surgery. Follow all the instructions you are given and be sure to:

- ❖ Tell your doctor about any medications, supplements, or herbs you take. You may need to stop taking them before the surgery
- ❖ Stop taking medicine as advised by doctor
- ❖ Ask your doctor what to do if you take prescription blood thinners
- ❖ Do not eat or drink anything after midnight, the night before your surgery. This includes water and coffee
- ❖ Arrange for an adult family member or friend to give you a ride home from the hospital

## If you are pregnant

Gallbladder problems may develop during pregnancy. This is because hormone changes can make bile more likely to form stones. If your gallbladder needs to be removed, your doctor will talk with you about the timing for surgery. In some cases, it can be delayed until after childbirth. But if your symptoms are severe, your doctor may advise having surgery during your pregnancy. This is done to protect you and your baby's health.

## Risks and complications of gallbladder surgery

Gallbladder surgery is safe. But it does have certain risks. These include:

- ❖ Bleeding
- ❖ Infection
- ❖ Injury to the common bile duct or nearby organs
- ❖ Blood clots in the legs
- ❖ Prolonged diarrhea
- ❖ Bile leaks
- ❖ Neuroma (painful spot) or numbness near incisions
- ❖ Hernia formation at an incision site

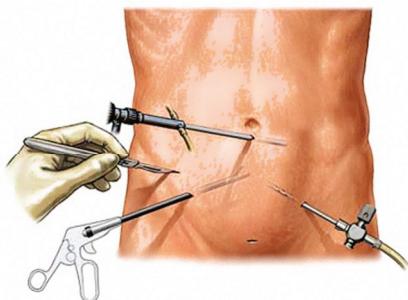
## Your surgery

Your surgery will be done in a hospital or surgery center. Most gallbladder problems are treated using laparoscopy. But certain factors may mean that open surgery is a safer procedure for you. There is also a chance that your doctor may need to switch from laparoscopy to open surgery during the procedure. If you have questions, be sure to talk with your doctor.

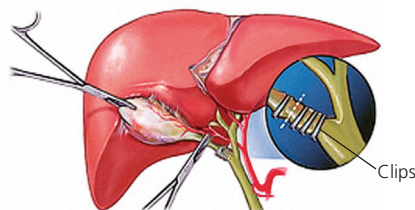
## The day of surgery

Arrive at the hospital or surgery center on time. You will be asked to change into a patient gown. You will then be given an IV to provide fluids and medication. Shortly before the surgery, an anaesthetist will talk with you. He or she will explain the medications used to prevent pain during surgery. Gallbladder surgery is done using general anaesthesia. This lets you sleep during the procedure.

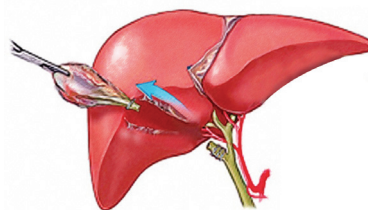
## Laparoscopic surgery



Small incisions are made in the abdomen. A harmless gas is then used to lift the abdominal wall away from the internal organs. This lets your surgeon have a clear view of the gallbladder through the laparoscope. A small light and camera on the scope send images to a video monitor. Surgical instruments are inserted through the other incisions to remove the gallbladder.



Small clips close off the bile duct and blood vessels. The clips help prevent bleeding and bile leaks. Once the clips are in place, the gallbladder is detached from the liver. The clips are made of metal (titanium) or plastic that does not harm the body. They are left in place.



The gallbladder is lifted for removal. The neck of the gallbladder is raised through an incision. The contents of the gallbladder, including any stones, may be removed. The gallbladder is then carefully lifted out through the incision. Bile will now flow directly from the liver to the small intestine.



## If open surgery is needed

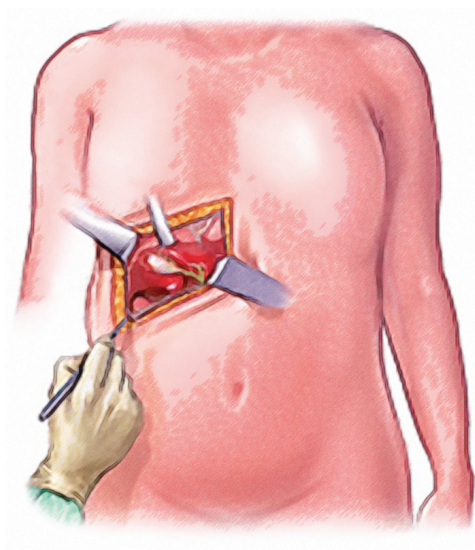
Open surgery is most often used when scarring from past surgeries or other factors make it a safer procedure. Your doctor may also decide during surgery to switch from a laparoscopic to an open procedure. This does not mean something has gone wrong. Instead, it is done when your doctor feels it is safer to remove the gallbladder through a larger incision. If you have open surgery, the same methods are used to detach the gallbladder from the bile ducts. The main difference is you will have a larger incision in your abdomen. Having open surgery also means a longer recovery period after the procedure.

## Open surgery

An incision is made in the abdomen. The incision may be made in the upper right side (solid line) or middle (dashed line) of the abdomen. The open incision gives your doctor a clear view of the gallbladder and bile ducts.

Small clips or sutures close off the bile duct and blood vessels. These help prevent bleeding and bile leaks. The clips are made of titanium (metal) or plastic that does not harm the body. If clips are used, they will remain in place.

The gallbladder is removed. Once the clips are secured, the gallbladder is detached from the liver. It is then carefully lifted out of the abdomen. Bile will now flow directly from the liver to the small intestine. The incision is closed with sutures or staples.



## Finding stones with X-rays

During either laparoscopic or open surgery, a cholangiogram catheter may be inserted into the bile duct. The catheter is a thin tube used to inject a special dye. Once the dye is injected, an X-ray is taken of the bile duct. This helps show whether any stones have moved from the gallbladder into the duct. If needed, the stones can then be removed.

## Your recovery

After laparoscopy, you can often go home the same day. For open surgery, you will need to stay in the hospital for a few days. Once you are home, follow your doctor's instructions to manage pain and care for your incisions. As you feel better, you can start getting back to your normal routine. Keep in mind, though, that recovery will take longer if you have an open procedure.



## Recovery in the hospital

After surgery you will be taken to a recovery area. Bandages will cover your incisions and you may have special boots on your legs to prevent blood clots. If you had laparoscopy, you may also have some shoulder pain. This is caused by the gas used during the surgery. To aid recovery, you will be asked to get up and move as soon as possible. You may also be asked to use a device that helps keep your lungs clear.

## Managing pain

It is normal to have some pain during recovery. To help you feel better, your doctor will prescribe pain medications to use at home. Be sure to use them as directed. Because some pain medications can cause constipation, your doctor may also suggest a laxative or stool softener.

## If you had open surgery

Recovering from open surgery is more painful than the recovery for laparoscopy. This is because an incision was made in the abdominal muscles to remove the gallbladder. The muscles will heal. But for a time, it may hurt to bend, stand, or take deep breaths. To help manage pain, you may receive a special pump that lets you give yourself pain medication. Keep in mind, you still need to move around as often as you can. This helps prevent blood clots and can help you heal.




## When to call your doctor

Call your doctor if you notice any of the following during your recovery.

- Fever over 101°F (38.3°C)
- Vomiting or nausea that lasts more than 12 hours
- Chills
- Pain or swelling in your calf
- Sharp or increasing pain
- Symptoms of jaundice
- Increasing redness or drainage from an incision
- Prolonged diarrhoea
- Shortness of breath




## Recovery at home

You will likely feel tired and may have some bruising around the incisions. You may also have some cramping after a few days. This is normal and goes away in time. To speed healing:

-  Follow your doctor's instructions about bathing and taking care of your incisions
-  Talk with your doctor about what to eat. You may need to start with light meals
-  Walk and move around as often as possible. This improves blood flow and can help you feel better

## Easing back into activities

You can start getting back to your normal routine as soon as you feel you can. Just take it easy at first and follow all your doctor's advice. For best results:

-  Ask your doctor about driving and going back to work. After laparoscopy, you can often return to work within 5 to 10 days. For open surgery, it may be up to 6 weeks
-  Use pain relievers with acetaminophen to relieve occasional discomfort
-  You can have sex again when you're ready

## Eating healthy meals

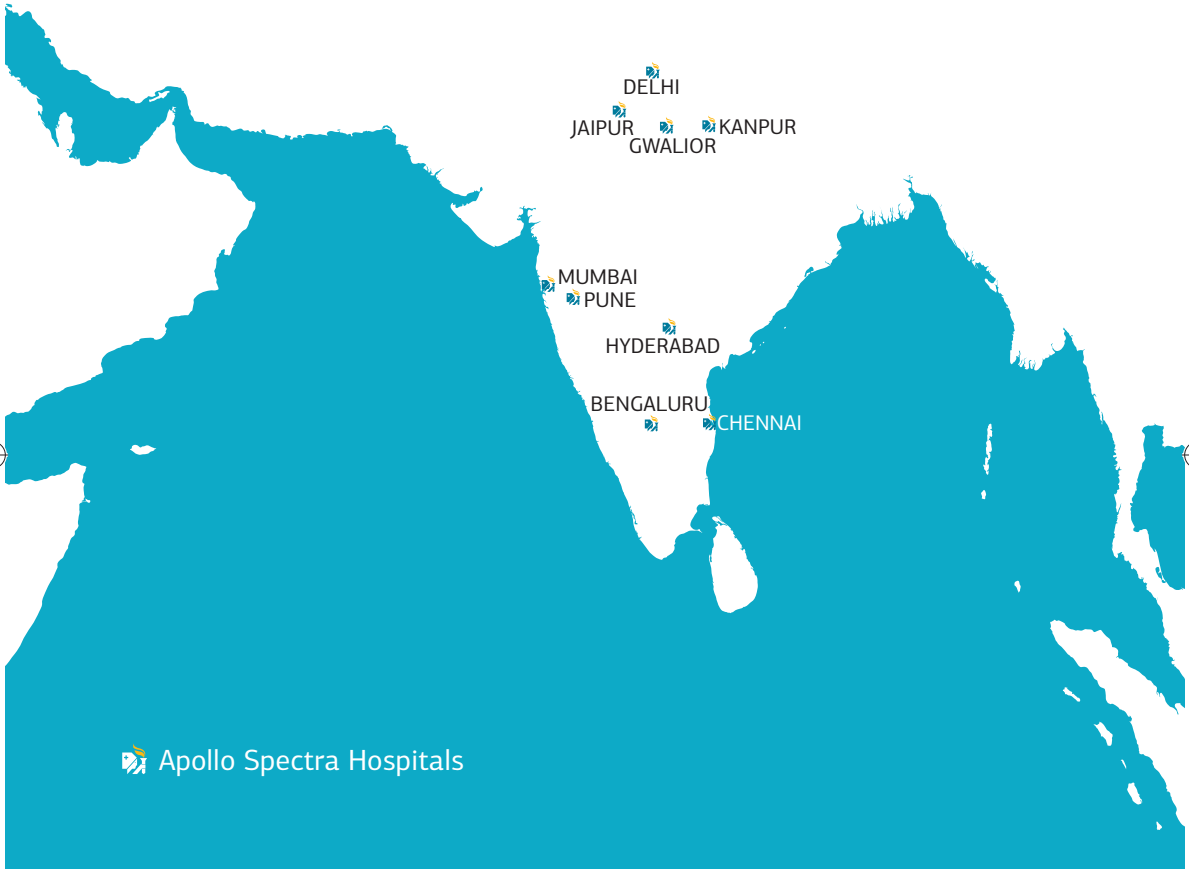
Even though your gallbladder has been removed, you do not need to be on a special diet. However, it often takes a few weeks for your digestion to adjust. You may have indigestion, loose stools, or diarrhoea. This is normal and should go away in time. To aid digestion, eat a balanced diet that is high in fibre. And if diarrhoea or other problems do not go away, be sure to tell your doctor.

## Having follow-up care

Keep follow-up appointments during your recovery. These allow your doctor to check your progress and make sure you are healing well. During office visits, tell your doctor if you have any new or unusual symptoms. Your doctor can also help answer any questions or concerns you may have.

## Feeling good again

Do not let gallbladder problems put limits to your life. By having surgery to remove your gallbladder, you can prevent painful attacks. You can also avoid future problems. And you will still be able to enjoy all your favorite foods and activities. So see your doctor for treatment. You can feel good again.



SMS SPECTRA TO 56363  
Toll Dial-in: 1860 500 2244  
[www.apollospectra.com](http://www.apollospectra.com)



BENGALURU | CHENNAI | DELHI | GWALIOR | HYDERABAD | JAIPUR | KANPUR | MUMBAI | PUNE