

*About
Cholecystecto*

*Surgical removal of the
gallbladder*

A guide for patients and relatives



Stones in the gallbladder are very common, and surgery is often advised for this problem. Cholecystectomy is surgical removal of the gallbladder. If you, or someone close to you has gallstones, this booklet is for you. This booklet has been prepared to tell you about gallstones and the treatment options available for them. Information about the benefits and risks involved will help you to make an informed decision.

It is important to remember that each person is different. This booklet cannot replace the professional advice and expertise of a doctor who is familiar with your condition. You may have questions that this booklet does not cover; you should discuss these with your surgeon.

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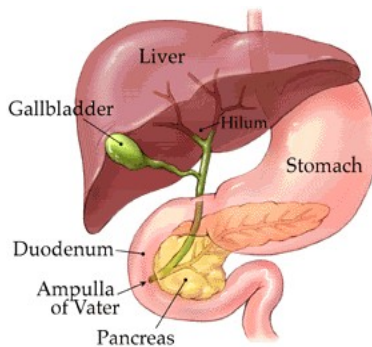
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What is the gall bladder?

The gallbladder is a small sac that lies beneath the liver in the right upper abdomen. It is joined to the bile duct, a tube that comes from the liver and carries bile to the intestine. The liver produces bile, a green viscous fluid that helps digest food. The gallbladder stores bile that is produced by the liver. It contracts when we eat, and pushes bile down the bile duct into the intestine. The gallbladder is not necessary to maintain good health. After the gallbladder is removed, bile flows directly from the liver to the intestines, and digestion proceeds normally.



What are gallstones?

Gallstones are solid pieces of stone-like debris formed from bile, usually in the gallbladder. They vary in size, shape and colour. There are various types of gallstones, but the commonest types consist of excess cholesterol. They are usually associated with a diseased gallbladder that is not functioning properly.

Gallstones are very common, and affect one or two of every ten adults. They are more common in older patients, in women, in association with the contraceptive pill, pregnancies and obesity. They can gradually enlarge over years, but it is often small stones that tend to cause more pain.

How are gallstones diagnosed?

Ultrasound scan is a safe, painless and accurate method of identifying gallstones. Occasionally, other tests may be necessary. Your doctor may recommend that you have an ERCP. This is an internal endoscopic examination that can look at the bile duct and see if it contains stones. If bile duct stones are found, they can be removed at the same time through the endoscope.

What problems do they cause?

Many people with gallstones have no symptoms and may never develop any problem. In that case, no treatment is needed. The consequences of gallstones can range from brief attacks of pain to potentially serious complications, such as inflammation of the pancreas. A stone may migrate into and block the bile duct, causing jaundice. Even very small gallstones can cause a lot of symptoms.

Do I need to be on a special diet?

Some people find that heavy meals aggravate their symptoms. You may benefit by staying on a low-fat diet before the operation.

When is cholecystectomy advised?

The gallbladder is removed when you have stones or inflammation in your gallbladder. This operation is performed to prevent you from having further attacks of pain, or complications such as inflammation of the pancreas. If you have medical problems that make it highly risky to undergo surgery, you may be advised against having the operation.

What is laparoscopy?

Laparoscopy, or "keyhole" surgery, enables the surgeon to inspect the inside of the abdomen, without having to make a large cut. A laparoscope is a long, narrow telescope attached to a small video camera and a light. It provides a view of the inside of the abdomen on a TV monitor for the surgeon and other team members.

How is laparoscopic cholecystectomy performed?

Laparoscopic cholecystectomy is complete removal of the gallbladder by keyhole surgery, without a big cut. A small incision 2 to 3 cm long is made at the navel and the laparoscope is inserted. The surgeon inflates the abdomen with carbon dioxide, a harmless gas, to provide room for the surgery to be performed. Two small cuts 0.5 to 1 cm in size are made below the right rib margin. A fourth cut is in the upper abdomen close to the breastbone. These are used for inserting instruments, such as scissors and forceps, which can pick up and cut tissues. Surgical clips are placed on the duct and artery leading to the gallbladder in order to secure these structures against leakage or bleeding. The gallbladder is removed from inside the abdomen through one of the cuts. This cut may need to be enlarged slightly if the gallstones are large.

It is sometimes necessary to take an X-ray of the bile duct during the operation. This is performed if there is some doubt that you may have a stone in the bile duct.

The surgery normally takes 30 to 90 minutes, depending on the size of the gallbladder, how inflamed it is, and the difficulty of the operation.

What are the benefits of keyhole surgery?

The advantages to you of having your gallbladder removed by the laparoscopic method are:

- Reduced pain and ease of recovery after surgery
- Less pain medication required
- Shorter hospital stay
- Earlier return to full activity and work
- Less visible abdominal scars

Who can't have the procedure?

Most patients can have laparoscopic surgery, if they are able to tolerate general anaesthesia safely. A few conditions make laparoscopic surgery difficult or unsafe. In these instances, your surgeon may advise you to undergo the traditional "open" procedure. Open cholecystectomy remains a safe and effective alternative.

Conversion to an open procedure

One in 20 to 30 keyhole operations cannot be completed and need a conventional open operation. Circumstances that may require conversion include intense inflammation or scarring of the gallbladder, inability to clearly see vital structures, excessive bleeding, or stones in

the bile duct. The laparoscopic procedure is abandoned and the operation is completed through a larger incision, under the same anaesthetic. This incision is 4 to 6 inches long, beneath the ribs in the right upper abdomen.

What are the possible risks and complications?

Laparoscopic cholecystectomy offers substantial advantages over open cholecystectomy. While the likelihood of major complications is very low, certain risks do exist. These risks may be higher in your case, if you have serious medical problems that increase the risks of general anaesthesia. Most of these risks are also present with the open method of cholecystectomy. A few complications, such as bile duct injury, may be slightly more common after laparoscopic surgery.

The possible complications include:

- Those related to anaesthesia, including the rare incidence of death
- Bleeding
- Infection
- Blood clots forming in the legs
- Leakage of bile from bile ducts into the abdomen (about 1 in 100)
- Injury to the bile duct, which usually needs repair (about 1 in 500)
- Injury to abdominal organs (about 1 in 1000)

What anaesthetic will I have?

Removal of the gallbladder requires general anaesthesia, i.e. you will be made unconscious. The anaesthetist will meet you that morning

and explain the procedure. A tube will be put down your windpipe while you are asleep, so you may experience a sore throat afterwards.

Pain after laparoscopic surgery is usually mild to moderate. You may also feel some shoulder pain. Your anaesthetist will give you strong painkillers and make sure that you are comfortable. The surgeon will also put local anaesthetic into the cuts in your tummy. You will be given regular pain medication on the ward.

If you need the bigger open operation, you are likely to feel more pain afterwards. In this case, we will give you a PCA (patient-controlled analgesia), a button to press whenever you feel pain. A computerised pump will deliver a small amount of morphine from a syringe into your vein. For a few minutes after one dose, the pump will not deliver another dose, no matter how often you press the button. This will enable you to safely control the amount of painkiller that you receive.

What alternative treatments are available?

A variety of treatment options for gallstone disease have been tried. A problem with all these non-surgical approaches is that new gallstones form several years later in the majority of successfully treated patients. Their use is limited to patients who are not suitable for surgery. There are no good alternatives to surgical removal of the gallbladder.

- **Oral Dissolution Therapy**

Oral tablets of bile acid for 6 to 12 months can be used to dissolve gallstones. This may be effective in 10- 15% of patients.

- **Extracorporeal Shock Wave Lithotripsy (ESWL)**

Methods of producing shock waves have been developed, in order to break up gallstones into smaller pieces that can be dissolved or pass out in the gut.

- **Contact Dissolution Therapy**

Gallstones can be dissolved by using agents introduced into the gallbladder via a tube through the skin.

How do I prepare for surgery?

If you are overweight, it would be helpful to lose weight while you are on the waiting list. Try to stop smoking as soon as you know that you need an operation. This will reduce your chances of developing complications after surgery.

Please bring all your medication with you to the hospital. Follow the instructions provided by the nursing staff. Do not eat anything for at least 6 hours before the procedure. You may be allowed to take your usual medication with sips of water.

What will happen after surgery?

You will return to the day surgery unit or ward after spending some time in the recovery area of the operating suite. The nurses will monitor your progress and administer painkillers. Most patients are able to get out of bed and start eating later the same day. You may be able to leave the hospital later that day or the next morning, depending on your condition. In case of the conventional open operation, you are likely to be in hospital for 3 to 4 days. You will be given painkiller medication to take at home as needed.

Do I need to diet afterwards?

You can have a normal diet soon after the operation. Most patients find they prefer light food and small meals for a few days.

When do I resume activities?

You may return to normal activities and work within 10 to 15 days. After 1 month, you can resume strenuous exercises. In case you undergo the open operation, you will need a longer time to recover.

Will I be called back to hospital?

You do not usually need to come back to the hospital for a follow up visit.

What is done to my gallbladder?

The gallbladder is sent to the pathologist. He/she carefully cuts and examines it under a microscope. This confirms the diagnosis, and excludes the presence of any growths, which occasionally co-exist. Your surgeon will receive a full report from the pathologist after 1-2 weeks. You will need to decide whether, after that, you would like the remaining tissue to be used for research or destroyed.

When should I call my doctor after surgery?

Call your doctor if:

- You develop a fever.
- You develop an unusual degree of pain
- You develop nausea or vomiting or cannot eat properly
- You become jaundiced (yellow eyes, dark urine)

Useful contact numbers:

In case a problem cannot be sorted by your doctor or practice nurse:

- Churchill Hospital: 01865 741841
- Day surgery unit, Churchill Hosp: 01865 225283
- John Radcliffe Hosp: 01865 741166
- Preassessment clinic appointments: 01865 857635
- Secretaries to
 - Mr Z Soonawalla and Prof P J Friend: 01865 220929
 - Mr N D Maynard: 01865 220280
 - Mr R Marshall: 01865 257798
 - Mr P McCulloch: 01865 221298
 - Mr G Sadler: 01865 220924

Useful websites for further information

- www.gastro.org/clinicalRes/brochures/gallstones.html

The American Gastroenterology Association provides general information about gallstones.

- www.nlm.nih.gov/medlineplus/tutorials/cholecystectomy.html

The National Institutes of Health provide a colourful site that explains all you need to know about your operation.

- www.nhsdirect.nhs.uk

The NHS Direct encyclopaedia with information on all aspects of gallstones and their treatment.

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