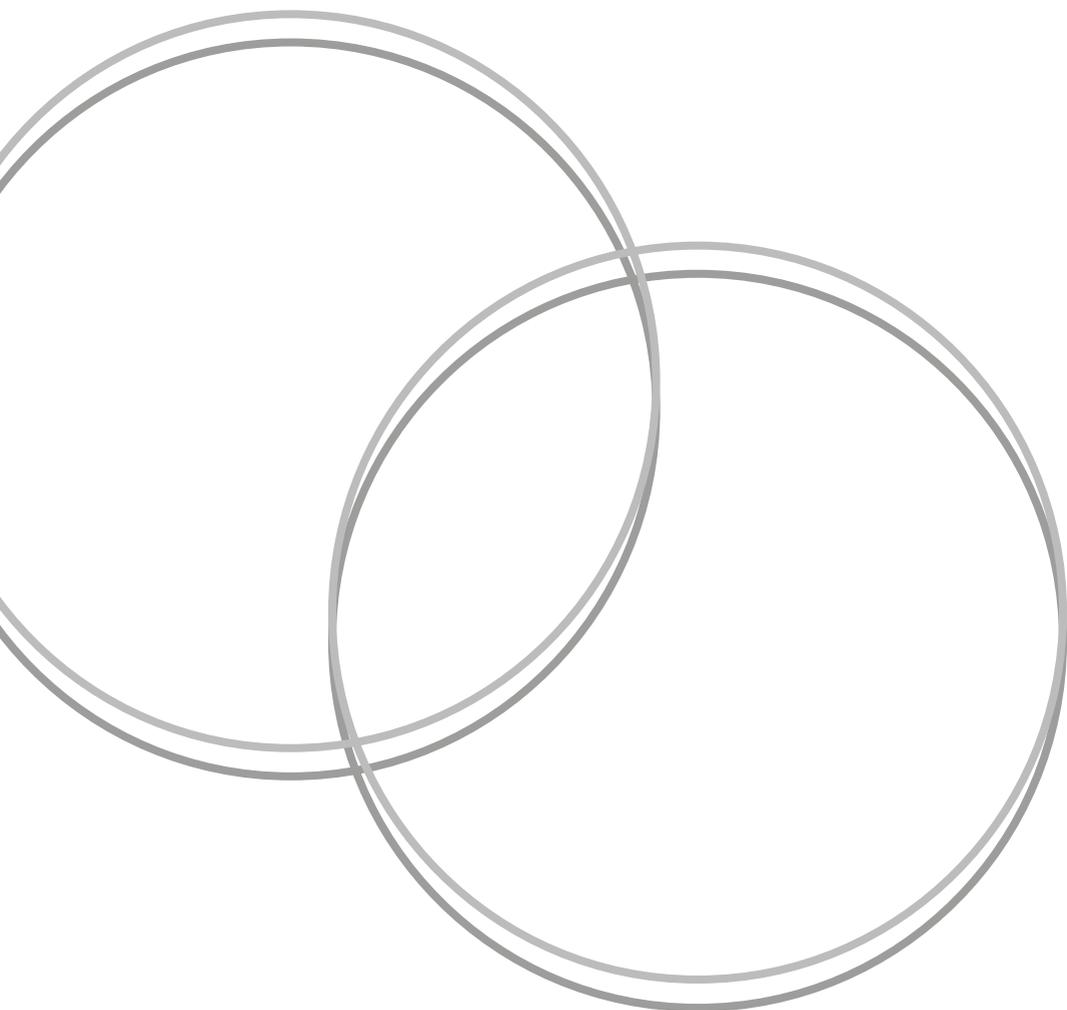


About cholecystectomy

Surgical removal of the gallbladder

Information for patients

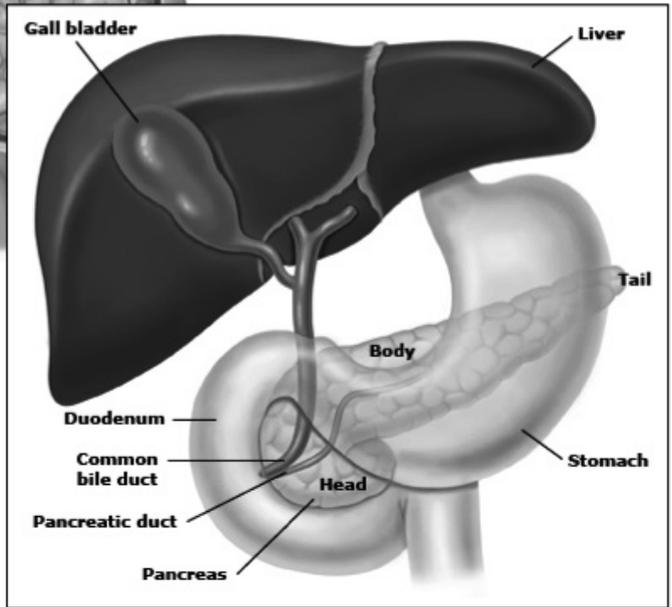
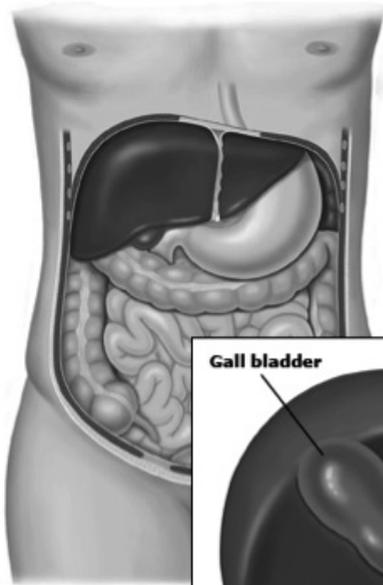


If you have gallstones and are considering surgery, this booklet is for you. It has been written to tell you about gallstones (stones in the gall bladder) and the treatment options available. Stones in the gallbladder are very common and are often treated with an operation to remove the gall bladder, which is called cholecystectomy.

Having information about the benefits and risks of this procedure will help you to make an informed decision about going ahead with the surgery.

This booklet does not replace the professional advice and expertise of a doctor who is familiar with your condition. If you still have questions after reading this booklet, please discuss these before you decide to go ahead with the surgery.

When you have had your questions answered and are happy to go ahead with surgery, you will be asked to sign the consent form at the end of this booklet.



What is the gallbladder?

The gallbladder is a small sac that lies beneath the liver on the right hand side of the upper abdomen. It is joined to the common bile duct, which is a tube that carries bile from the liver to the intestine.

The liver produces bile, which is a thick, green fluid that helps digest food. The gallbladder stores the 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 essential to maintaining good health. After the gallbladder is removed, bile flows directly from the liver to the intestines, and digestion carries on as normal.

What are gallstones?

Gallstones are pieces of stone-like debris formed from bile, usually found in the gallbladder. They vary in size, shape and colour. There are various types of gallstones; the commonest are made up of excess cholesterol (one of the ingredients in bile). They are usually associated with a diseased gallbladder that is not functioning properly.

Gallstones are very common and affect 1 to 2 in every 10 adults. They are more common in older people, women (more so in those who have taken the contraceptive pill) and people who are overweight. They can also form during pregnancy.

What problems do they cause?

Many people with gallstones have no symptoms and may never develop any related problem, so don't need any treatment. However, gallstones can cause brief attacks of pain or potentially serious complications, such as inflammation of the pancreas. A stone may also move into and block the bile duct, causing jaundice.

Even very small gallstones can cause a lot of symptoms. If you have experienced one attack, you are at high risk of further attacks, with a 70-75% chance of further attacks over the following 5 years.

How are gallstones diagnosed?

An ultrasound scan is a safe, painless and accurate method of identifying gallstones, but occasionally other tests may be necessary. You may need an MRI scan (magnetic resonance imaging) to look for stones in your bile duct. Please let your doctor know if you are claustrophobic or have any metal objects in your body, as this may mean you are not able to have an MRI.

Your doctor may also recommend that you have an ERCP (endoscopic retrograde cholangiopancreatography). This is an internal examination using a narrow tube called an endoscope, which can look at the bile duct and remove any stones within it.

We will give you further information about these two tests, if you need them.

Do I need to be on a special diet?

Rich meals or fatty foods are more likely to aggravate symptoms. You are likely to benefit from staying on a low-fat diet before the operation.

Why have I been advised to have a cholecystectomy?

We will recommend that your gallbladder is removed when you have stones that have caused attacks of pain. The aim of this operation is to prevent you from having further attacks, or complications (as inflammation of the pancreas). If you have medical problems that make it highly risky to have surgery, you may be advised against having the operation.

Laparoscopy, or 'keyhole' surgery, allows the surgeon to inspect the inside of your abdomen without having to make a large cut (incision). A laparoscope is a long, narrow tube which has a small camera attached to the end. It can show the surgical team a view of the inside of your abdomen on a screen.

What alternative treatments are available?

Staying on a careful low-fat diet often controls the symptoms, and some people can manage without surgery for a long time. A variety of other treatment options for gallstones have also been tried.

- **Oral Dissolution Therapy**

Taking tablets of bile acid for 6 to 12 months can help to dissolve gallstones. This is effective in 10-15 in 100 people, but recurrence rates after stopping treatment are high, so it is not generally recommended.

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

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

A problem with both of these non-surgical approaches is that only a very small number of people are successfully treated and many of those people form new gallstones several years later. These alternative treatments are usually used for people who are not suitable for surgery. As yet, there are no good alternatives to surgical removal of the gallbladder.

How is laparoscopic cholecystectomy carried out?

Laparoscopic cholecystectomy is complete removal of the gallbladder by keyhole surgery, using four small cuts. The first small cut, 2 to 3cm long, will be made at your navel. The laparoscope is then inserted through this cut. The surgeon will inflate your abdomen with a gas called carbon dioxide, to create room for the surgery to be carried out.

You will also have two smaller cuts, 0.5 to 1cm long, made below your right rib margin (the upper part of your abdomen, close to the lower edge of your ribs). The fourth cut will be in your upper abdomen, close to your breastbone. These three cuts are used for inserting other laparoscopic instruments, such as scissors and forceps.

Permanent surgical clips will be placed on the duct and artery that leads to your gallbladder, to secure them against leakage or bleeding. Your gallbladder will then be removed from inside your abdomen, through one of the cuts. This cut may need to be made slightly bigger if the gallstones are large.

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

It is sometimes necessary to take an X-ray of the bile duct during the operation. We will do this if we think you have a stone in your bile duct. If a stone is found in your bile duct during the operation it may be removed at the time, or your doctor may arrange for an ERCP after the operation, to remove the stone.

What are the benefits of keyhole surgery?

The advantages to you of having your gallbladder removed laparoscopically are:

- reduced pain and a smoother recovery after surgery
- less need for pain medication
- shorter hospital stay
- earlier return to full activity and work
- less visible abdominal scars
- who can't have the keyhole procedure?

Most people can have laparoscopic surgery, if they can safely have general anaesthesia. A few conditions make laparoscopic surgery difficult or unsafe. If these apply to you, we will discuss them with you and your surgeon may advise you to have the open procedure. Open cholecystectomy is still a safe and effective procedure.

Conversion to an open operation

One in 20 to 50 keyhole operations cannot be completed laparoscopically and will need to be changed to a conventional open operation. This would involve the laparoscopic instruments being removed and a larger cut (about 10 to 15cm long) being made on your abdomen, to allow the surgeon to get to your organs.

Reasons for changing to an open operation include intense inflammation or scarring of the gallbladder; the surgeon being unable to clearly see vital structures; adhesions from previous operations; excessive bleeding, severe obesity or stones in the bile duct.

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

What are the possible risks and complications?

While the likelihood of major complications is very low, there are risks associated with any type of surgery. The risks may be higher if you have serious medical problems.

The overall risks from laparoscopic cholecystectomy are less than 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 risk of death
- bleeding from the cuts or within the abdomen
- infection in the cuts or within the abdomen
- blood clots forming in the legs
- leakage of bile from the liver or bile duct into the abdomen (about 1 in 100 chance). Leakage of bile causes pain in the abdomen and can make you unwell. It usually needs urgent treatment to drain the leaked bile and then put a plastic tube into the bile duct to stop the leakage.
- injury to the bile duct, which is a serious complication that usually needs repair by major open surgery (about 1 in 500 risk)
- injury to other abdominal organs, such as the intestines or blood vessels (about 1 in 1,000 risk).

Your surgeon will discuss with you any additional specific risks that may apply to you, before the surgery.

What are the possible long-term side effects?

- About 1 in 10 people continue to experience further symptoms after removal of their gallbladder. In some people a stone is found in the bile duct which, when removed, cures the symptoms. Sometimes other problems like stomach ulcers or irritable bowel syndrome can mimic the pain caused by gallstones. Rarely, the pain can arise from muscle spasm in the bile duct.
- Stones can sometimes be spilled during the operation. These are usually found and removed, but it cannot be guaranteed that it will be possible to remove all the stones. Any remaining stones usually do not cause any symptoms, but in case they do, they may need to be removed during a second operation.
- Diarrhoea and excessive wind occasionally occur after cholecystectomy; this affects about 5-10 in 100 people. It is usually mild and can be managed by sticking to a careful low-fat diet, but occasionally needs to be treated with medication.

How do I prepare for surgery?

If you are overweight, try hard to lose weight while you are on the waiting list. If you smoke, try to stop as soon as you know you need an operation. This will reduce your chances of developing complications after surgery. If you have medical conditions such as high blood pressure or diabetes, make sure these are checked and well controlled.

You will be given an appointment for the Pre-operative Assessment clinic before the operation, so we can check you are fit for the surgery. You will also be given instructions for what to do on the day of your surgery. Please make sure that you follow the fasting (starving) instructions, as it is unsafe for you to have anything in your stomach when you are under anaesthetic.

You should be able to take your usual medication with sips of water. The pre-admission nurses will give you specific instructions if any of your medications should not be taken before or on the day of surgery. Please bring all your medications with you to the hospital for the Pre-operative Assessment visit, as well as on the day of surgery.

What anaesthetic and pain relief will I have?

Removal of the gallbladder requires general anaesthesia, which means you will be made unconscious. The anaesthetist will meet you on the morning of your surgery, to explain about the anaesthetic and any pain relief after the surgery.

Pain after laparoscopic surgery is usually mild to moderate. In addition to pain from the cuts to your abdomen, you may also feel some shoulder pain. This is due to irritation of the diaphragm, which shares a nerve pathway with the shoulder.

Your anaesthetist will give you painkillers after the operation and will make sure that you are comfortable. The surgeon will also put local anaesthetic into the cuts in your tummy, which will keep the area numb for some time after the operation. You will be given regular pain medication when you are on the ward, but please let us know if you are still in discomfort.

What will happen after the 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 give you painkillers. You will be able to get out of bed and start eating later the same day. You will have had a tube put down your windpipe during the operation, to help you breathe, so you may have a sore throat.

If you have had a laparoscopic procedure, you should be able to leave the hospital later that day, depending on how well you recover from the operation and anaesthetic. If you have had an open operation, you are likely to be in hospital for 3 to 4 days.

You will be given a supply of painkillers to take at home.

Do I need to change my diet afterwards?

You can return to your normal diet soon after the operation. Most people find they prefer to eat light food and small meals for a few days. A healthy balanced diet with regular light low-fat meals is the best approach. If you have any questions about diet, please speak to your GP.

When can I get back to my normal activities?

If you have had the laparoscopic procedure, you can shower the day after the operation. The cuts do not need dressings and can be left uncovered afterwards. There are usually no external stitches to remove, so you do not need to see your GP or practice nurse to have stitches removed.

You can return to normal activities and work within 10 to 15 days. After 1 month, you can return to strenuous exercises.

If you have the open operation you will need to stay in hospital for a few days, and will need a longer time to recover, usually 4 to 5 weeks. We will support you with looking after yourself whilst you are in hospital and will give you further advice before you go home.

What happens to my gallbladder after it is removed?

Your gallbladder will be sent to the Pathology laboratory for examination, where it will be carefully sliced and inspected under a microscope. This is done to confirm the diagnosis and check for the presence of any growths, which occasionally develop in the wall of the gallbladder. Your surgeon will receive a full report after 1 to 2 weeks.

When you sign the consent form you will need to decide whether, after the report, you would like the remaining bits of your gall bladder to be stored for research or destroyed.

Follow-up appointment

You are not likely to need to come back to hospital for a follow-up visit. If you have any concerns after the operation, please contact your GP.

Call your GP if:

- you develop a high temperature (fever)
- the pain after surgery gets worse and becomes unbearable, despite taking painkillers
- you start to feel sick, are sick, or cannot eat properly
- you become jaundiced (yellow eyes, dark urine).

If you develop a problem overnight or during the weekend and cannot wait until the next working day, please call **NHS 111**, the out-of-hours emergency care service.

Telephone: 111 (Freephone from landlines and mobiles)

Alternatively you can call:

Oxford University Hospitals' switchboard

Telephone: 0300 304 7777

Ask for the Emergency Surgical Registrar On-call (bleep 4049).

Other useful contact numbers

Pre-operative Assessment clinic appointments

Churchill Hospital

Telephone: 01865 226 982

Horton General Hospital

Telephone: 0300 304 7777

Day Surgery Unit

Churchill Hospital

Telephone: 01865 225 283

Horton General Hospital

Telephone: 01295 229 239

OUH Charitable Funds

(Oxford Hepatobiliary Fund 0490)

The Hepatobiliary and Pancreatic Surgery department at Oxford treats patients with benign (non-cancerous) conditions as well as cancer. The department runs a Charitable Fund that is used to provide the best equipment and facilities for our patients. It also helps support research projects to help improve patient care and develop innovative ideas.

If you would like to make a donation to the Oxford Hepatobiliary Unit Fund, please get in touch with the secretary of the Hepatobiliary Service.

Telephone: 01865 235 668

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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