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# Keyhole surgery to remove your gall bladder (Laparopscopic Cholecystectomy)

Department of Surgery

Information for Patients

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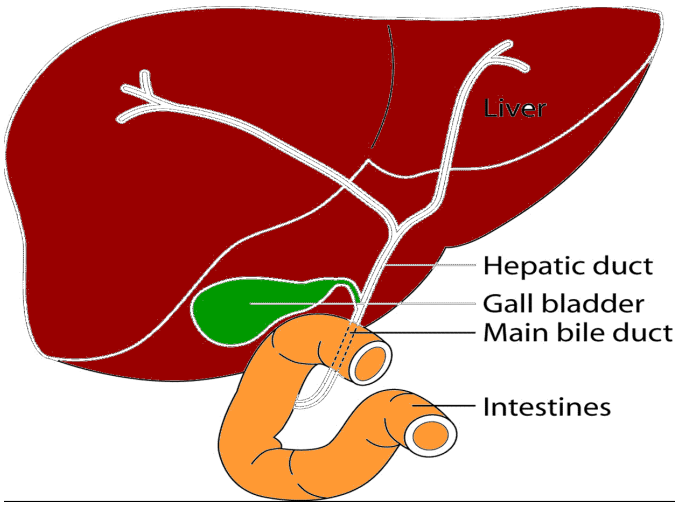
## Introduction

Please read this information before you come into hospital. Make a note of any questions you would like to ask.

Your surgeon has recommended that you have your gall bladder removed. This is usually done by keyhole (laparoscopic) operation. This is sometimes known as a laparoscopic cholecystectomy (gallbladder removal). This type of operation is routine. Most patients go home on the day of their operation. Some patients are not suitable for this type of operation and need an “open” operation. This choice may be taken before your operation, but is usually taken during the operation for reasons that will be explained later in this leaflet.

## What is the gall bladder?

The gall bladder is a small pouch that is attached below the liver. Fluid called bile is made in the liver and a small amount is stored in the gall bladder. When we have eaten a meal, the gall bladder empties the bile into the small intestine to mix with the partly digested food. The gall bladder makes the bile more concentrated by removing water from it. Gallstones are formed when chemicals in the bile crystallise. Gallstones vary in size and may be as small as grains of sand or as large as a plum.

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## Problems caused by gall stones

Many people do not know that they have stones in their gall bladder if they do not have any pain. Others will have pain caused by swelling (inflammation) of the stones. They irritate the lining of the gall bladder.

- **Biliary colic and acute cholecystitis:** as well as colicky (intermittent or fluctuating) pain (biliary colic) and feeling sick, gallstones can cause severe inflammation of the gall bladder (acute cholecystitis). This can cause continuing pain and a high temperature. Patients can feel bloated and also have some sickness. The pain of biliary colic can be severe but can usually be controlled with painkillers.
- **Jaundice:** sometimes a stone may move out of the gall bladder and into the main bile duct. This blocks the flow of bile from the liver. As the bile cannot drain into the intestines, it spills into the bloodstream causing the patient to become 'yellow'. Itching may be severe as the bile irritates the skin. Some of the bile will be passed in the pee (urine). This causes the urine to become very dark in colour. After a while your poo (bowel motions) will become very pale (the bile normally gives your poo their colour). They may be difficult to flush away, as they contain undigested fats.
- **Pancreatitis:** the pancreas produces enzymes that mix with the food to help digestion. The tube (duct) which carries this fluid joins with the ducts that carry bile into the intestines. If a stone escapes from the gall bladder, it may block the ducts. This condition is very painful and can be serious.
- **Cholangitis:** this problem is quite rare. It occurs when a blocked bile duct becomes infected.

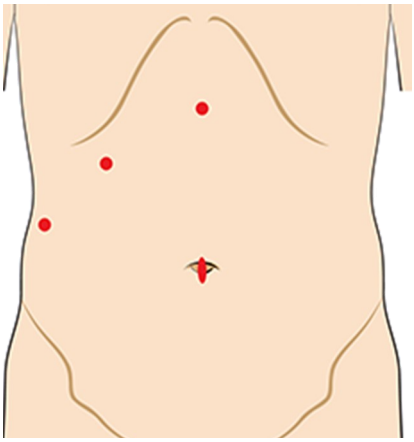
## What is a laparoscopic cholecystectomy?

This is a 'keyhole' operation to remove your gall bladder. It is done under a general anaesthetic. It usually takes between 30 minutes to 2 hours depending on your individual circumstances.

The operation is done through small cuts (port sites). These are made in your tummy (abdomen). Hollow tubes (ports) are placed into the cuts. The surgeon passes instruments through these to do the operation. Carbon dioxide gas is pumped in through one of these ports to inflate your tummy (abdomen). This makes it is easier for the surgeon to access your gall bladder.

The gall bladder is removed either through your belly button or through one of the port sites. The skin wounds left after this operation will be closed either with

- a stitch which slowly dissolves
- a stitch that will need removing by a healthcare professional.



The type of stitch depends on your surgeon's preference. The diagram shows roughly the position of the cuts that will be made.

Sometimes X-rays are taken during the operation of the ducts draining the liver. This is called an 'on-table cholangiogram' (OTC).

## Are there any risks?

Laparoscopic surgery is seen as a very effective and safe procedure. More than 95% of patients do not have any problems linked with the operation. There are some specific risks and complications you should be aware of:

- **Bile duct injury** - this is the most serious complication. It is uncommon (reported in up to 1 in 650 of cases). The main bile duct can be damaged during the operation. If this occurs, this is seen as a serious problem. It may need a major operation to repair it. This should be discussed with your surgeon.
- **Bile leak** - for some patients (about 1 in 100) bile may leak into their abdomen after surgery. This may cause pain, feeling sick (nausea) and a fever. These may not start until 2 days after surgery. If you are feeling unwell at home a few days after your operation with signs of a fever or your abdomen is becoming larger and/or tender, you must seek medical attention. In some cases an operation is needed to try and find a cause of the bile leak.
- **Changing from keyhole to open surgery** - sometimes (in about 1 in 100 patients), the surgeon will not be able to do the operation with keyhole surgery. In these cases a bigger cut is made on your right hand side, under your right rib. This is usually done if your surgeon feels that it is unsafe to go ahead with keyhole surgery, or if your gallbladder is difficult to access due to scar tissue from earlier surgery or earlier attacks of pain. If your surgeon has to change your operation to the open method, then it will mean you staying in hospital for a few days longer. Your recovery at home may be longer (4 to 6 weeks).
- **A bigger operation** - sometimes gallstones may have caused other problems such as holes (fistulae) between the gallbladder and the bile duct or bowel (about 1 in 100), or sometimes gallbladder infection (cholecystitis) has caused a hole (perforation) in it. In this case the surgeon may need to do a bigger operation involving the bowel or bile duct. Sometimes a drain needs to be left in for some weeks to help these heal.
- **Damage to your intestines** - if you have had earlier operations on your abdomen, these may have caused scarring. This may make the keyhole operation more difficult. Sometimes, the small or large bowel can be damaged because of this.
- **Deep vein thrombosis (DVT, blood clot in the lower leg)** - You will have a risk assessment and if needed you will be offered blood thinning medication and/ or compression stockings to reduce your risk. More information is available in our leaflet '**Reducing the risk of blood clots while you are in hospital'** available here: www.yourhealth.leicestershospitals.nhs.uk or ask a member of staff for a copy. You will also be encouraged to get up and move around after your operation as soon as the effects of the anaesthetic have worn off.
- **Chest infection** - if you smoke, stopping about 2 weeks before your operation will help reduce the risk of a chest infection. Also, getting up and about as soon as you feel able is very important.
- **Bowel disturbance** - some people notice an increase in the frequency of their bowel movements. This may settle within a few months. Some patients may need tablets if this becomes a problem.
- **Port site hernia** - In about 1 in 100 patients, a small weakness will remain in the cuts made in the belly button. This allows a hernia to develop, which may need an operation in the future.

# Is there any other treatment available?

In the past different methods were tried to dissolve gallstones, either with tablets or by laser treatment. However, there is no strong evidence that they work in the short or long term. Your body can work normally without the gall bladder, so taking it out may be the recommended treatment.

Or, your surgeon may decide with you that a “watch and wait” approach is best, and that no treatment is needed at this time. The reasons for this will be explained to you fully.

# Gallbladder polyp

A gallbladder polyp is a small, abnormal growth of tissue that sticks out (protrudes) from the lining of the inside of the gallbladder. They are fairly common and 95 percent are non-cancerous (benign). The size and features of a gallbladder polyp can help predict whether it is cancerous (malignant) or not.

You may be having this operation for gallbladder polyps instead of gallstones. Not all patients diagnosed with gallbladder polyps need an operation. However, surgery is usually offered if you are having symptoms similar to gallstones, there are multiple polyps, the size is 1cm or more, or there is a high probability of cancer.

If you do not have any symptoms and the size of the polyp is less than 1cm, you will be monitored with regular ultrasound scans. If the size of the polyp increases during follow up scans, we will talk to you about the possibility of having your gallbladder removed.

## What are the benefits of laparoscopic rather than open surgery?

- Smaller cut
- Less scarring
- Less pain
- Less risk of infection
- Shorter hospital stay (most patients are able to go home the same day)
- Shorter recovery time (usually about 2 weeks but it can be up to 6 weeks before you feel back to normal).

## Preparing for your admission

You will have a ‘pre-assessment’ appointment on a different day. This will either be:

**In the pre-assessment clinic:** it is very important that you attend. If you do not attend, your operation may be postponed or cancelled.

- At this clinic a member of the nursing team will see you. They will check that you are fit for your operation. They will also be able to explain more about the operation and answer any questions that you may have.

- You may also be seen by a doctor who will examine you and may organise for you to have some tests.

**During your clinic appointment with your surgeon** - You may be sent for blood tests and MRSA screening. In this situation, you will be given some forms to fill in at home and bring with you on the day of your operation.

## Medication

- Please tell your surgeon if you are taking any medicines. You will be told if you need to stop any of your medicines before your operation.
- If you are taking any medicines that thin your blood, such as aspirin, warfarin, rivaroxaban or clopidogrel, it is important that you tell us as soon as possible.
- Please bring your medicines into hospital with you when you are admitted.
- If you are taking the oral birth control (contraceptive) pill, you may be advised to stop taking these 4 to 6 weeks before your operation. This is due to the slightly higher risk of a deep vein thrombosis (DVT). You will need to use a different method of contraception during this time. You will be able to go back on the pill after your operation.

## Preparing for your operation

Once a date has been agreed for your operation, you will be sent a letter confirming this. The letter will tell you when you need to stop eating and drinking.

**The following points should be noted before coming into hospital:**

- If you smoke, it is recommended that you stop 48 hours before your operation. The hospital is a ‘smoke free environment’. This means you cannot smoke in the hospital or in hospital grounds.
- Do not bring valuables into hospital, as we cannot be held responsible for any loss or damage.
- Please remove all jewellery; let us know at pre-assessment of any jewellery you cannot remove.
- Please remove contact lenses, make-up and nail varnish.
- Take a bath or shower using the special shower gel that was given to you at pre-assessment.
- You do not need to shave your stomach, this will be done at the time of your operation if needed.
- You must be collected on the day of your operation by a responsible adult, who must take you home in a car or taxi after your operation.
- You must have a responsible adult at home with you for at least 24 hours.
- You must have a phone at home.
- You must not drive, cycle, operate machinery, drink alcohol, or be alone for a minimum of 24 hours after your operation.

## What do I need to bring with me on the day of the operation?

- Your appointment letter. The time you are given to arrive is not the time of your operation. The surgeon and anaesthetist need to see you before the start of the operating list. You may be waiting for your operation for up to 4 hours.
- Any drugs, medicines or inhalers you are using. Please take any medication you need before you come in. The pre-assessment nurse will tell you when you should take your medication. Please consult your GP or clinic about stopping blood thinning medicines before your operation.
- A dressing gown and slippers, if you have them.
- Something to do while you are waiting such as a book or magazine.
- Bring a contact number for the person who is taking you home.
- Only bring an overnight bag if you have been told at pre-assessment it is necessary. Most patients will go home on the day of their operation.

## Arrival at the hospital

To help things go as smoothly as possible, please read the following important information:

- If you are ill, or cannot keep your appointment for any other reason, please let us know as early as possible. We may be able to offer it to another patient.
- Please follow the instructions from your pre- assessment appointment about taking your medicines
- The operating list can be a morning list, an afternoon list or an all-day list, depending on the surgeon. Please be prepared to wait. If you are likely to be waiting for longer than expected the nursing staff will explain the reasons for this.

## What will happen on the day of the operation?

You should come to Theatre Arrivals, or the ward named in your letter. Your details will be checked and you will be directed to a waiting area, where the nurse will collect you.

The nurse will talk to you about your operation and ask you a few questions.

You will meet one of the surgical team who will check you have signed a consent form. Before you sign this form, please ask if there is anything you do not understand.

You will be visited by the anaesthetist. This is the doctor will look after you when you are asleep.

You will need to change into a theatre gown; the nurse will ask you to do this on arrival.

You will then be directed to a same-sex waiting area to wait for surgery.

## After your operation in recovery

You may be given oxygen until you are fully awake. This is given through a mask which is placed over your nose and mouth.

You may have a ‘drip’ going into the back of your hand. This is normal and will be removed when you are drinking enough fluid.

You may have a wound drain in place. If you have your operation on the Day Case Unit then the drain may be removed later that day. Otherwise, the drain will normally be removed the day after your operation.

## Recovering on the ward

Most patients go home the same day. After you have come round in the recovery area you will return to the day ward and staff will make sure you are comfortable, and give you food and drink. If you have any discomfort or sickness please let the staff know so that they can help you.

You will recover on the ward until your nurse is happy that you are well enough to go home. You will need to eat and drink before you can go home. A very small number of patients need to stay overnight if the nurse or doctor feels this is needed.

## Recovery at home

### Pain

You may have some discomfort after your operation but it should not stop you from gentle movement and going home. You will be given pain relief whilst you are asleep. You should wake up feeling reasonably comfortable. If you have pain, please tell the nurse looking after you.

You may have some shoulder pain and/or lower back pain. This is caused by the gas pumped into your abdomen during the operation which presses under the rib cage. Moving around will help to ease this and it usually settles within 1 or 2 days.

You will be prescribed painkillers to take home with you. If you are in pain it is important that you take these according to the instructions on the packaging. It is much better to keep pain under control than to try and treat it when it has become unbearable.

If your surgeon has to change to ‘open’ surgery, you will be given stronger pain relief to make sure that you have a comfortable recovery. You may have an infusion of local anaesthetic into your wound. This is delivered by a special plastic tube that sits just under your wound. You may also have a button to press that delivers pain killers directly into your bloodstream.

### Sickness

A few patients feel sick after a general anaesthetic. Please tell the nurse looking after you if you feel sick. You can be given medicine to help relieve this

### Wound care

You will have small plasters over your wounds, which you may remove 4 to 5 days after your operation, providing they are clean and dry. The ward staff will give you some clean dressings to take home. A small amount of leakage is normal.

After this time you may choose not to cover the wounds, although you can apply new dressings to protect your clothes.

You may have a shower when you are at home. It is perfectly safe for water to splash onto the wounds in the shower. If you take a bath, make sure the water is shallow. Afterwards gently pat the skin dry around the wounds with a clean towel.

The wounds may itch and there may be bruising. This is quite normal and will settle in the same way as any other bruise. A small number of people develop a wound infection after the operation, particularly if the gall bladder is infected or contains pus.

The signs of infection are

- redness,
- swelling,
- heat,
- leaking fluid,
- smell or tenderness around the wound edges.

If you think your wounds are infected, please contact your GP as you may need a short course of antibiotics. Sometimes, a further operation is needed to release the pus from an infected area.

If you have skin stiches that need to be removed, it is usually done at your GP surgery. The ward will arrange this before you leave hospital.

## Diet

There is no specific dietary restrictions after removal of your gallbladder. You can eat and drink normally after the operation, however, you may want to increase your intake of foods at your own pace. You may find eating little and often is easier in the first few days after your surgery.

It is always best to have a well balanced diet.  Please speak to your GP if you need advice on a healthy and balanced diet.

## Getting up and about

It is very important to get moving quite soon after your operation. You must not get out of bed the first time without the help of a nurse, as you may feel dizzy. When you go home you should keep on walking around doing a little bit more each day.

Once you have left hospital, if you have any of the following symptoms please contact us as soon as possible:

- a temperature or fever
- severe stomach pain
- a swollen stomach
- being sick a lot (severe or uncontrolled vomiting)
- jaundice (yellowing of the eyes or skin)

## General advice

Most people go home the same day. Once you have been discharged from hospital do not compare your recovery with other people who have had the same operation. We are all different and recover at different rates.

## Follow up

Usually, no follow-up with the hospital is needed. However, you may get a phone call from the ward you were discharged from to check you are recovering as expected.

## Contact details

If at any time you are sent home, you are concerned about any symptoms or problem then you should contact your GP or the hospital you were recently discharged from.

If you need to seek help it would be helpful if you are able to tell them:

- the name of your consultant
- the operation that you had
- the date of your surgery
- your hospital number

Please also make a note of the name of the person that you speak to for advice.

Please contact the relevant hospital:

| | |
|---|---|
| Glenfield Hospital (Ward 24) | **0116 250 2490** |
| Leicester General Hospital (Day Case Unit 1) | **0116 258 4192** |
| or (Day Case Unit 2) | **0116 258 8130** |
| Leicester Royal Infirmary ASU | **0116 258 5164** |
| (Ambulatory Surgical Unit) | |

**24 hour contact numbers:**

| | |
|---|---|
| Surgical Admissions (SAU) | **0116 258 5332** |

## Further information

Surgeons at the Leicester Royal Infirmary, Leicester General Hospital and Glenfield Hospital do these operations. You might notice slight differences between the information in this booklet and the care you actually get. This is not something to be concerned about as it is normal for there to be differences between individual surgeons and their teams.

## Space to make notes

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