**Introduction**

Cholecystectomy is removal of the gallbladder that is located under your liver on the right side of your upper abdomen (see picture 1).

![Diagram of liver, gallbladder, bile tubes, pancreas, and stomach](image)

Picture 1: gallbladder (with gallstones), liver, bile tubes, pancreas gland, and stomach.

**Aims**

The gallbladder is usually removed when it contains stones that may cause problems varying from pain (biliary colic) to serious, life threatening complications.

If you have been advised to have the gallbladder removed, it means that you either have pain from gallstones or had a complications and need surgery to avoid more serious problems re-occurring.

**What does the operation involve?**

The operation is done under general anaesthetic. There are two ways to remove the gallbladder.

1) Laparoscopic (key hole)

Four tiny slit holes are made through which tubes as thick as your little finger are passed into the abdomen; these tubes carry surgical instruments and a camera that relays pictures onto a TV screen.

The abdomen is filled with air and the surgeon can remove the gallbladder looking at the picture on the TV screen and taking is out through one of the tubes.
In our experience around 95% of all gallbladders are removed by keyhole surgery (this percentage is much lower in emergency operations).

The advantages of this method are that there is less pain after the operation, the recovery is fast and the scars are tiny.

The disadvantages are that if there is a lot of scar tissue from inflammation of the gallbladder or from a previous operation it may not possible to be completed or there is higher risk of injury to bile tubes or other organs.

2) Open surgery

This is done through an incision (cut) over the gallbladder, under the ribs on right side.

The advantage of this technique is that the tissue (even heavy scar tissue) around the gallbladder area can be seen and dissected more safely.

The disadvantages are that there is more pain after the operation, the recovery time is longer, and more problems with the wound (infection, hernia, visible scar).

**Risks**

There are risks related to the anaesthetic procedure and you are advised to discuss these with your anaesthetist (a general information form may be given to you).

Any operation may lead to complications, including:

- Excessive bleeding internally requiring blood transfusion and re-operation
- Surgical wound infection
- Injury to nearby tissues (bowel, liver, stomach, blood vessels) is rare (1:1000) and can be repaired at the time but sometimes is noticed afterwards and a further operation is needed
- Clots arising from the veins in the legs (deep vein thrombosis) which may travel to the blood vessels in the lung (pulmonary embolism) (this may be a very serious complication but occur very rarely)
- Long term numbness or pain around the scar, hernia at site of operation and an unsightly (ugly) scar
In addition, specific complications of this operation are:

Early complications

- Death rate of 1 in 1000, due to perioperative complications like heart problems, chest infections, septicaemia (blood borne infection); the risk is higher in patients over 60, those who are overweight, smokers, heavy drinkers, in emergency operations and in the presence of jaundice.
- Infection from the bile into the blood stream or into the abdomen requiring high doses of antibiotics
- Leakage of bile into the abdomen which may require further procedures/operation to seal it (1%)
- Damage to the bile tubes draining the bile from the liver to the gut requiring a open operation for repair (0.5% or 5 in 1000 for keyhole surgery)
- Gallstone left in the bile tube by slipping into it due to manipulation of the gallbladder during its removal (retained stones causing blockage of the bile tube or inflammation of the pancreas (pancreatitis)
- Failure to remove gallbladder due to very heavy scar tissue making it unsafe; in such situation a tube may be left inside the gallbladder and attached to a bag outside the abdomen to contain the inflammation and a further operation is required several weeks later

Late complications

- Stricture (narrowing) of the bile tubes which can lead to jaundice, fever and pain; this may need a further operation to repair it
- Flatulence (increased amount of wind), fat intolerance and vague discomfort in the abdomen
- Diarrhoea or increase frequency of bowel movements that requires medical treatment and in a minority of patients could be life-long
- Hernia at site of operation
- Scar tissue in the abdomen which may cause bowel obstruction

The laparoscopic (keyhole) technique allows a quicker recovery, less pain afterwards and a slightly lower death rate.

However, the keyhole surgery in itself may cause particular complications not seen in open surgery. In some circumstances the tube put in for filling the abdomen with air may lead to injuries to blood vessels or bowels that require open surgery for repair. Also the risk of injuries to the local issues such as bile duct is slightly higher in keyhole surgery (5 in 1000 rather than 3 in 1000 seen in open cholecystectomy).
Some of these complications may require an early or late re-operation or other less invasive procedures done with endoscopy (flexible cameras put inside stomach) or radiology.

**Benefits**

The majority of the patients will have their symptoms cured and the complications associated with gallstones are avoided.

**Are there any alternatives to the procedure?**

Other ways of treating gallstones have been tried like shock waves directed to the stones to shatter them or drinking solutions to dissolve them.

These non-surgical methods have now been abandoned completely as they do not deal with the diseased gallbladder and did not prove to work efficiently.

**What are the consequences of not having the procedure?**

Gallstones may cause significant problems ranging from persistent or repeated attacks of pain (biliary colic) with many hospital admissions, to serious infections (including septicaemia) and serious damage to other organs like the pancreas (which may be a potential life threatening complication). The risks of not operating should be discussed with your surgeon based on your own history and presentation of the condition.

**What about after the operation?**

**Discomfort**

You will wake up in a drowsy state in the recovery room before being taken back to the ward. You may have a small plastic tube in your abdomen which is usually removed after 1-2 days.

Some patients will be able to go home on the evening of the procedure.

Some patients may experience discomfort for 12 – 24 hours but this settle down quite quickly and most patients are at home within 24 – 48 hours. The wound may ooze a little and there are normally bruises around the wound but all these settle quite quickly.

**Activity**

Most people are able to resume normal activity (including driving) within two to four weeks after their operation. Heavy lifting is quite acceptable provided it is comfortable. Sexual activity can be resumed when the wounds are comfortable. There are no hard rules for this and you are in charge of deciding when and how to gradually resume normal activity.
Diet

Start with clear fluids than eat a light diet first few days. Constipation due to painkillers can occur and if necessary a mild laxative could be used.

**What is the prognosis or expected outcome?**

You could expect a cure with the operation.

The procedure is generally safe and the risks and benefits are as described above.

If there are more specific ones, particular for your individual situation, these will be discussed in details with you.

**When to contact the ward or your doctor**

Occasionally problems my happen days after going home.

If any of the following occur you need to seek advice:

- If you are being sick (vomiting) several times
- If your body temperature is higher than 101.5F or 37.5C, feel unwell, shivering, feeling hot or cold.
- If you have any pus coming out of your wound or any increase in redness around the wound.
- If you have an increase in pain in the abdomen not settling with medication given on discharge.

If you have any concerns err on the cautious side and seek advice.

It is recommended that you telephone the ward to make contact with the professional team or to contact your GP.
Comments, Compliments or Complaints

The Patient Relations/Patient Advice and Liaison Service (PALS) Department provides confidential on the spot advice, information and support to patients, relatives, friends and carers.

Contact Us

Tel: 01942 822376 (Monday to Friday 9am to 4pm)

The Patient Relations/PALS Manager
Wrightington, Wigan and Leigh NHS Foundation Trust
Royal Albert Edward Infirmary
Wigan Lane
Wigan WN1 2NN

Ask 3 Questions

Become more involved in decisions about your healthcare. You may be asked to make choices about your treatment. To begin with, try to make sure you get the answers to three key questions:

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

How We Use Your Personal Information

For details on how we collect, use and store the information we hold about you, please take a look at our “how we use your personal information” leaflet which can be found on the Trust website: www.wwl.nhs.uk/patient_information/Leaflets/default.aspx

This leaflet is also available in audio, large print, Braille and other languages upon request. For more information call 01942 773106.

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