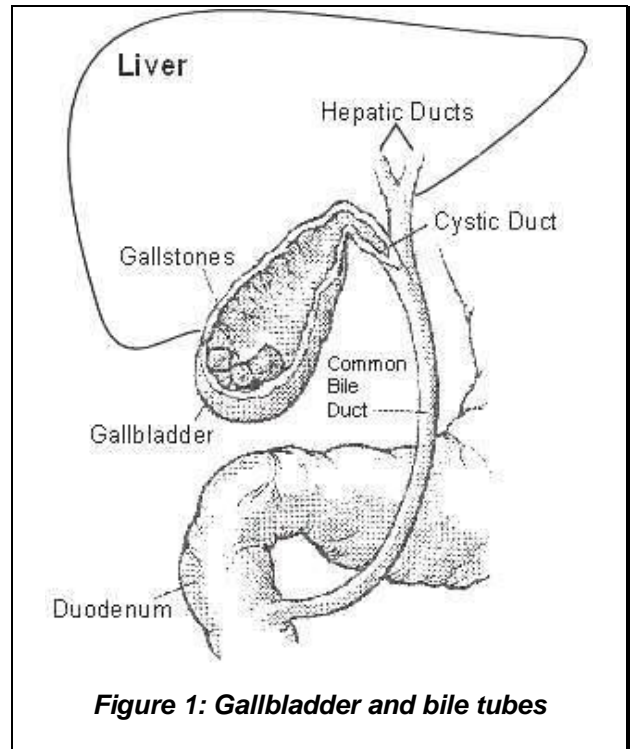


Laparoscopic Cholecystectomy

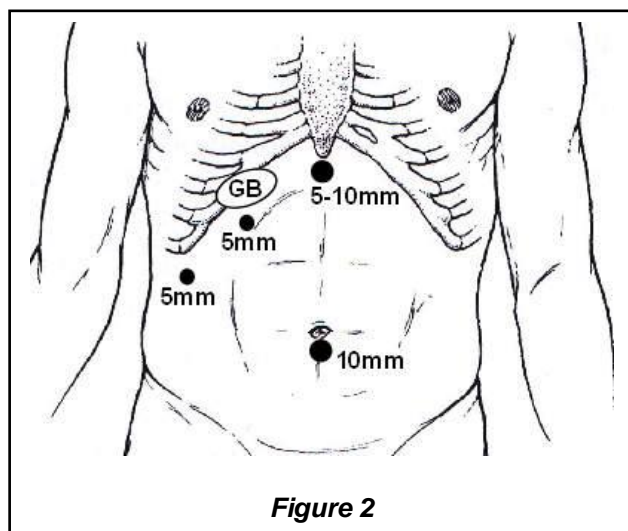
Introduction

The gall bladder is a small pear-shaped organ that is attached to the underside of the liver (figure 1). The gall bladder stores bile, which is a fluid that helps to digest fat. The bile flows into the gut along a small tube (the bile duct). Gallstones may form in the gall bladder and may cause pain, bloating, nausea and vomiting. Sometimes stones may travel into the bile duct and cause a blockage. If this occurs the person may become jaundiced (yellow) and require urgent treatment. One in five people develop gallstones although not everyone will have problems. However those people who do have problems may go on to develop complications if it is not treated.

There are many different reasons why people develop gallstones. They tend to develop in middle age but are some times seen in very young people. They tend to occur in people who are overweight and they can run in families. They are more common in women than men and there is a tendency to develop them in pregnancy. Occasionally they develop after long periods of illness, and sometimes people with certain blood disorders develop them. We know that they are always associated with infection within the gall bladder as bacteria can be seen within the gallstones. They tend to be associated with a western diet as they are far less common in some countries than others. It is very rare that we can identify why any one particular person develops gallstones.



THE OPERATION

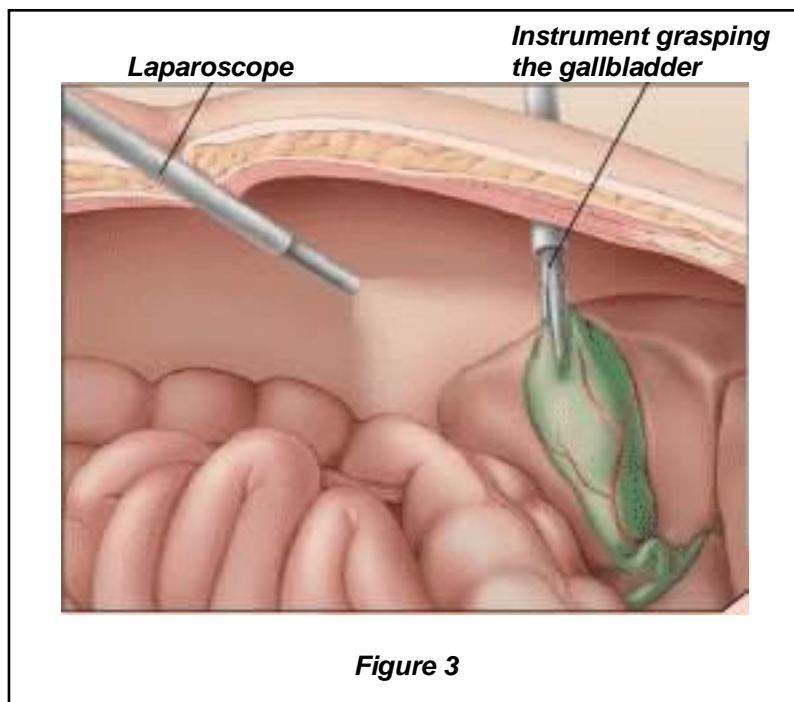


Laparoscopic cholecystectomy is the surgical removal of the gallbladder (GB) using a laparoscope (a tube like instrument). This is commonly known as keyhole surgery and is safe and effective for most patients who have symptoms from gallstones. It is necessary to remove the gallbladder as well as the gallstones as otherwise the gallstones will come back again.

There are usually three or four small cuts (incisions) made in the abdomen (figure 2), however the number of the cuts and their positions may vary between patients. A telescope ('laparoscope') is passed into one of the small incisions to allow the surgeon to see inside the abdomen. Hollow tubes called ports are inserted into the other small incisions. Carbon dioxide is then blown into the abdomen to lift the abdominal cavity away from the liver, gallbladder, small bowel, stomach and other organs.

The surgeon then puts instruments such as forceps and scissors into the other ports to help remove the gallbladder (figure 3). Small clips are placed to block off the tube leading from the gallbladder to the other tubes (ducts) and the arteries leading to the gall bladder. These clips stay in your body and do not cause any problems.

Once the gall bladder is taken out all the instruments are removed from the abdomen and the carbon dioxide gas is allowed to escape before the incisions are closed with stitches.



BENEFITS OF HAVING THE SURGERY

The removal of the gallbladder will, in most people, relieve pain, nausea and vomiting, and it will also prevent complications and the gallstones from coming back.

RISKS OF NOT HAVING THE SURGERY

The symptoms of gallstones may get better, but can return if left untreated. It is likely that complications will develop, making treatment more difficult and increase the risks. Complications include inflammation of the gallbladder, inflammation of the pancreas and blockage of the bile duct, causing jaundice and infection. Very rarely these complications are life threatening.

DISCOMFORT AND AFTER EFFECTS

You can expect some discomfort in the abdomen, and pain-killing tablets can be given for this. You may also have shoulder tip pain caused by the gas used during the operation: gentle walking may ease this. The discomfort should wear off within 4-5 days. If not tell your general practitioner.

RISKS AND COMPLICATIONS

General risks of having an operation

Although the operation is considered safe, there are risks associated with laparoscopic cholecystectomy as with any other surgical procedure.

General complications during the operation may include:

- Adverse reaction to general anaesthetic
- Secretions may collect in the lungs causing a chest infection
- Clotting may occur in the deep veins of the leg. Rarely, part of this clot may break off and go to the lungs. This can be life threatening
- Circulation problems to the heart or brain may occur, which could result in a stroke
- Death is possible during or after an operation due to severe complications

The risk of a serious complication is very small – less than 1 in 1,000 patients will have a serious complication.

Specific risks from this surgery include:

<i>The Risk</i>	<i>What happens</i>	<i>What can be done about it</i>
Excessive bleeding inside the abdomen	Damage to large blood vessels causing bleeding in one in three hundred people. This may be from the blood vessels and/or the liver bed.	Emergency blood transfusion (one in one thousand people), and abdominal surgery.
Injury to the bowels	Injury to the gut in one in three hundred people, or other organ such as the bladder when the tubes and instruments are passed into the abdomen.	More surgery to repair the injured organs will be needed.
Need for open surgery	Keyhole surgery may not work and the surgeon may need to do open surgery (1-2% of people).	Open surgery requires a bigger cut in the abdomen and sometimes a longer stay in hospital.
Stones in the bile tubes	An x-ray may be performed during surgery which shows up the tubes. Some stones may have moved from the gall bladder into the bile tubes. These can usually be removed at the time of surgery.	An endoscopic procedure may be needed to remove the stones at a later date, if they cannot be removed during the operation.
Escape of stones	Stones may spill out of the gallbladder and be lost inside the abdomen.	Rarely, if the stones cannot be found and removed they can cause abscesses, which may need draining.
Bile leak	Small clips or ties that are put on the blood vessels or bile tubes and left in the body can come off. This can cause an internal bile leak in 1 - 2% of people.	This may need drainage in the x-ray department, or further surgery which can usually be done through the previous keyhole scars. Rarely an open operation is needed.
Bile duct injury	The bile duct can be damaged during the surgery by the instruments in one in one thousand people.	This can cause long-term problems with blockage, which may need further surgery
Bleeding into the wound	Possible bleeding into the wound after the surgery.	This can cause swelling, bruising or blood stained discharge.
Hernia	A weakness can happen in the wound, with the development of a hernia.	Hernias usually need to be repaired by further surgery.
Adhesions (bands of scar tissue)	Adhesions can form and cause bowel blockage and possible bowel damage. This can be a short or long-term complication. This is much rarer in keyhole surgery than open surgery.	This may require further surgery to cut the adhesions and free the bowel.
Surgery does not help	Symptoms experienced before surgery may persist in some people after surgery.	This may be due to another gut problem or irritable bowel syndrome
Increased risk in obese patients	An increased risk of wound infection, chest infection, heart and lung complications and thrombosis.	
Increased risk in smokers	Smoking slows wound healing and affects the heart, lungs and circulation.	Giving up smoking before the operation will reduce the risk of wound infection, chest infection, heart and lung complications and thrombosis

ALTERNATIVE TREATMENT OR OPTIONS

There are some alternative treatments; however these may not be available or suitable for everyone.

Oral dissolution therapy is taking of tablets by mouth to dissolve the gallstones. It is most effective for patients who are over weight, have small or single gallstones and a gall bladder that is still working. It has a 50% risk of gallstones recurring within two years and a poor outcome for patients with larger gallstones. It is only recommended for those patients who are not fit enough to have surgery, or who choose not to have surgery. The drugs may be poorly tolerated with unpleasant side effects.

Open cholecystectomy is the surgical removal of the gall bladder through an abdominal incision about 10cm long below the right rib cage. This is a safe alternative to a laparoscopic cholecystectomy but requires a longer stay in hospital and a longer recovery period.

Cholecystostomy Drainage of the gallbladder is usually performed on patients who are too sick to have the gallbladder removed

HOW LONG WILL I BE IN HOSPITAL

Most patients who are fit and well can be admitted on the day of their operation and go home later on the same day. Older patients or those with heart or chest problems may need to stay overnight.

HOW SHOULD I PREPARE FOR MY OPERATION

If you smoke you should try and stop as smoking interferes with wound healing. Your GP may be able to help you with this.

Before the day of the operation you will get instructions telling you when you should stop eating and drinking. Your stomach must be empty in order to make the general anaesthetic safe.

If you take tablets to thin the blood such as Aspirin, Warfarin or Clopidogrel, then these must be stopped one week before your surgery. If you have health problems that mean these tablets cannot be stopped, then you may need a conventional operation rather than a keyhole operation. It is very important that you discuss this with the doctor in the clinic.

You usually arrive at the hospital on the morning of the operation. The nurses will help you to change into a theatre gown and get you ready for theatre. An anaesthetist will explain the anaesthetic procedure. The surgeon who is going to perform the operation will also see you and ask you to sign the surgical consent form if you have not already done so in clinic. If you have any queries that have not been answered in the clinic, then you will have an opportunity to ask the surgeon and the anaesthetist questions before your operation.

AFTER THE OPERATION...

PAIN CONTROL

With any keyhole operation you can expect some soreness in the wounds and you may also have some discomfort in the abdomen relating to your gallbladder surgery. This will mostly be during the first 24 – 48 hours. We will give you pain killers that you should take regularly for the first few days. If you have prolonged soreness and are getting no relief from the prescribed pain medication you should notify your GP. Occasionally patients may experience shoulder-tip pain but this should settle very quickly; gentle walking will help to ease this. The discomfort should wear off within 4 – 5 days. If not you should inform your doctor.

WOUND CARE

The wounds are covered with dressings that should stay on for 48 hours. The steristrips should be left on for a week if possible. You will have dissolving stitches that do not need to be removed. If you have any concerns about your wounds at any time, please make an appointment to see the practice nurse at your GP's surgery.

It is occasionally necessary to leave a small tube (drain) in your side. This is just a precaution and it is usually removed the day after surgery.

DRIVING

You should not drive for 24 hours after a general anaesthetic. After this, you should be fit to drive as normal, providing that you do not feel any after-effects and can perform an "emergency stop" without any pain. **Your car insurance may be invalid if you drive when you are not medically fit to do so.**

DIET

You may have a drip in your arm, which will come out soon after you recover from the anaesthetic. To begin with you can take sips of water and then increase from fluids to solids. Some people feel nauseous after a general anaesthetic but this is usually short-lived and can be helped by anti-sickness medication. When you are fully awake after your operation, you will be offered tea and toast, and if this is well-tolerated then you can resume a normal diet.

Most people find that they have less appetite for the first week after a gallbladder operation – this is normal and you should only eat as much as you feel comfortable with. Your appetite will return to normal after 1 week.

There are no specific dietary restrictions after removal of your gallbladder, as you are still producing bile which helps to absorb fats. However, in a few patients the system can take a while to ‘reset’ and this may result in some indigestion with bloating, colicky pain and/or diarrhoea. This is usually self-limiting but may last for several weeks.

BOWELS/BLADDER

The nurses will ensure that you have passed urine before you leave the hospital, although you may find that the force of your stream is not back to normal for 24 hours. Some patients find that they are prone to constipation immediately following surgery. This can be due to the painkillers and/or immobility after an operation. If constipation is a problem then your local chemist or NHS Direct (0845 4647) will be able to offer advice and simple over the counter remedies should help.

MOBILITY

For the first few days after surgery you should take frequent short walks around the house to avoid the possibility of postoperative clots in the legs and chest. After a week you can take brisk walks outside the house. Normal aerobic exercise activity such as swimming and jogging or going to the gym can be resumed in 2 weeks. It is safe to play golf after three weeks but this may still be uncomfortable. Any heavy lifting should be avoided for the first month. Sexual intercourse can be resumed when comfortable.

SLEEP/REST

You may feel more tired than normal in the first few days after your operation. This is perfectly normal and you should rest whenever you feel tired.

BRUISING

Bruising may develop around the wounds which may look quite alarming. However, it is nothing to worry about and will fade in 2 – 3 weeks.

PERSONAL HYGIENE

You can shower or bath after 48 hours once you have removed your dressings. Pat the wounds dry with a clean towel and then leave them open to the air.

RETURNING TO WORK/SICK CERTIFICATES

You should be fit to return to work 2 weeks after your operation. If you require a sick certificate, one can be issued to you before you leave the hospital. If you require a further certificate, you will need to see your GP.

FOLLOW-UP AFTER THE OPERATION

You may not receive an appointment for a follow-up after your operation. If you are well you do not need to be seen. However, if you have any concerns or problems, please contact your general practitioner who can arrange a further appointment with the consultant if appropriate.

HOW WILL LOSING MY GALLBLADDER AFFECT ME?

Most patients do not notice any difference after a cholecystectomy, particularly if the gall bladder is not functioning at the time of the operation because of stones or inflammation. Indeed many patients feel a lot better with relief of their pain and more energy. Some patients may find that they are temporarily unable to digest fatty foods as easily after the operation, and in these cases a fatty meal may cause bloating, colicky discomfort, flatulence and occasional diarrhoea. Usually the bowel adjusts and most people find they are able to take a normal diet within 6 – 8 weeks of surgery. Only about one in a hundred people are troubled with persistent diarrhoea and this can be treated with tablets.