LAPAROSCOPIC CHOLECYSTECTOMY

Patient Information

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Outline:

- What is gallstone disease?
- How is the gallbladder removed surgically?
- Do I really need my gallbladder removed?
- Risks of surgery
- What to expect pre– and postoperatively?
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What is gallstone disease?

Gallstones are very common in the community. Many people have them and will never have any problems. Gallstones form generally in the gallbladder due to an abnormal composition of bile. It is like sugar crystals reappearing after dissolving in a hot cup of coffee when the coffee cools down.

In health, the gallbladder is a storage facility for bile, which is a secretion which helps us digest fatty foods. The bile is itself produced in the liver then travels down the bile duct to be stored in the gallbladder. When we eat, the gallbladder contracts and delivers the bile into the intestines to help us digest the fats in our diet.

Gallstones can cause a variety of diseases. Most commonly, it blocks off the outlet of the gallbladder and can cause abdominal pain (biliary colic) which may progress to inflammation of the gallbladder (cholecystitis). It may even block off the bile duct, causing infection (cholangitis) or the pancreatic duct causing inflammation (pancreatitis)

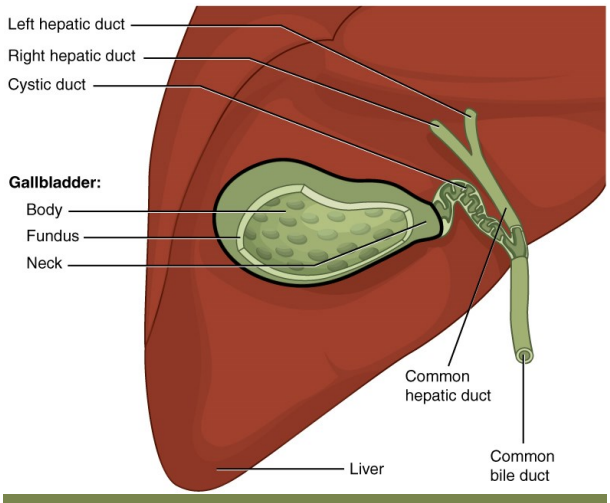
How is the gallbladder removed surgically?

The gallbladder is said to be shaped like a pear and is about 10cm long and 3cm wide. It is found in the right upper part of the abdomen, under the liver. Anatomically, the gallbladder hangs off the side of the bile duct, again much like a pear hanging off its branch. The surgery simply involves controlling the blood supply of the gallbladder and then taking the pear "off its branch". The operation is called a "cholecystectomy".

The operation can be performed either by key hole surgery (laparoscopically) or by open operation. The vast majority can be performed laparoscopically. A small proportion (less than one in twenty) cannot be performed laparoscopically due to its difficulty—these operations are then converted to an open operation. During the surgery, an x-ray of your bile duct (cholangiogram) may also be taken.

If laparoscopic (key hole) surgery is successful, you will have a few small cuts about 2-3 cm long centred around the right side of your abdomen. If an open operation were required, the cut will run transversely in the right upper part of your abdomen.

The surgery will take about an hour for a straight-forward operation and longer for emergency cases or those which require open surgery. If all goes well, you will be discharged on the same day or the next day for laparoscopic surgery and about 5 days for open surgery.



The gallbladder is situated on the undersurface of the liver, in the right upper abdomen. At surgery, the cystic duct is cut to separate the gallbladder from the bile duct.

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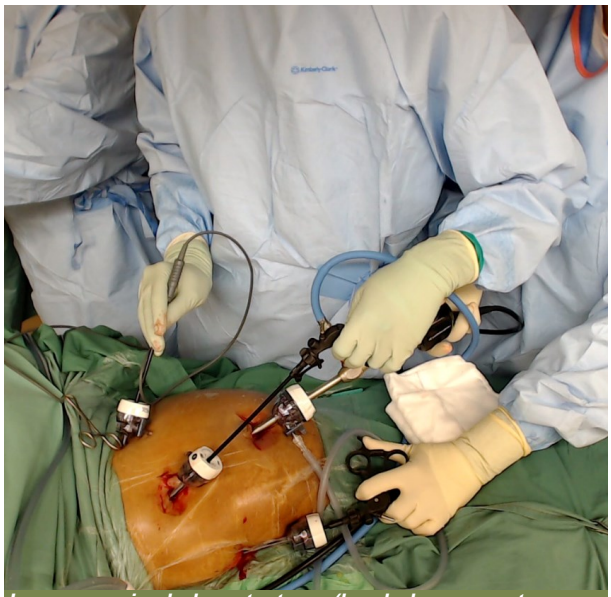


Laparoscopic cholecystectomy (key-hole surgery to remove the gallbladder) being performed at Westmead. Note the operation is performed through 4 small "key holes".

Do I really need my gallbladder removed?

Whilst the majority of patients with gallstones do not get any symptoms from it, as stated above, gallstones can cause a variety of diseases. Once you have had an attack of gallstone disease, you are at a very high risk of having another attack and potentially, a more life-threatening complication of gallstones. We therefore recommend surgery.

Gallstones can't just be removed as the problem is with the gallbladder. Removal of gallstones alone without removing the gallbladder would mean that gallstones would re-form and cause problems again.

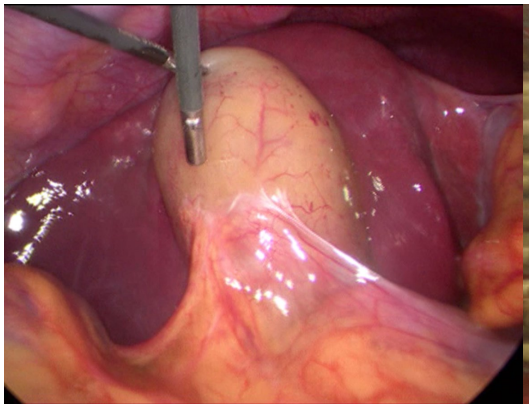
There are no long term consequences from removal of the gallbladder. As it is only a storage facility for bile, its removal simply means a temporary problem with fat digestion. With time, the body will adapt and fats can be gradually reintroduced into the diet. Having fatty foods early after the operation may cause diarrhoea due to fat malabsorption.

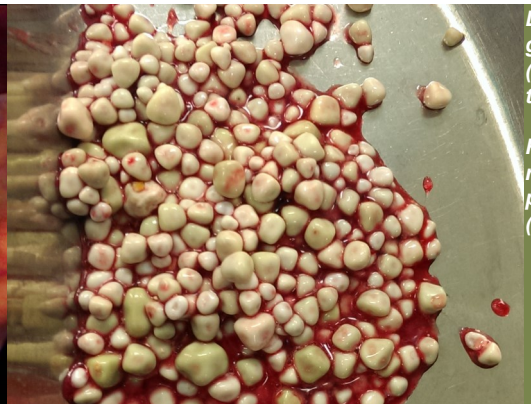
What are the risks of a laparoscopic cholecystectomy?

Like all procedures, removal of the gallbladder has risks associated with it. Firstly, there are risks associated with the anaesthetic. These will vary depending on your age and other medical issues. The anaesthetist will assess you in the pre-admissions clinic and will explain more about this to you.

Second, there are the surgical risks. These vary depending on the difficulty of the procedure, but in general, include:

- *Bile leak* – Where we have removed the gallbladder (the "stalk" of the "pear"), we normally leave a clip there to prevent leakage. Rarely (1 in 100 cases), there may be a leak from this or from a small duct which goes directly into the gallbladder from the liver. If this occurs, the treatment is usually the placement of a drain (a plastic tube) to drain the leak and an endoscopy (ERCP) to decompress the bile duct.
- *Bile duct injury* – Even more rarely, during the dissection of the gallbladder, the main bile duct (the "branch" from which the pear hangs) can be injured. This is usually due to inflammation or fibrosis in the area or from atypical anatomy. This occurs roughly 1 in 300 cases. This is a serious complication and if it occurs, it usually requires a further operation to repair the damage or to redirect bile to the intestines elsewhere.
- *Damage to surrounding structures* – The small and large intestines are in the same area and so there is a potential for them to be injured. This is very rare but is more common in those where there is inflammation or in patients who have had previous surgery.
- *Conversion to open operation* – As stated above, less than 5 cases in 100 require conversion to an open operation. This is much more common in the setting of inflammation, recurrent attacks of infection or multiple previous surgeries.





Left: An acutely inflamed swollen gallbladder seen at operation (laparoscopic) for inflammation of the gallbladder (cholecystitis)

Right: Multiple small gallstones removed from the gallbladder in a patient with pancreatitis (inflammation of the pancreas)

How do I prepare myself for surgery?

You will be asked to fast for a period of time before surgery. Depending on when your operation is scheduled, it is generally either midnight the night before or after an early morning breakfast the day of surgery. On the morning of surgery, you should take all your medications except for your diabetic medications and blood-thinning medications. Your surgeon or anesthetist will give you specific advice regarding this. If you are taking blood thinners such as aspirin, warfarin, clopidogrel etc, you should inform your doctor so that appropriate instructions are given to you as you may need to stop these for a few days prior to surgery.

Specific instructions after surgery?

You will be a bit sore for about a week. You should therefore take regular pain killers for at least three days after surgery. Your surgeon will give you instructions regarding the specific medications to take. You should try to avoid eating fatty foods for a few weeks following surgery, otherwise you may experience diarrhoea. Over the course of a few weeks, you can gradually reintroduce fats into your diet.

The wounds are going to take some time to heal, so please do not lift anything heavy (>10kg) or do anything strenuous for four weeks. Apart from that, you are allowed to walk around and do all your usual daily activities. You should avoid driving for a week after the surgery as pain in the abdomen will influence your reaction in case of emergency.

The dressings will generally consist of an external dressing covering some tape across the wound (Steristrips). The external waterproof dressing can come off in three days and the Steristrips in one week. You can shower over the wound from the first day of surgery. After a shower, just pat the wound dry. Avoid baths or swimming for two weeks.

Any further questions?

Feel free to ask us!

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