



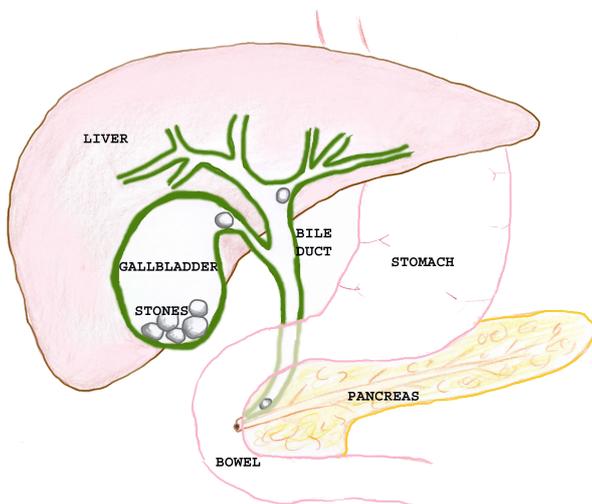
Laparoscopic Cholecystectomy (Removal of the Gallbladder)

Information for Patients

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The Gallbladder

The Liver makes bile and excretes it into a long tube (the bile duct) that joins the first part of the bowel. Bile is a solution that helps to make fats dissolve in water (so that we can absorb them). When there is no fat in the gut, the bile is stored in the gallbladder. When we eat fat, a chemical messenger makes the gallbladder contract, squeezing bile into the gut.



Around 1 in 10 adults have gallstones. These begin as small crystals in the gallbladder and grow over time. These stones can cause irritation to the gallbladder, particularly when fat is consumed, causing pain and nausea (biliary colic).

Predisposing factors

We are unsure why certain people get stones and others don't. Some factors that have been found to be associated with gall stones are:

- Female gender
- Family history of gallstones
- Increasing age
- Obesity

Biliary Colic

Biliary colic is the most common symptom of gallstones. It is pain or discomfort, in the upper abdomen, usually brought on by food (especially

rich food). It lasts for minutes to hours, until the gallbladder relaxes.

Severe Complications of Gallstones

Acute Cholecystitis

Acute cholecystitis is a severe infection of the gallbladder. It begins like biliary colic, but fails to improve, and is associated with fever. Acute cholecystitis will usually settle with antibiotics in hospital. If it does not settle, then urgent surgery is required.

Cholangitis

If stones escape from the gallbladder into the bile duct, they may cause partial or complete blockage of the bile duct with infection and jaundice.

Pancreatitis

This is an inflammation of the pancreas which is a digestive organ at the back of the abdomen. Small gallstones that have escaped from the gallbladder into the bile duct can pass past the pancreas and cause it to become inflamed.

Who needs a cholecystectomy?

Patients with any of the severe complications of gallstones should have a cholecystectomy. Patients with gallstones and symptoms should have a cholecystectomy, before the development of severe complications. Occasionally patients without gallstones, who have significant symptoms, will require a cholecystectomy (once other causes have been ruled out).

What tests are done?

Most patients have gallstones diagnosed by ultrasound. The ultrasound will also show the width of the bile duct, which will help to determine the risk of stones outside the gallbladder. Routine blood tests including liver function tests.

How is the gallbladder removed?

The most common method of removal of the gallbladder is with laparoscopic (keyhole) surgery. A small cut is made under the umbilicus

(belly button). Through this a camera is placed, and gas is instilled. 2 or 3 other small cuts are placed in the upper abdomen, through which instruments are introduced to dissect free the gallbladder. An x-ray (cholangiogram) will be performed through the gallbladder (cystic) duct to rule out stones in the main duct.

The cystic duct and cystic artery are then clipped with permanent titanium clips. These do not cause any long term problems or interfere with MRI. The gallbladder is then removed from its attachment to the liver and removed in a plastic bag.

The post-operative course

The post operative course is different for each person. Most patients stay one night in hospital. 1 week off work.

Sutures are dissolving and buried, dressings can stay on for 7 days.

A follow-up appointment is made for 3 weeks after surgery. You may eat and drink normally after a day or two.

What are the potential complications?

Serious complications after gall bladder surgery are rare.

Complications of gallbladder surgery include (but not limited to);

- *Bile duct injury.* There is a small risk of injuring a major bile duct draining out of the liver. This injury occurs in around 1 in 3-500 cases.
- *Bile leak.* Bile leak after the surgery can be from a major duct or a minor one. It occurs around 1 in 100 cases, and sometimes requires other procedures to dry it up.

- *Retained stone.* Sometimes there is an unsuspected stone in the main bile duct that presents in the days or weeks following gallbladder surgery with pain, +/- jaundice. These require a day stay procedure (ERCP) to remove them.
- *Wound infection.*
- *Clots.*
- *Allergic reactions.*
- *Heart troubles.*

FAQs

Will I be able to eat normally afterwards?

Yes, most patients will tolerate a normal diet afterwards, and there are no restrictions.

Can't you just remove the stones?

No, removing the stones would be more dangerous than removing the whole gallbladder and methods to dissolve them or blast them make the serious complications more likely.

Don't I need my gallbladder?

No, the gallbladder is largely redundant, and the bile ducts will store all the bile necessary for healthy function.

VISIT MY WEBSITE OR YOUTUBE FOR A VIDEO EXPLANATION. "GALLSTONES EXPLAINED WITH DR MICHAEL CRAWFORD"
<https://youtu.be/HNbJODqLoEc>

Please ask Dr Crawford if you have further questions

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