



## Laparoscopic Cholecystectomy

### *What are gallstones?*

Gallstones are 'stones' that form in the gallbladder. They are quite common but increase with age and in people who eat a diet rich in fat. Your doctor has recommended an operation to remove the gallstones and the gallbladder. However, it is your decision to go ahead with the operation or not. This will give you information about the benefits and risks to help you make an informed decision.

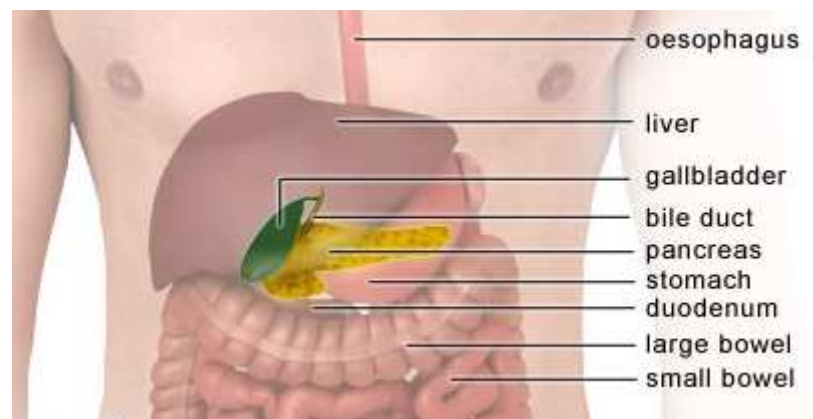
### *How are gallstones formed?*

Your liver produces a fluid called bile that is concentrated by, and stored in, the gallbladder (see figure 1).

When you eat food, the gallbladder empties bile into the intestines to help digest fats. Stones can develop in bile, particularly if you have a high-fat diet.

In some people, gallstones can cause severe symptoms with repeated attacks of abdominal pain being the most common. Pain is due either to stones blocking the cystic duct and preventing the gallbladder from emptying (biliary colic) or to inflammation of the gallbladder (cholecystitis). The pain can be severe enough to need admission to hospital.

If the stones move out of the gallbladder into the common bile duct, they can cause jaundice (skin turning yellow is colour). Severe infection of the bile duct (cholangitis) or inflammation of the pancreas (acute pancreatitis). These complications can be serious and can even cause death.



*Figure 1. The gallbladder and surrounding structures*

### *What are the benefits of surgery?*

You may be free of pain and able to eat a normal diet. Surgery should also prevent the serious complications that gallstones can cause.

### *Are there any alternatives to surgery?*

Surgery is recommended as it is the only dependable way to treat the condition. It is possible to dissolve the stones or even shatter them into small pieces but these techniques involve unpleasant drugs and side effects, have a high failure rate and the gallstones usually come back.

Antibiotics can be used to treat any infections of the gallbladder. A low-fat diet may help to prevent attacks of pain. However, symptoms are likely to come back.



## *What will happen if I decide not to have the operation?*

Your gallstones may not cause any symptoms. If you have already suffered symptoms, it is likely that these will continue from time to time. There is a small risk that you may develop life-threatening complications

## *What does the operation involve?*

Gallstones are treated surgically by removing the gallbladder containing the stones (cholecystectomy). Your body will function perfectly well without a gallbladder and new stones will not be made.

- ***The operation***

The operation is performed under a general anaesthetic and usually takes about an hour. Your surgeon will free up the gallbladder duct (cystic duct) and artery. They may take an x-ray where they inject a colourless fluid (called a contrast agent) into the common bile duct. Your surgeon will then separate the gallbladder from the liver and remove it.

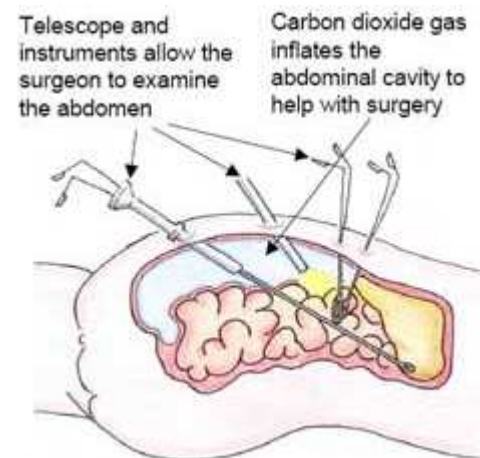
If the x-ray shows stones in the common bile duct, your surgeon may remove the stones during the operation or later a flexible telescope.

- ***Laparoscopic (keyhole) surgery***

The keyhole technique is usually used, as this is associated with less pain, less scarring and a faster return to normal activities.

Your surgeon will make a small cut in or near the umbilicus so they can insert an instrument which inflates the abdominal cavity with gas (carbon dioxide). They will make several cuts on your abdomen so that they can insert tubes (ports) into your abdomen. Your surgeon will place surgical instruments through the ports along with the telescope so they can see inside your abdomen and perform the operation (see figure 2).

To complete the operation, your surgeon will remove the gallbladder through one of the small cuts and then they will close the cuts. In about 1 in 10 people it will not be possible to complete the operation using this technique. If this happens, the operation will be changed (or converted) to open procedure.



*Figure 2*  
*The technique for laparoscopic surgery*

- ***Open surgery***

The operation is the same but it is performed through a single, large cut, usually under the right rib cage.

## *What should I do about my medication?*

You should continue your normal medication unless you are told otherwise. Let your surgeon know if you are on **Warfarin** or **Clopidogrel**. Follow your surgeon's advice about stopping this medication before the operation.



## Specific complications of this procedure

### A. Laparoscopic complications

- **Damage to internal organs** – when placing instruments into the abdomen (risk: 1 in 1,000). The risk is higher in people who have previously had surgery to the abdomen. If an injury does happen, you may need open surgery, which involves a much bigger cut. About 1 in 3 of these injuries is not obvious until after surgery, so if you have pain which does not continue to improve each day after surgery, you should let your doctor know.
- **Developing a hernia near one of the cuts used to insert the ports** (risk: 2 in 10,000). Your surgeon will try to reduce this risk by using small ports (less than 10 millimetres in diameter) where possible or, if they need to use larger ports, using deeper stitching techniques to close the cuts.
- **Surgical emphysema** (crackling sensation in the skin due to trapped gas), which settles quickly and is not serious.

### B. Cholecystectomy complications

- **Leaking bile or stones.** Usually your surgeon can deal with this at the time of surgery, but you may need another operation.
- **Retained stones** in the common bile duct. Your surgeon may remove the stones the operation or later using a flexible telescope.
- **Persistent pain**
- **Diarrhoea** this can sometimes happen because you no longer have a gallbladder the flow of bile or blood
- **Inflammation in the abdomen** (peritonitis) due to collection of bile or blood.
- **Bile duct injury**, which is potentially serious (risk: 1 in 200). You may need a further operation to correct the problem.
- **Bowel injury** (risk: less than 1 in 500) This can happen if the bowel is stuck to the gallbladder.
- Serious **damage to the liver** or its associated blood vessels, which is rare. You may a further operation to correct the problem

## How soon will I recover?

### • In Hospital

After the operation you will be transferred to the recovery area and then to the day-case ward. You should be able to go home later on the same day. A responsible adult should take you home in a car or taxi, and stay with you for at least 24 hours. You will need support for a few days.

### • At home

You should drink plenty of fluid and increase the amount of fibre in your diet to avoid constipation. This is important for the first few days after your operation. You may be prescribed laxatives to help to prevent you from becoming constipated.



- ***Returning to normal activities***

You should be able to return to work within 3 to 4 weeks depending on your type of work. The wounds often take several weeks to heal completely and you may need to wear pads until then. There are no open wounds with the stapled technique. Slight bleeding or discharge is common until your wounds have healed. A nurse should check the wounds after about a week. You will normally be seen in the clinic to make sure everything has settled.

Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, you should ask a member of the healthcare team or your GP for advice.

Do not drive until you are confident about controlling your vehicle and always check with your doctor and insurance company first.

- ***The future***

You should make a full recovery and the symptoms should clear completely. However, occasionally haemorrhoids come back. If your symptoms continue, particularly bleeding, you should let your doctor know.

## *Summary*

Gallstones are a common problem. An operation to remove your gallbladder should result in you being free of pain and able to eat a normal diet. Surgery should also prevent the serious complications that gallstones can cause.

Surgery is usually safe and effective. However, complications can happen. You need to know about them to help you make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

## *Contact for further information*

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