

UG19 Cholecystectomy and Exploration of the Bile Duct

Expires end of November 2022

Local Information

You can get information locally from:
Ealing Hospital main switchboard on 020 8967 5000

- Central Middlesex Hospital main switchboard on 020 8965 5733
- Northwick Park and St Mark's Hospitals main switchboard on 020 8864 3232
- Our website – www.lnwh.nhs.uk

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To contact PALS:

At Northwick Park, St Mark's and Central Middlesex Hospitals on 020 8869 5118 or email PALS at LNWH-tr.PALS@nhs.net

At Ealing Hospital and community services on Freephone 0800 064 1120 or 020 8967 5221 between 9.30 am and 4 pm or email PALS at LNWH-tr.ehPALS@nhs.net

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What are common bile-duct stones?

Common bile-duct stones are gallstones that move out of your gallbladder and get stuck in your common bile duct, which is a tube that connects your gallbladder and liver to your intestines. Gallstones are 'stones' that form in your gallbladder. They are common and can run in families. The risk of developing gallstones increases as you get older and if you eat a diet rich in fat.

Your doctor has suggested an operation to remove the gallstones along with your gallbladder (cholecystectomy). However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision.

If you have any questions that this document does not answer, it is important that you ask your doctor or the healthcare team. Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point.

How do common bile-duct stones happen?

Your liver produces a fluid called bile that is concentrated by, and stored in, your gallbladder.

When you eat food, your gallbladder empties bile into your intestines to help digest fats. Stones can develop in bile, particularly if you eat a diet rich in fat. The stones can move into your common bile duct. Sometimes they can form in your common bile duct because of an infection.

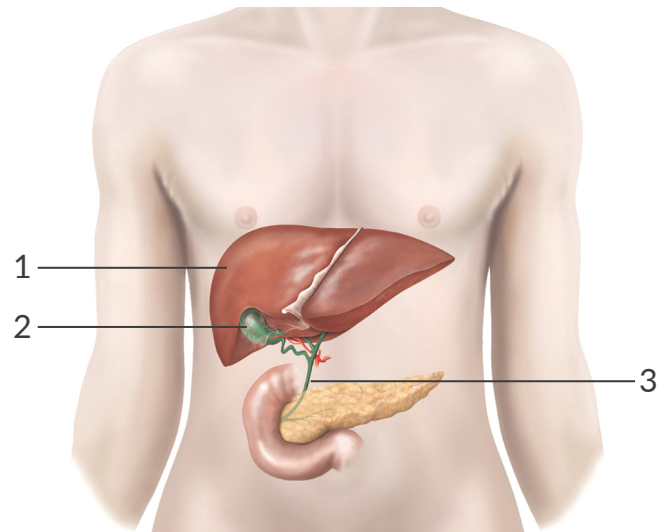
Common bile-duct stones can cause jaundice (your eyes and skin turning yellow), serious infection of your bile ducts (cholangitis) or inflammation of your pancreas (acute pancreatitis). These are serious problems and can be life-threatening.

What are the benefits of surgery?

You should be free of pain and able to eat a normal diet. Surgery should also prevent the

serious complications that common bile-duct stones can cause.

Your body will function perfectly well without a gallbladder.



The position of the gallbladder

1. Liver
2. Gallbladder
3. Common bile duct

Are there any alternatives to surgery?

An ERCP (endoscopic retrograde cholecho pancreatogram) is a procedure to examine your bile duct using a flexible telescope and dye (colourless contrast fluid). If there are gallstones in your bile duct, they can usually be removed using a sphincterotomy (a cut in the papilla, which is a small circle of muscle). If the gallstones are large, a stent (tube) can be inserted in your bile duct to help relieve jaundice.

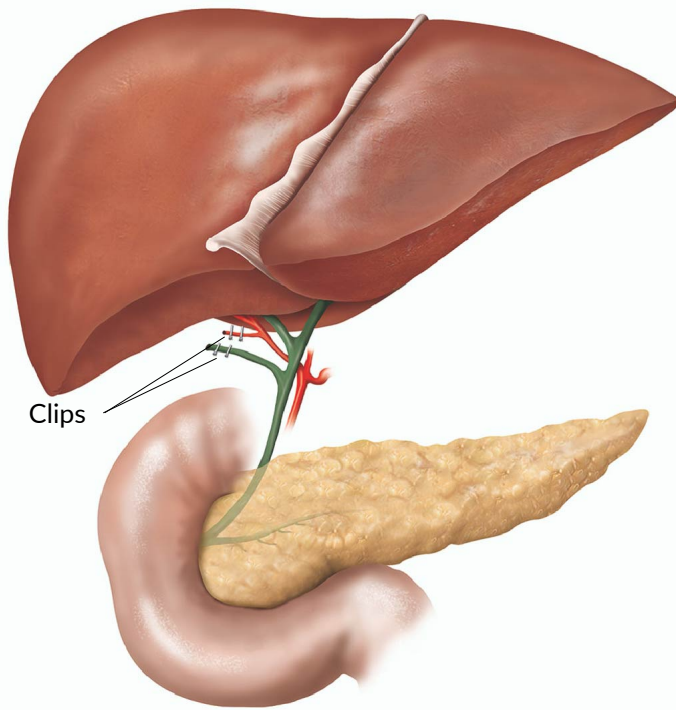
It is possible to dissolve the stones or even shatter them into small pieces but these techniques involve unpleasant drugs that have side effects and a high failure rate. The gallstones usually come back.

Antibiotics can be used to treat any infection of your gallbladder and common bile duct. Eating a diet low in fat may help to prevent attacks of pain.

However, these alternatives will not cure the condition and symptoms are likely to come back. If your gallbladder is not removed, the risk of developing more stones is very high.

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

About 2 in 10 people will not have any symptoms. If you have already had symptoms, it is likely that these will continue from time to time. There is a small risk of life-threatening complications.



After the gallbladder has been removed

What does the operation involve?

If you are female, the healthcare team may ask you to have a pregnancy test as some procedures involve x-rays or medications that can be harmful to unborn babies. Sometimes the test does not show an early-stage pregnancy so let the healthcare team know if you could be pregnant.

The healthcare team will carry out a number of checks to make sure you have the operation you came in for. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

The operation is performed under a general anaesthetic and usually takes 1 to 2 hours. You may also have injections of local anaesthetic to help with the pain after the operation. You may be given antibiotics during the operation to reduce the risk of infection.

Your surgeon will first need to find out where the stones are in your common bile duct. They may inject dye into your common bile duct and take an x-ray. Your surgeon may also use a telescope to look inside the duct. This is called a cholangiogram.

If your surgeon finds any gallstones in the duct, they will try to remove them through the cystic duct or the common bile duct. Various techniques can be used, including a wire basket or a tube with an inflatable balloon at the end (balloon catheter). Sometimes your surgeon will need to make a cut in the duct. If your surgeon cannot remove the stones, they may insert a stent in the duct to help relieve jaundice.

Your surgeon will remove your gallbladder. They will free up and secure your gallbladder duct (cystic duct) and artery, separate your gallbladder from your liver, and remove it.

Laparoscopic (keyhole) surgery

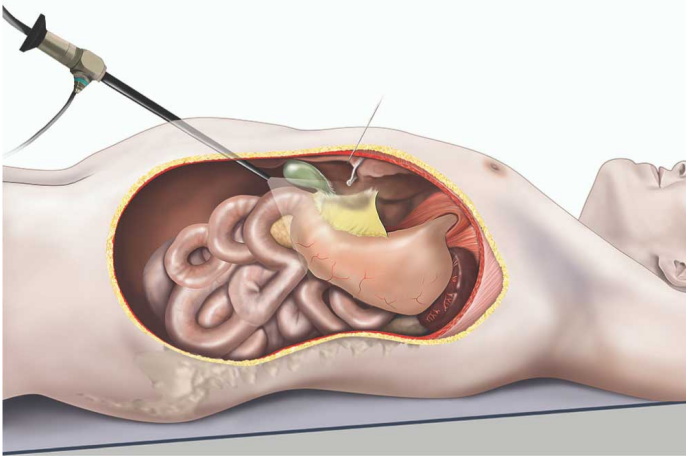
Your surgeon may use keyhole surgery as this is associated with less pain, less scarring and a faster return to normal activities.

Your surgeon will make a small cut on or near your belly button so they can insert an instrument in your abdominal cavity to inflate it with gas (carbon dioxide). They will make several small cuts on your abdomen so they can insert tubes (ports) into your abdomen.

Your surgeon will insert surgical instruments through the ports along with a telescope so they can see inside your abdomen and perform the operation.

Sometimes it will not be possible to complete the operation using keyhole surgery. The operation will be changed (converted) to open surgery.

Your surgeon will remove the instruments and close the cuts. They may insert a drain (tube) in your abdomen to drain away fluid that can sometimes collect.



Laparoscopic surgery

Open surgery

The operation is the same but it is performed through a larger cut usually just under your right ribcage.

Your surgeon may decide that keyhole surgery is not appropriate for you and recommend open surgery. They will discuss the reasons with you.

What should I do about my medication?

Make sure your healthcare team knows about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

How can I prepare myself for the operation?

If you smoke, stopping smoking now may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help to prepare you for the operation, help you to recover and improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

You can reduce your risk of infection in a surgical wound.

- In the week before the operation, do not shave or wax the area where a cut is likely to be made.
- Try to have a bath or shower either the day before or on the day of the operation.
- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.
- If you are diabetic, keep your blood sugar levels under control around the time of your procedure.

If you have not had the coronavirus (Covid-19) vaccine, you may be at an increased risk of serious illness related to Covid-19 while you recover. Speak to your doctor or healthcare team if you would like to have the vaccine.

What complications can happen?

The healthcare team will try to reduce the risk of complications.

Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. Some risks are higher if you are older, obese, you are a smoker or have other health problems. These health problems include diabetes, heart disease or lung disease.

Some complications can be serious and can even cause death. Using keyhole surgery means it may be more difficult for your surgeon to notice some complications that may happen during the operation. When you are recovering, you need to be aware of the symptoms that may show that you have a serious complication.

You should ask your doctor if there is anything you do not understand.

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

General complications of any operation

- Bleeding during or after the operation. Rarely, you will need a blood transfusion or another operation.
- Allergic reaction to the equipment, materials, medication or dye. This usually causes a skin

rash which settles with time. Sometimes the reaction can be serious (risk: less than 4 in 10,000) or even life-threatening (risk: 4 in 100,000). The healthcare team is trained to detect and treat any reactions that might happen. Let your surgeon know if you have any allergies or if you have reacted to any medication or tests in the past.

- Infection of the surgical site (wound). It is usually safe to shower after 2 days but you should check with the healthcare team. Let the healthcare team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need special dressings and your wound may take some time to heal. In some cases another operation might be needed. Do not take antibiotics unless you are told you need them.
- Blood clot in your leg (deep-vein thrombosis – DVT). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or special stockings to wear. Let the healthcare team know straight away if you think you might have a DVT.
- Blood clot in your lung (pulmonary embolus), if a blood clot moves through your bloodstream to your lungs. Let the healthcare team know straight away if you become short of breath, feel pain in your chest or upper back, or if you cough up blood. If you are at home, call an ambulance or go immediately to your nearest Emergency department.
- Chest infection. If you have the operation within 6 weeks of catching Covid-19, your risk of a chest infection is increased (see the 'Covid-19' section for more information).
- Developing a hernia in the scar. This appears as a bulge or rupture called an incisional hernia. If this causes problems, you may need another operation.

Specific complications of this operation

Keyhole surgery complications

- Gas embolism. This is when gas (carbon dioxide) gets into the bloodstream and blocks a blood vessel. This is very rare but can be serious.
- Damage to structures such as your bowel, liver or blood vessels when inserting instruments into your abdomen (risk: less than 3 in 1,000). The risk is higher if you have had previous surgery to your abdomen. If an injury does happen, you may need open surgery. About 1 in 3 of these injuries is not obvious until after the operation.
- Conversion to open surgery. This involves a larger cut.
- Surgical emphysema (a crackling sensation in your skin caused by trapped carbon dioxide), which settles quickly and is not serious.
- Developing a hernia near one of the cuts used to insert the ports (risk: 1 in 100). Your surgeon will try to reduce this risk by using small ports (less than a centimetre in diameter) where possible or, if they need to use larger ports, using deeper stitching to close the cuts.

Bile duct exploration complications

- Leaking of bile after the tube is removed. If the bile leaks onto your skin, the problem usually settles in 1 or 2 days. However, if bile leaks into your abdomen it can cause serious complications and you may need another operation.
- Infection of your skin around the tube, which usually settles when the tube is removed.
- Difficulty removing the tube. Sometimes the tube will need to be left in longer than usual while the stitches holding it in place dissolve.
- Retained stones in your common bile duct. Your surgeon may remove the stones later through the tube or by using a flexible telescope that is passed down your oesophagus (gullet). You may need another operation.

- Stones forming again in your common bile duct (risk: 1 in 10).
- Narrowing of your common bile duct needing further treatment (risk: 5 in 100).

Cholecystectomy complications

- Leaking of bile or stones. Your surgeon can usually deal with this at the time of surgery but you may need another operation.
- Bowel injury, if your bowel is stuck to your gallbladder (risk: less than 2 in 1,000).
- Inflammation of the lining of your abdomen (peritonitis) caused by a collection of bile or blood. Sometimes this can be caused by the tube slipping out of your common bile duct.
- Continued bowel paralysis (ileus), where your bowel stops working for more than a few days, causing you to become bloated and to be sick. You may need a tube (nasogastric or NG tube) placed in your nostrils and down into your stomach until your bowel starts to work again.
- Serious damage to your liver or its associated blood vessels. This is rare but you may need another operation.
- Continued pain.
- Needing to go to the toilet more often because you no longer have a gallbladder controlling the flow of bile into your intestines (risk: 3 in 100). You may get diarrhoea (risk: 1 in 100). Your doctor may give you some medication to slow down your bowel.
- Tissues can join together in an abnormal way (adhesions) when scar tissue develops inside your abdomen. Adhesions do not usually cause any serious problems but can lead to bowel obstruction. You may need another operation. The risk is lower if you have keyhole surgery.

Covid-19

A recent Covid-19 infection increases your risk of lung complications or death if you have an operation under general anaesthetic. This risk reduces the longer it is since the infection. After 7 weeks the risk is no higher than someone who has not had Covid-19. However, if you still have

symptoms the risk remains high. The risk also depends on your age, overall health and the type of surgery you are having.

You must follow instructions to self-isolate and take a Covid-19 test before your operation. If you have had Covid-19 up to 7 weeks before the operation you should discuss the risks and benefits of delaying it with your surgeon.

Consequences of this procedure

- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told so you can move about and cough freely. After keyhole surgery, it is common to have some pain in your shoulders because a small amount of carbon dioxide gas may be left under your diaphragm. Your body will usually absorb the gas naturally over the next 24 hours, which will ease the symptoms.
- Scarring of your skin, which may be unsightly.

How soon will I recover?

In hospital

After the operation you will be transferred to the recovery area and then to the ward. You should be able to go home after 1 to 2 days if you had keyhole surgery or after 4 to 5 days if you had open surgery. However, your doctor may recommend that you stay a little longer.

You need to be aware of the following symptoms as they may show that you have a serious complication.

- Pain that gets worse over time or is severe when you move, breathe or cough.
- A high temperature or fever.
- Dizziness, feeling faint or shortness of breath.
- Feeling sick or not having any appetite (and this gets worse after the first 1 to 2 days).
- Not opening your bowels and not passing wind.
- Swelling of your abdomen.
- Difficulty passing urine.
- Jaundice (yellowing of the eyes/skin together with dark urine).

If you do not continue to improve over the first few days, or if you have any of these symptoms, let the healthcare team know straight away. If you are at home, contact your surgeon or GP. In an emergency, call an ambulance or go immediately to your nearest Emergency department.

Returning to normal activities

To reduce the risk of a blood clot, make sure you carefully follow the instructions of the healthcare team if you have been given medication or need to wear special stockings.

The healthcare team will arrange for you to come back to the clinic after 1 to 6 weeks to have the tube removed.

You should be able to return to work after 3 to 4 weeks, depending on how much surgery you need and your type of work.

Your doctor may tell you not to do any manual work for a while. Do not lift anything heavy for a few weeks.

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

Do not drive until you can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

The future

You should make a full recovery and be able to return to normal activities and eat a normal diet. If your pain or jaundice continues, let your doctor know.

Summary

Gallstones are a common problem. Sometimes they can move into your common bile duct or stones can form in your common bile duct. An operation to remove your gallbladder and any stones in your common bile duct should result in you being free of pain and able to eat a normal diet. Surgery should also prevent the serious complications that common bile-duct stones can cause.

Surgery is usually safe and effective but complications can happen. You need to know

about them to help you to make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

Acknowledgements

Reviewer

Simon Parsons (DM, FRCS)

Illustrator

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