

- some soreness in the abdomen
- possibly some pain in the shoulders, especially the right shoulder, and the upper right part of the abdomen - this is caused by the gas that is used to inflate the abdomen, and usually settles within 24 hours

Complications

Complications are unexpected problems that can occur during or after the procedure. Most people are not affected. However, possible complications of any operation are:

- excessive bleeding
- an abnormal reaction to the anaesthetic
- developing a blood clot, usually in a vein in the leg (deep vein thrombosis; DVT) - most people are asked to wear compression stockings to help maintain the blood flow in the veins of the legs during and after the procedure

Further treatment, such as another operation to stop any bleeding or antibiotics to deal with an infection, may be needed.

The possible complications specific to a laparoscopic cholecystectomy are:

- damage to organs or blood vessels in the abdomen

This factsheet is based on reputable sources of medical evidence and has been reviewed by BUPA doctors. For more details of references and sources, please see our website. The content is intended for general information only and does not replace the need for personal advice from a qualified health professional.

- injury to the bile duct
- jaundice

Occasionally, it is not possible to complete the operation with the "keyhole" method and the operation may need to be converted to opening the abdomen. This complication is uncommon.

In the longer term, some people experience ongoing abdominal symptoms, such as pain, bloating, wind and diarrhoea. This is known as "postcholecystectomy syndrome" and may require further investigation and treatment.

The chance of complications depends on the exact type of procedure that is being performed and other factors such as the person's general health. The consultant will be able to explain how the risks apply in each individual case.

Further information

British Liver Trust

☎ 0870 770 8028

www.britishlivertrust.org.uk

Digestive Disorders Foundation

☎ 020 7486 0341

www.digestivedisorders.org.uk

Gallbladder removal

The gallbladder is a small pear-shaped pouch situated under the liver in the upper right part of the abdomen. It stores bile, a liquid produced by the liver, and then releases it into the intestine to help digestion.

The gallbladder may need to be removed to treat gallstones. The operation is usually done using keyhole surgery, which is called laparoscopic cholecystectomy (co-lee-sist-ek-tomy).

Why have gallbladder removal?

Gallstones are small, hard stones, which can sometimes develop in the gallbladder. They can result in a blockage of the flow of bile out of the gallbladder and symptoms that can include pain, jaundice (yellowed skin), and fever. For more information, see the separate BUPA factsheet, *Gallstones*.

The body can function well without a gallbladder and removing it is a common treatment for gallstones that are causing symptoms.

Most gallbladder surgery is performed laparoscopically ("keyhole surgery"), but a small number of people need open surgery through a 12-20cm cut in the

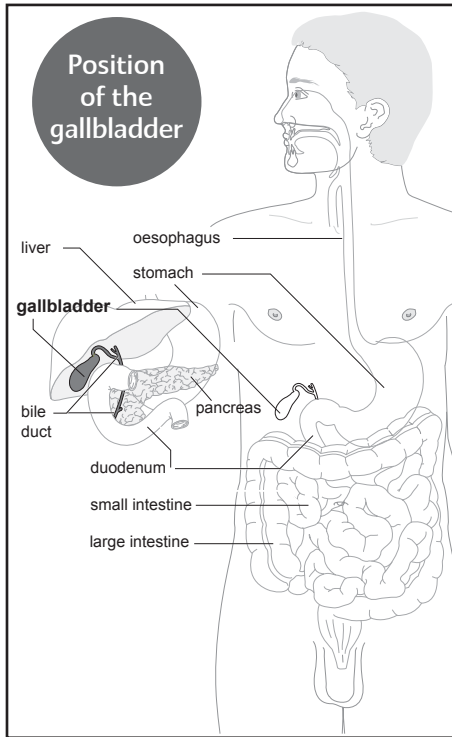
abdomen. The consultant will advise which procedure is most suitable in each case.

This leaflet is about the keyhole method, laparoscopic cholecystectomy, which the most commonly performed procedure for gallstones.

What are the alternatives?

If symptoms are mild, or surgery is not possible for medical reasons, there may be alternatives to having a laparoscopic cholecystectomy to remove gallstones.

- Medicines can sometimes be used to dissolve the gallstones, but this does not work for everyone and can take up to two years or longer.



- If the gallstones are blocking the bile ducts, it may be possible to view them using an endoscope (a narrow tube that is passed down the throat) rather than open surgery. This is known as an ERCP (endoscopic retrograde cholangiopancreatography). Gallstones can sometimes be removed by enlarging the bile duct and removing the stones with special tools attached to the endoscope.
- Another type of non-surgical treatment breaks up the stones using ultrasound waves (lithotripsy). This is only suitable when a small number of stones is present and is an uncommon treatment option.

The operation

A laparoscopic cholecystectomy usually lasts 60-90 minutes and requires a stay in hospital of two nights. In some cases, where adequate support is available at home, it can be a day-case procedure, with no overnight stay.

The operation is performed under a general anaesthetic, which means that the person is asleep and feels no pain. Typically, people are asked not to eat or drink for six hours before a general anaesthetic. Some anaesthetists allow a few sips of water until two hours before.

Once the anaesthetic has taken effect, a hollow needle is inserted through or near the umbilicus (belly button) and used to inflate the abdomen slightly with carbon dioxide gas. The laparoscope (a long, thin telescope) is then inserted through another small incision. This gives the surgeon a view of the internal organs on a video monitor.

To remove the gallbladder, specially adapted surgical instruments are inserted through two further small incisions. The incisions used in this type of surgery are usually between one and two centimetres long. When the operation is complete, the incisions are closed with stitches and the four small wounds are covered with dressings.

What to expect afterwards

As the anaesthetic wears off, there is likely to be some pain. The anaesthetist will prescribe painkillers. Suffering from

pain can slow down recovery, so it's important to discuss any pain with the doctors or nurses.

There may be a drip in the arm to prevent dehydration. This will be removed once the person is drinking enough.

A physiotherapist may visit to discuss gentle exercises to do at home. These will help speed up recovery.

On discharge, a nurse will advise about caring for the stitches, hygiene and bathing, and will arrange an outpatient appointment for the stitches to be removed, if necessary. Some people will have dissolvable stitches, which do not need to be removed.

Once home, it is possible to tire more easily than usual to begin with, so it is important to take it easy. Strenuous exercise and lifting should be avoided. Light exercise such as walking is recommended.

Normal activities, including returning to work, can usually be resumed after about a week.

You must follow your surgeon's advice about driving. You shouldn't drive until you are confident that you could perform an emergency stop without discomfort.

A special low fat diet isn't normally necessary, but it is important to eat a balanced diet that includes fruit and vegetables and wholewheat grains.

Anyone who notices any of the following symptoms should contact their hospital or GP:

- any of the wounds start to bleed
- any of the wounds become more painful, red, inflamed or swollen
- the abdomen swells
- pain is not relieved by the prescribed painkillers
- a fever develops.

These could be signs of an infection that may need to be treated with antibiotics.

Deciding to have the operation

Laparoscopic cholecystectomy is the most commonly performed type of abdominal surgery and is generally a safe operation. For most people, the benefits in terms of improved symptoms are far greater than the disadvantages.

However, in order to give informed consent, anyone deciding whether or not to have this procedure needs to be aware of the possible side-effects and the risk of complications.

Side-effects

Side-effects are the unwanted but mostly mild and temporary effects of a successful procedure. Examples of side-effects include feeling sick as a result of the general anaesthetic or painkillers. Medicines are available to help avoid this. In addition, common side-effects of laparoscopic cholecystectomy include: