

Cholecystectomy (gallbladder surgery)

Open and Laparoscopic

Understanding the Gallbladder

The Gallbladder

The gallbladder is a small pouch that sits under the liver on the right side of the body. It's job is to store and release bile, a fluid made by the liver. The bile helps you to digest food by breaking down fats. Normally bile moves easily through the digestive system. If you have gallstones or problems with your gallbladder function, it can cause pain and may lead to serious complications. If your gallbladder is removed your liver continues to make bile to aid digestion.

Symptoms of Gallbladder Problems

- Severe pain or aching in the upper abdomen. The pain can come or go, or may remain constant.
- A dull ache beneath the ribs or breastbone.
- Back pain, or pain in the right shoulder blade.
- Nausea, heartburn, or vomiting.

Diagnosing Gallbladder Problems

Your doctor will ask you about your symptoms. If he suspects a problems with your gallbladder he may order some special tests for you.

- An **Ultrasound Scan** of the abdomen is a painless test that uses sound waves to detect gallstones.
- If your Ultrasound Scan is negative for gallstones or other problems but you are still having symptoms of a gallbladder problem your doctor may order a **HIDA Scan (Hepatobiliary Scan)**. A HIDA Scan uses a radioactive fluid (marker) to check gallbladder function. It can also show if any bile ducts are blocked. The radioactive fluid safely passes from the body after the test.
- A **CT Scan (“CAT” Scan)** may also be done to rule out any other causes of your abdominal pain. A CT Scan uses a series of x-rays to show detailed images of the body.
- **ERCP (Endoscopic retrograde cholangiopancreatography)** uses a thin, flexible scope that is guided through the mouth and stomach to the bile duct to remove stones from the duct. It can also be used after surgery to check for stones in the duct.

Planning Your Treatment

Consultation with the Surgeon

If you are diagnosed with gallbladder disease or gallstones your doctor will send you to see the surgeon. At your visit, the surgeon will talk to you about your symptoms, medications, family history, review your records, and do an abdominal exam. If surgery is an option for you he will discuss the treatment options and the following risks and complications of surgery.

- Bleeding
- Infection
- Injury to the common bile duct or nearby organs
- Blood clots in the legs
- Prolonged diarrhea
- Bile leaks
- Neuroma (painful spot) or numbness near incisions
- Hernia formation at an incision site

Getting ready for Surgery

Before you have surgery you will need to:

- See your family doctor for a physical to assure you are able to have surgery.
- Tell your doctor about any medications, supplements, or herbs you are taking. You may need to stop taking some of your medications before surgery.
- Stop taking aspirin, ibuprofen, and naproxen as directed.
- Ask your doctor what to do if you take prescription blood thinners such as Coumadin (Warfarin) and Plavix.
- If you are diabetic ask your doctor how to adjust your diabetic medication.
- Don't eat or drink anything after midnight.
- You will need an adult to drive you home from the hospital.

Pregnancy and Gallbladder Surgery

Women may develop gallbladder problems during pregnancy. Hormonal changes can make bile more likely to form stones. In some cases, surgery can be delayed until after childbirth. If you are having severe symptoms, your doctor may advise having surgery during your pregnancy. This is done to protect you and your baby's health.

About the Surgery

Types of surgery

There are 2 ways to remove the gallbladder. **Open Cholecystectomy** uses a large incision in the abdomen to remove the gallbladder. **Laparoscopic Cholecystectomy** uses several small incisions and a laparoscope to remove the gallbladder.

Not everyone is a candidate for a laparoscopic cholecystectomy. For instance, if a patient has had previous surgeries in their abdomen they may not be able to have the laparoscopic procedure.

In some cases, the surgeon may start a laparoscopic surgery but have to change to an ‘open’ surgery. This is usually done if the surgeon realizes that an open surgery would be better for the patient.

Open Cholecystectomy and **Laparoscopic Cholecystectomy** both require general anesthesia. This means you will be asleep through the procedure.

The Day of Surgery

Laparoscopic Cholecystectomy

You will go to the Same Day Surgery center at the hospital. An IV is started to provide fluids and medications during and after surgery. You will visit with the Nurse Anesthetist before surgery and he/she will discuss what you will have for anesthesia during surgery. Be sure to mention any allergies or problems you have had with anesthesia.

You will be taken to the operating room and given medication to make you sleepy. During surgery several small incisions are made in the abdomen and a harmless gas is used to lift the abdominal wall away from the internal organs. This gives the surgeon a clear view of the gallbladder through the laparoscope. The laparoscope has a small light and camera and images are sent to a video monitor. Surgical instruments are inserted through the other incisions.

Small clips are used to close off the bile duct and blood vessels (the clips are made of titanium or plastic and do not harm the body). Once they are in place the gallbladder is detached from the liver. The gallbladder is then removed through one of the incisions. The bile will now flow directly from the liver to the small intestine.

If you are having an **open cholecystectomy** a large incision is made in the upper right side or middle of the abdomen. The same procedure is followed to apply clips and then lift out the gallbladder through the incision. The incision is closed with sutures or staples.

The main difference with the open cholecystectomy is that you will have a larger incision. This means a longer recovery period after the procedure.

Checking for Gallstones

During laparoscopic or open surgery an x-ray (cholangiogram) will be taken of the bile duct. A dye is injected into the bile duct through a thin catheter and an x-ray is taken. This helps to show if any stones have moved from the gallbladder into the duct. If needed, the stones can be removed at that time or later by ERCP.

Your Recovery

In the hospital

You will go to the recovery room after surgery where you will be closely monitored until you are awake and ready to go to your room. Bandages will be covering your incisions and you will have special stockings on your legs to help prevent blood clots. If your surgery was done using the laparoscope you may have some pain in your shoulder caused by the gas used during surgery. You will be asked to get up and move as soon as you are able.

Your IV will remain in place for pain medication and any other medications until you are taking oral fluids and foods without problems.

You may be able to go home the same day if you had laparoscopic surgery. This will depend on how you are feeling after surgery. You may need to stay overnight.

If you had an open cholecystectomy your hospital stay will be longer. Your IV will stay in longer to provide access for medications. Because you have a large incision that was made in the abdominal muscles you are going to have more pain and it will take longer to heal. To manage your pain you may have a special pump that allows you to give yourself pain medication. You will be asked to take deep breaths and may be asked to use a device that helps you to clear your

lungs. You will be asked to get up and move around as soon as you are able. This helps to prevent blood clots and helps you to heal.

At Home

You will be sent home with instructions on caring for your bandages, taking pain medication, and bathing. An appointment will be scheduled by the hospital for you to see the surgeon in 7-10 days.

You may have some bruising around the incisions and some cramping for a few days. This is normal and goes away with time. With the laparoscopic surgery you may have Band-Aids or gauze dressings covering your incisions. These can be removed after 48 hours and you can then shower. You can cover the incisions as needed with Band-Aids or gauze. If you had an open cholecystectomy you will be sent home from the hospital with instructions on how to care for your dressing.

If you are wearing elastic stockings that were put on during your hospital visit these may be removed after you are up and around on a regular basis.

To speed the healing process:

- Follow your doctor's instructions about bathing and caring for your incisions.
- You may want to start with light meals and gradually work into a regular diet.
- Walk and move around as often as possible. This helps to improve blood flow and can help you to feel better.
- Use pain medication as directed for occasional discomfort.
- Do not lift anything over 15 lbs for 6 weeks after surgery
- Contact the surgeon if you have severe pain that is not relieved by the pain medication, persistent fever over 101 degrees F (39 C), redness or foul smelling drainage from the incision site(s).

Your Follow up Appointment

At your appointment with the surgeon ask your doctor about the following:

- When you can drive.
- When you can return to work . Bring any paperwork that needs to be filled out for your work with you to your appointment. After a laparoscopic surgery you may be able to

return to work as soon as 10-14 days after surgery, depending on your work. If you had an open procedure you may be off of work up to 6 weeks.

- How long you will have a lifting restriction.
- Tell the surgeon if you have any new or unusual symptoms.

Eating Healthy Meals

It often takes a few weeks for digestion to adjust. You may have indigestion, loose stools or diarrhea. This should go away in time. Eat a balanced diet, high in fiber, to aid digestion. If the diarrhea persists contact your doctor.