

**CHOLECYSTITIS** (Updated 10.08)**General information**

Cholecystitis is the term for inflammation of the gallbladder. The gallbladder is the organ that stores bile after it is produced by the liver, and then releases it into your small intestine, when needed, to help digest fat. Gallstones, which are hard “pebbles” composed of bile, may form in the gallbladder or may block the ducts, causing pressure to build up behind them. Gallstones are a very common cause of cholecystitis. Women are more likely than men to suffer discomfort from gallstones. Other risk factors include high blood triglycerides, being overweight or pregnant, and having diabetes or a family history of cholecystitis.

**Signs and Symptoms**

Discomfort caused by the gallbladder is often called “biliary colic” because bile is stored in the gallbladder and the pain often comes in spasms, like colic. It usually begins as intermittent pain and cramping that becomes more constant over time, and centers in the middle to right upper side of the abdomen. Other symptoms may include:

- Fever.
- Nausea and/or vomiting.
- Anorexia (loss of appetite).
- Pain when probing the right upper quadrant of your abdomen.

**Lab Tests and Imaging Studies**

An **ultrasound** of the right upper quadrant may show gallstones, a thickening of the gallbladder wall, or fluid around the gallbladder. This test is done while you are awake and is usually not painful.

A **HIDA scan** can be used to determine how well the gallbladder is functioning. HIDA is a chemical labeled with a small amount of a radioactive tracer that the doctor injects into your vein through an IV line. It is taken up by your liver and passed with the bile to your gallbladder. A special camera placed over your abdomen can follow the tracer as it moves through your system, so the doctor can see how well the gallbladder is working. This procedure is typically not painful, once an IV has been placed. The tracer is not harmful to you and the radioactivity dissipates within hours after it is given.

A **CT scan** can show thickening of the gallbladder wall and any fluid around the gallbladder if it is present. CT scans are painless, but you must lie on a table that moves you into a tunnel where x-rays are taken from all around you.

**Laboratory tests.** Your doctor may also request a blood sample to make sure you are not anemic or fighting an infection, and to check the health of your liver and pancreas.

## Medical Management

Sometimes cholecystitis resolves on its own. If infection is present, your doctor may prescribe one or more courses of antibiotics, and a low-fat diet may help reduce the pain. However, if gallstones are present or if the pain continues, surgical removal of your gallbladder (cholecystectomy) may be indicated.

If you must have your gallbladder removed surgically, there are two options: open cholecystectomy and laparoscopic cholecystectomy.

With **open cholecystectomy**, either a 5 to 8-inch long incision is made on the right side of your abdomen just below your ribs, or a midline incision is made between the belly button and xiphoid. The operation may take 1 to 2 hours and you will spend up to a week in the hospital.

In **laparoscopic cholecystectomy**, the doctor makes 4 or so inch-long incisions and uses them to insert a tiny camera and other surgical tools that will remove the gallbladder. After inflating your abdomen with gas to make the organs visible, the doctor can watch what is happening on a TV screen while using the tools to remove the gallbladder through one of the incisions. When the operation is done laparoscopically, both recovery time and pain are less. You may be back to your normal routine in 3 to 5 days. However, sometimes the operation must be done in an open fashion. Your doctor will advise you about your best option.

## Reasons for surgery

The main reason for surgery to remove the gallbladder is cholecystitis, or inflammation of the gallbladder. Some signs and symptoms of cholecystitis include:

- Severe abdominal pain or cramping after eating.
- Nausea and vomiting, heartburn.
- Changes in bowel movements such as loose stool.
- Slight fever or chills.

# CHOLECYSTITIS

## What to expect before, during, and after your surgery

### Before surgery

If you and your doctor decide that surgery is the best option for you, there are some things you should know:

- A low-fat diet can reduce the frequency and severity of attacks.
- Tell your doctor about all medications you are taking, including vitamins, supplements, and blood thinners.
- Call your doctor if you experience a high fever or changes in your skin color (jaundice).
- Do not eat or drink anything after midnight the night before your surgery.
- Make sure that you have someone to give you a ride home from the hospital.

### During the operation

- You will be put to sleep by the anesthesiologist before the procedure begins.
- If the procedure is to be done laparoscopically, a gas is used to inflate the belly and lift the abdominal wall away from the internal organs.
- Four incisions are made to allow a camera and the surgical instruments into the abdomen.
- Small clips are used to close the bile duct and blood vessels to the gallbladder. These clips are left inside, but are not harmful to the body.
- The gallbladder is detached from the liver bed and removed.
- You will wake up in the operating room or in the recovery room, where nurses will monitor you. If your procedure was done laparoscopically, you will return to your family in the short stay unit.
- Patients undergoing the surgery laparoscopically will be required to stay a night in the hospital if your gallbladder is infected, if the surgery is done late at night, if you require a drain tube to remove excess fluid, or if you have other medical conditions that require monitoring as you recover from the surgery.
- Patients having an open cholecystectomy may need 3 to 7 days in the hospital for recovery.

## Caring for yourself after surgery

**Pain:** Pain is common after surgery, especially around the incision site. You may also experience abdominal pain from the gas used to inflate your belly. The pain medication prescribed by your doctor will help with this pain, which should improve in the days following your surgery.

**Fever:** Your temperature can vary after surgery and a low-grade temperature is common. If your temperature exceeds 101.5 degrees or if it is accompanied by chills, vomiting, or flu-like symptoms, you should call the office.

**Bathing:** Your incisions are covered with steri-strips. It is O.K. to take a shower the day after your surgery and you may get the steri-strips wet, just do not scrub them with soap. Do not soak in the bathtub or get into pools or hot tubs for 4 to 6 weeks following your surgery to prevent infection.

**Incision:** When you leave the hospital, your incisions will be covered by a sterile bandage called a steri-strip. This will fall off or be removed at your post-op visit. There may be some drainage from the incisions; this is normal. The drainage should be thin, watery, and slightly pink, but should not be bright red blood. An infection may be starting if the drainage is thick green or yellow, or if the skin around the incision is red or warm to touch. Some swelling and bruising around the incisions is normal and should improve in the days following your surgery.

**Pain:** The prescription medication contains a narcotic along with Tylenol (acetaminophen). It is important for you to follow the directions on the label. If you are allowed to take ibuprofen, you may be able to take some between your doses of prescription pain medication. If you have any questions or are not sure if you should be taking ibuprofen due to other medications or medical conditions, please check with your doctor first. You may also try ice packs and resting to alleviate the pain.

**Constipation:** Constipation is very common following a surgery. The anesthetic used during the operation paralyzes the bowel, which can lead to constipation for up to a week. Pain medications such as Vicodin or Percocet also cause the bowel to move more slowly. You may try over-the-counter medications such as milk of magnesia, Colace, or Metamucil, as well as prune or apple juice to get your bowels moving.

**Diarrhea:** Loose stool, or diarrhea, is a common side effect when the gallbladder is removed and typically occurs right after eating. Diarrhea should resolve in the weeks following the surgery, but can take 6 to 12 months in some people. Diarrhea is not a concern unless it is accompanied by fever, severe abdominal cramping, or if blood is present in the stool. Of course, you can lose a lot of fluid through diarrhea, thus it is important to stay well hydrated if you experience diarrhea after your operation. If the diarrhea is interfering with your daily activities, it may be safe for you to take an over-the-counter anti-diarrhea medicine. Check with your doctor first.

**Dietary restrictions:** It may take a few days for your appetite to return to normal after your surgery. There are no specific restrictions after a cholecystectomy, but keep in mind that foods high in fat may cause diarrhea.

**Activity restrictions:** You may return to your normal activities as soon as you feel able. For some people, this is the following day. Others may take several weeks to completely gain their strength.

**Driving:** We want you to be safe on the road so you must be off of narcotic pain medications such as Vicodin or Percocet. You must also be able to put a seat belt on without pain or irritation to the incisions

### **When to call the office**

- Fever over 101.5 degrees.
- Persistent, increasing pain.
- Increased redness or drainage from an incision.
- Change in skin color/jaundice.
- Pain or swelling in your calf.
- Difficulty breathing.

### **When to go the Emergency Room**

- Uncontrolled bleeding from the incisions.
- Persistent vomiting.
- Change in mental status.
- Inability to breathe.

You are always welcome to call the office with your questions or concerns. After hours, an answering service will direct your questions to the on-call providers. However, these individuals are unable to call in prescriptions for pain medication after 5 p.m.