

# Open Gallbladder Surgery

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Treating Gallbladder Disease



# A Common Problem

If you've had a painful attack of gallbladder symptoms, you're not alone. Gallbladder disease is a very common problem. Most often, the symptoms are caused by stones that form in the gallbladder. To treat the problem, you will likely need to have your gallbladder removed. This eliminates pain and prevents future attacks. Best of all, you'll be able to live a full, healthy life without your gallbladder.

## Symptoms of Gallbladder Problems

Gallbladder problems can cause painful attacks, often after a meal. Some people have only one attack. Others have many. The most common symptoms of gallbladder attacks include:

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



## How Gallbladder Problems Are Treated

To remove gallstones and prevent new ones from forming, the gallbladder is removed. The operation is called a **cholecystectomy**.

# Questions and Answers About Gallbladder Surgery

It's normal to have some concerns about surgery. Below are answers to common questions:

- **How is the gallbladder removed?**

An incision is made in the abdomen. The surgeon sees and works through this incision.

- **Why not just remove the gallstones?**

Unless the gallbladder is removed, more stones are likely to form. The gallbladder may also need to be removed for reasons other than gallstones.

- **Will I need to change my diet?**

No. Once you've fully recovered from surgery, you can still eat all the things you like.

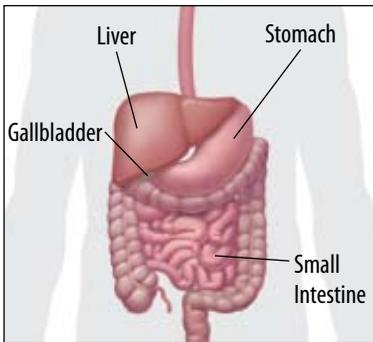


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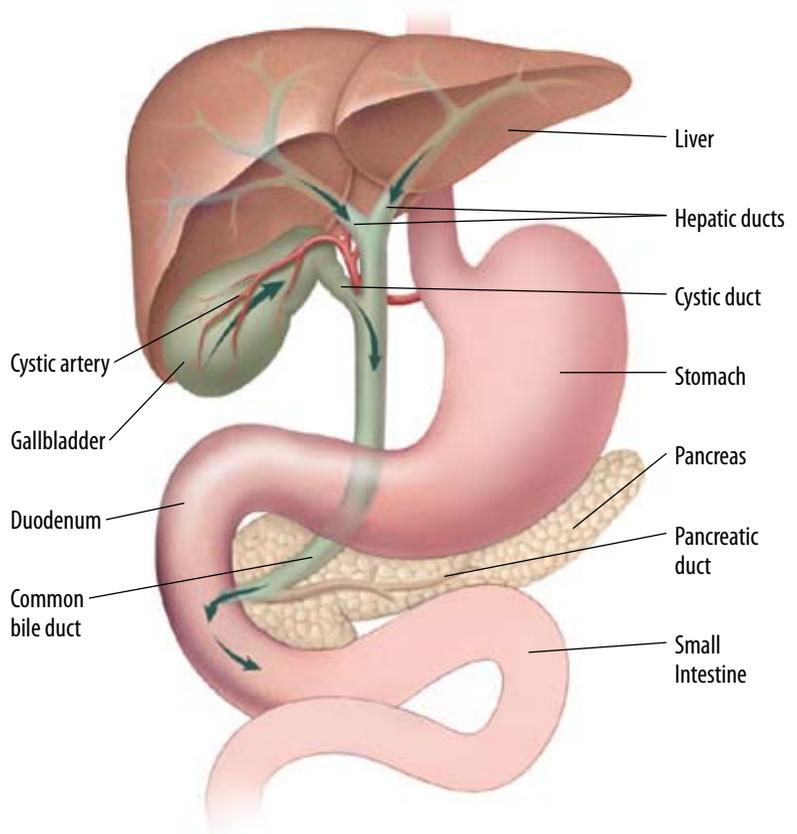
# Understanding the Gallbladder

The gallbladder is a small, pear-shaped organ in the abdomen. Its job is to store and release **bile**, a fluid made by the liver. Bile helps break down fats in the food you eat. Normally, bile moves smoothly through the digestive system. But if stones form in the gallbladder, they can block the release of bile. This can cause pain and lead to serious complications.

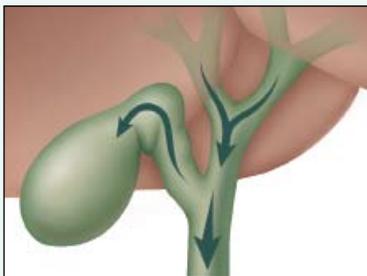


## When the Gallbladder Is Healthy

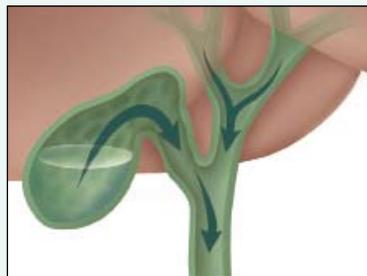
The gallbladder sits just beneath the liver in the upper right side of the abdomen. When the gallbladder is healthy, it stores and concentrates some of the bile made by the liver. After a meal, the gallbladder squeezes bile into ducts (small tubes). The bile then travels to the small intestine where it helps aid digestion.



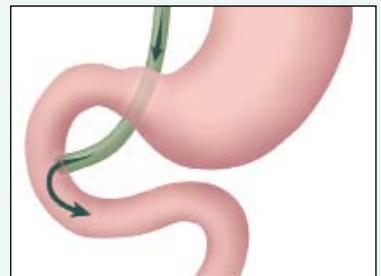
## How Bile Enters the Digestive System



**Your liver makes bile.** Most of the bile is sent through a network of ducts to the duodenum (first part of the small intestine). A small amount of bile is also sent to the gallbladder for storage.



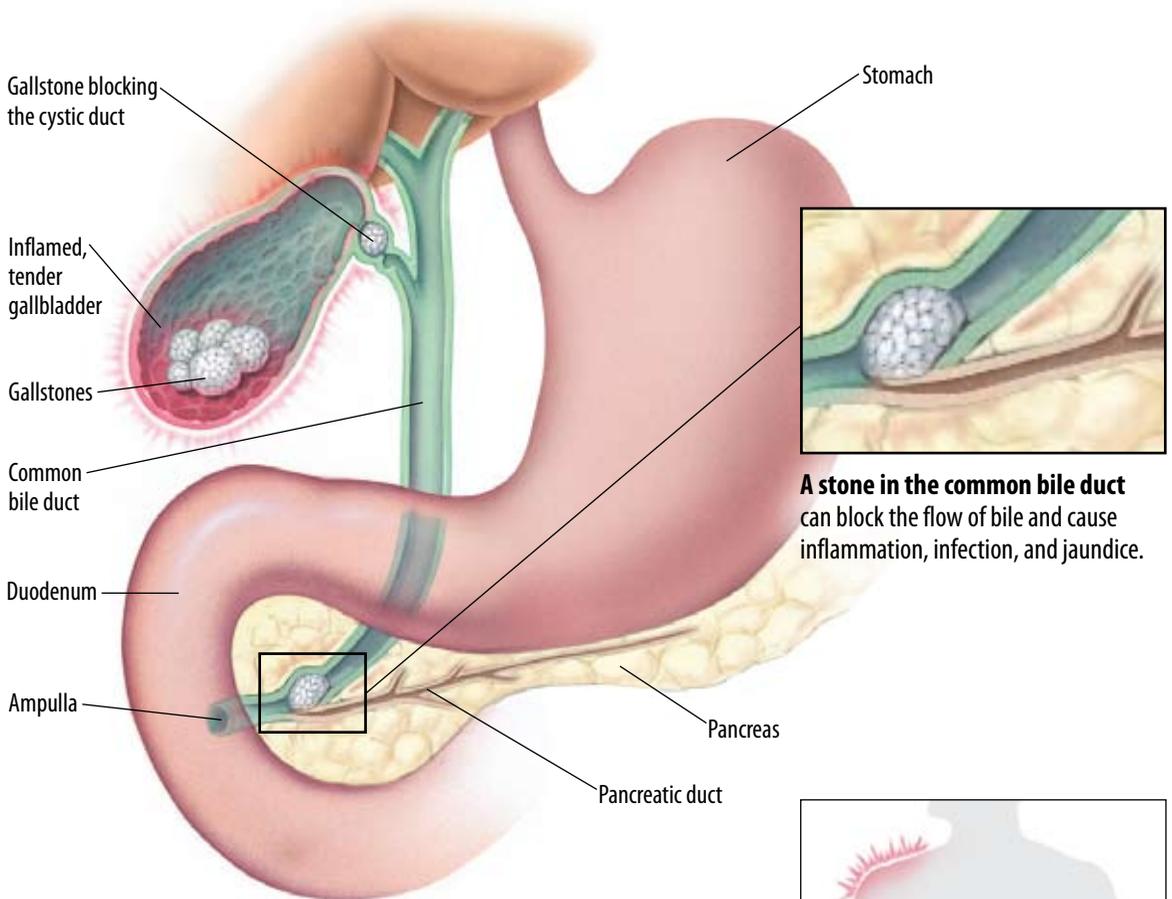
**The gallbladder stores some bile.** The gallbladder concentrates the bile by removing water. When bile is needed to digest fats, hormones (chemical messengers) signal the gallbladder to squeeze bile out through the cystic duct.



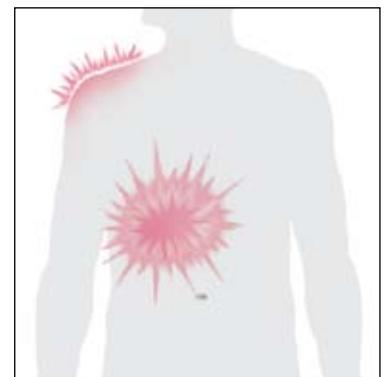
**Bile is sent to the duodenum.** The bile moves through the common bile duct to the duodenum. There, it mixes with food. The pancreas adds other digestive juices. Digestion continues in the small intestine.

# When Gallstones Form

Most gallbladder problems are caused by gallstones. These form when substances in the bile crystallize and become solid. In some cases, the stones don't cause any symptoms. In others, they irritate the wall of the gallbladder. More serious problems occur if the stones move into nearby ducts and cause blockages. This stops the flow of bile and can lead to pain, nausea, and infection. **Jaundice** (a buildup of bile chemicals in the blood) can also occur. Symptoms include yellowing of the skin and eyes, dark urine, and itching.



**A stone in the common bile duct** can block the flow of bile and cause inflammation, infection, and jaundice.



**Pain caused by a blockage** is often felt in the upper right side of the abdomen. You can also have pain in the shoulder-blade, back, or beneath the breastbone.

## Problems in the Common Bile Duct

The common bile duct is formed by the junction of ducts leading from the liver and gallbladder. It's also a common place for problems to occur. This most often happens when a stone moves from the gallbladder and blocks a section of the duct. This can make bile back up into the liver, causing jaundice. If a gallstone blocks the junction with the pancreatic duct, it can inflame the pancreas and cause **pancreatitis**. This is a serious medical condition that requires immediate treatment.

# Your Evaluation

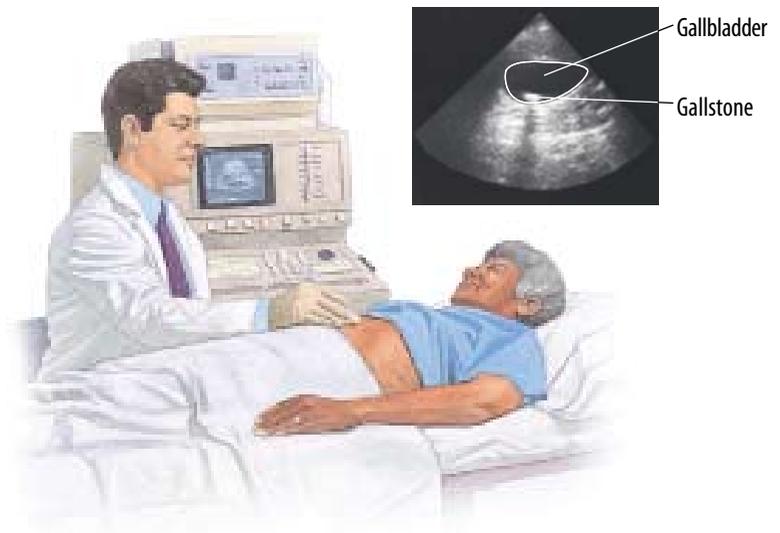
You'll need to have a thorough medical evaluation before any treatment is done. Your doctor will ask about your health and symptoms. You'll then have a physical exam. If needed, your doctor may also order other tests. Once the evaluation is complete, your doctor will talk with you about treatment options.

## Medical History and Physical Exam

Your doctor will ask about your symptoms. Be sure to mention the location and frequency of any pain. Also mention any other health problems you have. In addition, you may be asked about your diet and any medications you take. You'll then have a blood test and physical exam. During the exam, your doctor may press on your abdomen to check for pain.

## Ultrasound Scan

If your doctor suspects you have gallstones, you'll be scheduled for an ultrasound scan. This test uses painless sound waves to check for gallstones.



## Other Tests

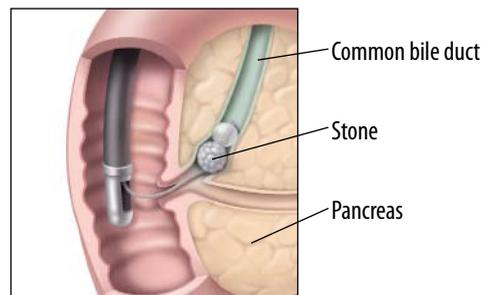
To learn more about your gallbladder problem, your doctor may order one or more of the tests below.

### CT scan ("CAT scan")

A CT scan uses a series of x-rays to produce detailed images of the body. These let your doctor view structures in the abdomen and can help rule out other causes of abdominal pain.

### HIDA (Hepatobiliary scan)

A HIDA scan uses a radioactive fluid (marker) to check gallbladder function. It can also show whether any bile ducts are blocked. After the test, the fluid safely passes from the body.



### ERCP (Endoscopic retrograde cholangiopancreatography)

This test uses a thin, flexible scope that is guided through the mouth and stomach to the bile duct. The scope helps find and remove stones from the duct. ERCP can also be performed after gallbladder surgery to check for stones in the duct.

# Planning Your Treatment

After the evaluation, your doctor will talk with you about treatment options. If your stones are not causing symptoms, you may choose to delay surgery. But if you've had one or more painful attacks, your doctor will likely recommend removing your gallbladder. This prevents more stones from forming and causing attacks. It also helps prevent complications. And after the gallbladder is removed, your liver will still make bile to aid digestion.



## Risks and Complications of Gallbladder Surgery

Gallbladder surgery is safe. But it does have certain risks. These include:

- 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 the incision site

## Getting Ready for Surgery

Your doctor will talk with you about preparing for surgery. Follow all the instructions you're given and be sure to:

- Tell your doctor about any medications, supplements, or herbs you take. You may need to stop taking them 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.
- Don't eat or drink anything after the midnight before your surgery. This includes water and coffee.
- Arrange for an adult family member or friend to give you a ride home from the hospital.

## If You're Pregnant

Gallbladder problems may develop during pregnancy. This is because hormone changes can make bile more likely to form stones. If your gallbladder needs to be removed, your doctor will talk with you about the timing for surgery. In some cases, it can be delayed until after childbirth. But if your symptoms are severe, your doctor may advise having surgery during your pregnancy. This is done to protect you and your baby's health.

# Your Surgery

Your surgery will be done in a hospital. If you have questions, be sure to talk with your doctor ahead of time.

## The Day of Surgery

Arrive at the hospital on time. You'll be asked to change into a patient gown. You'll then be given an IV to provide fluids and medication. Shortly before surgery, an anesthesiologist will talk with you. He or she will explain the medications used to prevent pain during surgery. Gallbladder surgery is done using general anesthesia. This lets you sleep during the procedure.

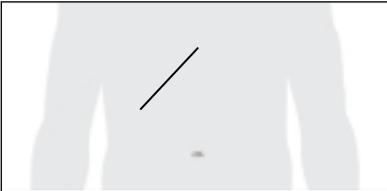
## Finding Stones with X-Rays

During surgery, a cholangiogram catheter may be inserted into the bile duct. The catheter is a thin tube used to inject a special dye. Once the dye is injected, an x-ray is taken of the bile duct. This helps show whether any stones have moved from the gallbladder into the duct. If needed, the stones can then be removed.

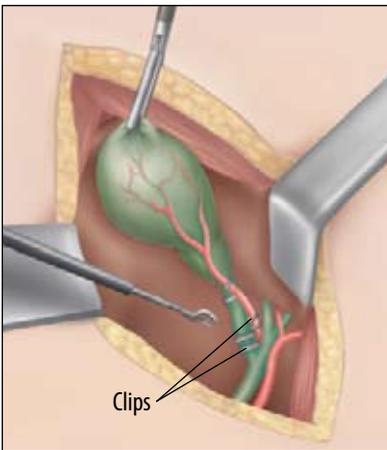


**A cholangiogram catheter** injects dye into the bile duct. The dye helps reveal stones when x-rays are taken.

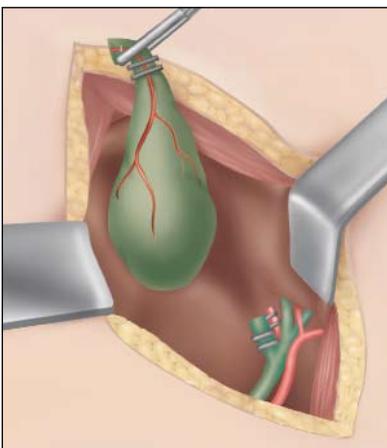
## During Surgery



**An incision is made in the abdomen.** The incision may be made in the upper right side (solid line) or middle (dashed line) of the abdomen. The open incision gives your doctor a clear view of the gallbladder and bile ducts.



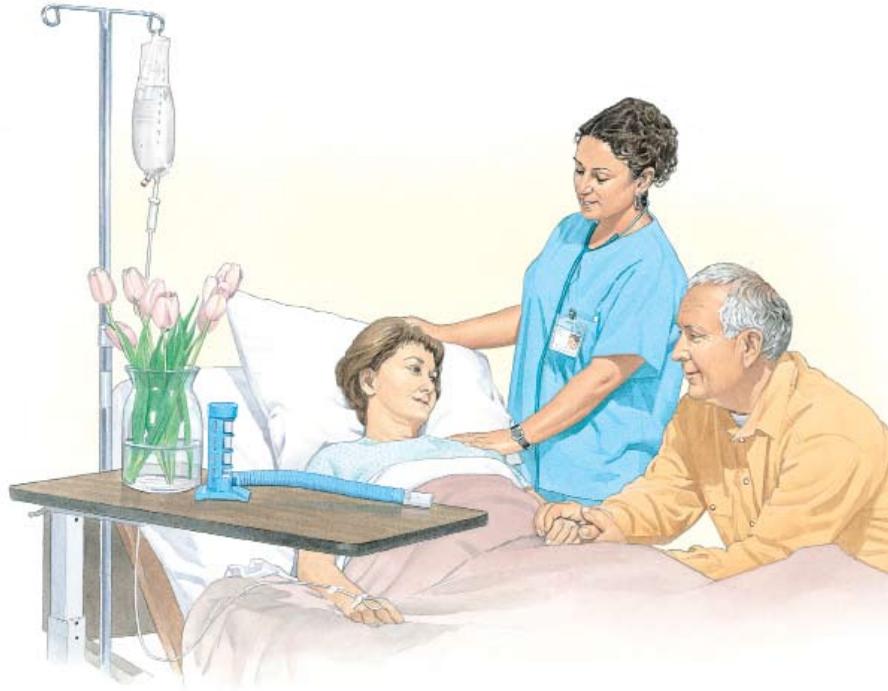
**Small clips or sutures close off the bile duct and blood vessels.** These help prevent bleeding and bile leaks. The clips are made of titanium (metal) or plastic that does not harm the body. If clips are used, they will remain in place.



**The gallbladder is removed.** Once the clips are secured, the gallbladder is detached from the liver. It is then carefully lifted out of the abdomen. Bile will now flow directly from the liver to the small intestine. The incision is closed with sutures or staples.

# Your Recovery

After open surgery, you'll need to stay in the hospital for a few days. Once you're home, follow your doctor's instructions to manage pain and care for your incisions. As you feel better, you can start returning to your routine.



## When to Call Your Doctor

Call your doctor if you notice any of the following during recovery.

- Fever over 101°F (38.3°C)
- Chills
- Sharp or increasing pain
- Increasing redness or drainage from the incision
- Vomiting or nausea that lasts more than 12 hours
- Shortness of breath
- Pain or swelling in your calf
- Symptoms of jaundice
- Prolonged diarrhea

## Recovery in the Hospital

After surgery you'll be taken to a recovery area. Bandages will cover your incision and you may have special boots on your legs to prevent blood clots. To aid recovery, you'll be asked to get up and move as soon as possible. You may also be asked to use a device that helps keep your lungs clear.

## Managing Pain

It's normal to have some pain during recovery. To help you feel better, your doctor will prescribe pain medications to use at home. Be sure to use them as directed. Because some pain medications can cause constipation, your doctor may also suggest a laxative or stool softener.

## After Open Surgery

Recovering from open surgery may be painful. This is because an incision was made in the abdominal muscles to remove the gallbladder. The muscles will heal. But for a time, it may hurt to bend, stand, or take deep breaths. To help manage pain, you may receive a special pump that lets you give yourself pain medication. Keep in mind, you still need to move around as often as you can. This helps prevent blood clots and can help you heal.

## Recovery at Home

You will likely feel tired and may have some bruising around the incision. You may also have some cramping after a few days. This is normal and goes away in time. To speed healing:

- Follow your doctor's instructions about bathing and caring for your incision.
- Talk with your doctor about what to eat. You may need to start with light meals.
- Walk and move around as often as possible. This improves blood flow and can help you feel better.

## Easing Back into Activities

You can start getting back to your normal routine as soon as you feel able. Just take it easy at first and follow all your doctor's advice. For best results:

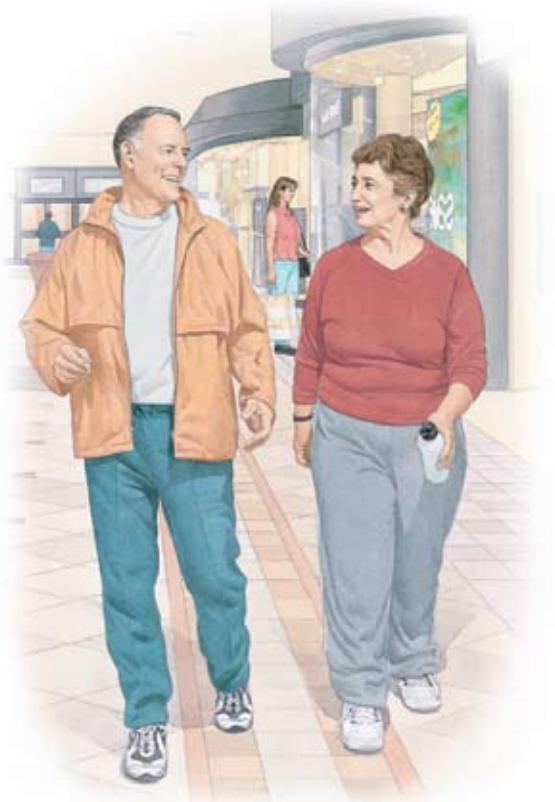
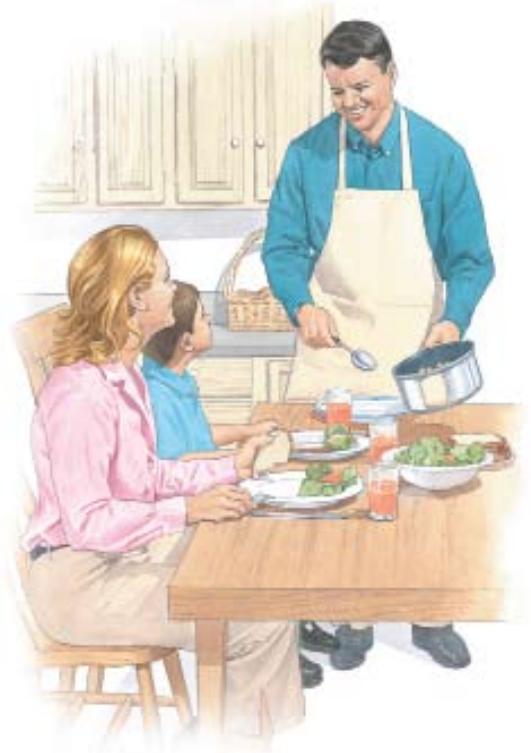
- Ask your doctor about driving and going back to work. It may be up to 6 weeks before you are able.
- Use pain relievers with acetaminophen to relieve occasional discomfort.
- You can have sex again when you're ready.

## Eating Healthy Meals

Even though your gallbladder has been removed, you don't need to be on a special diet. However, it often takes a few weeks for your digestion to adjust. You may have indigestion, loose stools, or diarrhea. This is normal and should go away in time. To aid digestion, eat a balanced diet that is high in fiber. And if diarrhea or other problems don't go away, be sure to tell your doctor.

## Having Follow-up Care

Keep follow-up appointments during your recovery. These allow your doctor to check your progress and make sure you're healing well. During office visits, tell your doctor if you have any new or unusual symptoms. Your doctor can also help answer any questions or concerns you may have.



Regular exercise helps speed recovery and can improve your overall health.

# Feeling Good Again

Don't let gallbladder problems put limits on your life. By having surgery to remove your gallbladder, you can prevent painful attacks. You can also avoid future problems. And you'll still be able to enjoy all your favorite foods and activities. So see your doctor for treatment. You *can* feel good again.



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