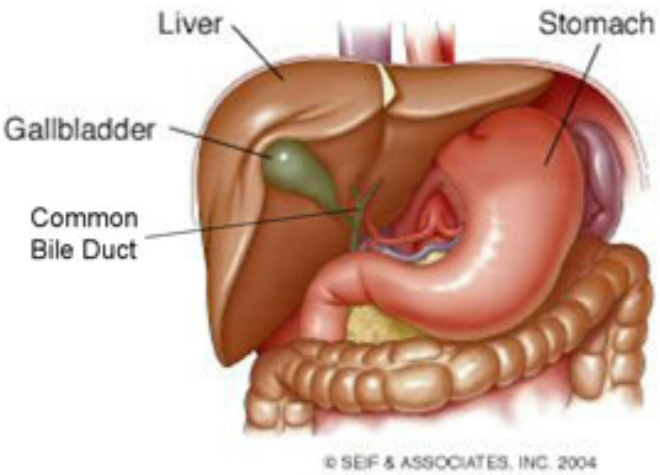
Common Bile Duct Stones

The gallbladder is located in the right side of the upper belly (*abdomen*) under the liver. It stores bile from the liver until it is needed. Bile is made up of cholesterol, water, salts, fats, proteins, and waste product (*bilirubin*). The common bile duct is the tube that carries bile from other ducts to the small intestine to help digest fats. Bile duct stones are stone-like pieces of material that form in the gallbladder and become lodged in the common bile duct. Stones may be present in the gallbladder as well as the bile duct. They can vary in size and number.



Having a stone in the common bile duct is a serious problem. The stone may pass on its own. However, if it gets stuck and causes a blockage in the common bile duct, yellow color in the skin or eyes (*jaundice*) develops. If the blockage persists, the bile becomes infected (*cholangitis*). This is a life-threatening problem.

CAUSES

Excess cholesterol in the bile is the most common reason bile hardens into a stone-like material. Excess bilirubin or not enough bile salts may also cause the bile to harden. Why this happens is not entirely clear.

Certain factors increase the risk of developing stones, such as:

- Being female. Women are twice as likely to develop gallstones, especially those who are pregnant, taking hormone replacement therapy, or taking birth control pills.
- Having a family history of stones.
- Being overweight (even moderately overweight).
- Consuming a high-fat, high-cholesterol diet.
- Crash dieting or rapid weight loss.
- Being older than 60.
- Having American Indian or Mexican American heritage.
- Taking cholesterol-lowering medicine.
- Having diabetes.

SYMPTOMS

Small bile duct stones may not cause any symptoms. They are sometimes discovered while having tests for other conditions. Larger stones can block the flow of bile into the small intestine. This can cause infection and inflammation in the gallbladder, ducts, or sometimes, the liver or pancreas. Symptoms (sometimes called a “gallbladder attack”) may include:

- Pain in the upper right abdomen (*biliary colic*). The pain can last from 30 minutes to several hours.
- Pain between the shoulder blades at the back.
- Pain under the right shoulder.
- Feeling sick to your stomach (*nauseous*).
- Throwing up (*vomiting*).
- Fever.
- Juandice.

DIAGNOSIS

Symptoms can mimic other conditions, so proper diagnosis is important. An imaging test is often performed to confirm the diagnosis and determine the location and size of the stones, such as:

- Ultrasound.
- CT scan.
- Cholescintigraphy, or HIDA (*hepatobiliary iminodiacetic acid*) scan: An imaging technique using a safe, radioactive dye.
- ERCP (*endoscopic retrograde cholangiopancreatography*): An imaging technique where stones can be detected and removed.
- Blood tests may also be performed.

TREATMENT

Watchful waiting may be all that is necessary if you do not have symptoms.

If you are experiencing pain or other symptoms:

- Pain medicine and medicines (*antibiotics*) that kill germs may be given.
- ERCP may be performed to locate and remove the stones to relieve the obstruction. In this procedure, a tube is threaded through the mouth, down into the small intestine.
  - After having an ERCP, the gallbladder will often be removed (*cholecystectomy*) during the same hospitalization. Cholecystectomy is typically performed with a flexible telescope-like instrument (*laparoscope*) through tiny incisions.
- Rarely, some cases may require open surgery, with a larger incision. Open surgery is needed when ERCP is unsuccessful to remove the stone or if laparoscopic surgery is unsuccessful to remove the gallbladder.
- Insertion of a bile drainage tube (*cholecystostomy*) may be performed to take care of common bile duct stones. In this procedure, a radiologist inserts a tube into the gallbladder or the bile ducts in the liver to relieve the pressure caused by the stone. After the patient gets better, the gallbladder will be removed and the stone will be dealt with.

HOME CARE INSTRUCTIONS

- Take pain relievers as directed.
- Limit your intake of fats and cholesterol if you experience pain or bloating. Try eating smaller meals.
- Follow up with your caregiver for additional examination and testing as directed.
- If you have had a procedure or surgery, follow your caregiver's specific instructions for aftercare.

FINDING OUT THE RESULTS OF YOUR TEST

Not all test results are available during your visit. If your test results are not back during the visit, make an appointment with your caregiver to find out the results. Do not assume everything is normal if you have not heard from your caregiver or the medical facility. It is important for you to follow up on all of your test results.

PROGNOSIS

Most people respond well to the treatments for bile duct stones and symptoms are relieved. Fortunately, storing bile in the gallbladder is not essential to the digestion of fats, so the gallbladder can be removed safely. Treatment is essential if stones are trapped in the bile duct as this can lead to more serious complications.

PREVENTION

- Limit your intake of fats and cholesterol.
- Avoid "crash" diets or rapid weight loss.
- Maintain a healthy weight.

SEEK MEDICAL CARE IF:

- "Attacks" become more frequent and impact your daily activities.

SEEK IMMEDIATE MEDICAL CARE IF:

- The pain does not go away or becomes severe (lasts up to 5 hours).
- You have an oral temperature above 102° F (38.9° C), not controlled by medicine.
- You are feeling nauseous.
- You are vomiting.
- You appear to have jaundice.
- Your stools are light reddish brown in color.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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