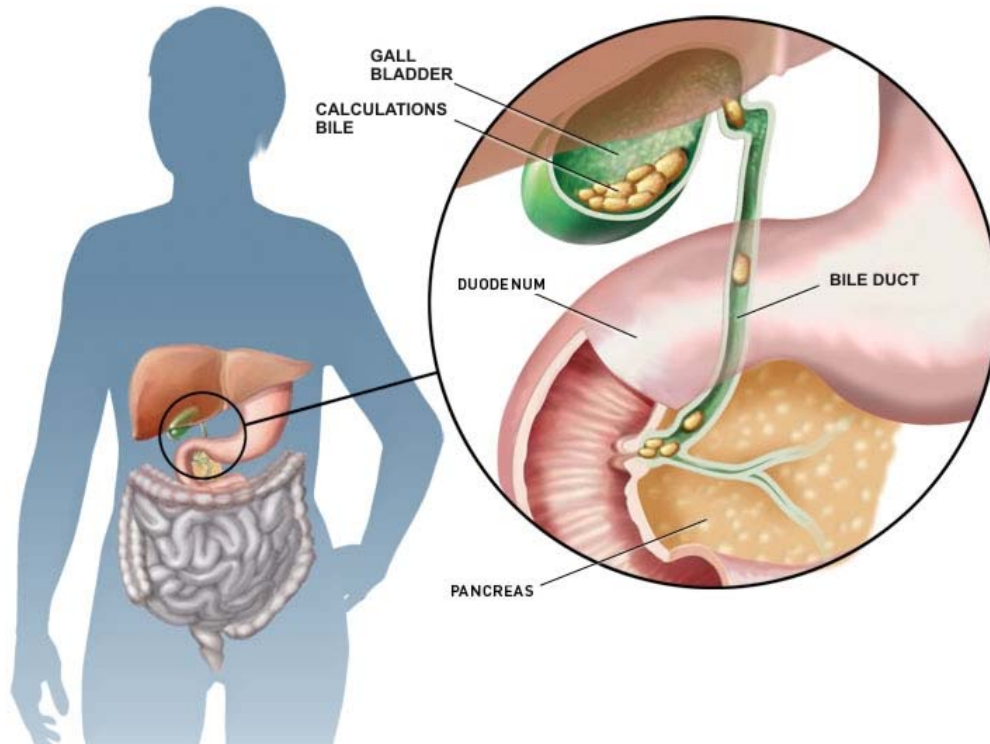


CHOLELITHIASIS (GALLSTONES)

What is Cholelithiasis (GALLSTONES)?

Gallstones are small, pebble-like substances that develop in the gallbladder. The gallbladder is a small, pear-shaped sac located below the liver in the right upper abdomen. Bile is produced by the liver, then stored in the gallbladder until the body needs it. The gallbladder contracts and pushes the bile into the common bile duct that carries it to the small intestine, where it helps with fat digestion. Gallstones form when bile stored in the gallbladder hardens into pieces of stone-like material.



The two types of gallstones are cholesterol stones and pigment stones. 80% of gallstones are cholesterol stones which are usually yellow-green. 20% of gallstones are pigment stones which are small, dark stones made of bilirubin and calcium salts. The gallbladder can develop just one large stone, hundreds of tiny stones, or a combination of the two.

What are the causes?

Factors that contribute to the formation of gallstones, particularly cholesterol stones, include:

- Sex. Women are twice as likely as men to develop gallstones
- Family history
- Overweight
- Diet. Diets high in fat and cholesterol and low in fiber increase the risk of gallstones due to increased cholesterol in the bile and reduced gallbladder emptying
- Rapid weight loss
- Age. People older than age 60 are more likely to develop gallstones
- Ethnicity. American Indians have a genetic predisposition

- Cholesterol-lowering drugs. Drugs that lower cholesterol levels in the blood actually increase the amount of cholesterol secreted into bile
- Diabetes. Diabetics generally have high levels of fatty acids which may increase the risk of gallstones

What are the symptoms?

The majority (60-80%) remain asymptomatic and are picked up in imaging done for other reasons.

As gallstones move into the bile ducts and create blockage, pressure increases in the gallbladder and one or more symptoms may occur. Gallbladder attacks often follow fatty meals, and they may occur during the night. A typical attack can cause:

- Pain in the right upper abdomen that increases rapidly and lasts from 30 minutes to several hours
- Pain in the back between the shoulder blades
- Pain under the right shoulder

If any of the following symptoms occur, a doctor should be seen:

- Prolonged pain-more than 5 hours
- Nausea and vomiting
- Fever-even low-grade-or chills
- Yellowish colour of the skin or whites of the eyes
- Clay-coloured stools

How is it diagnosed?

Abdominal ultrasonography is the method of choice for detecting gallbladder stones

- CT scan
- MRI
- Endoscopic ultrasonography detects small gallstones (< 3 mm)

Treatment options.

- Asymptomatic gallstones – Expectant management
- Symptomatic gallstones – Usually, definitive surgical intervention (eg. cholecystectomy), though medical dissolution may be considered in some cases.

Cholecystectomy (removal of gallbladder) for asymptomatic gallstones may be indicated in the following:

- Large (>2 cm) gallstones
- Nonfunctional or calcified gallbladder on imaging studies and who are at high risk of gallbladder carcinoma