Gallstones (Biliary Colic)

What is the Gallbladder?

The gallbladder is an organ that lies in the upper abdomen adjacent to the liver. The liver makes bile that aids in the digestion and absorption of fat. Bile is stored within the gallbladder. While eating, the gallbladder begins to squeeze bile into the intestine to assist with digestion.

What causes gallstones?

Stones may develop while bile is stored within the gallbladder. Due to different concentrations of cholesterol and calcium within bile, some patients may be more likely to develop stones. Certain risk factors also play a role, including obesity, age, and female gender. Family history is also a risk factor.

What symptoms do they cause?

Gallstones are very common; in fact, many patients with them do not develop any symptoms. Common symptoms include pain in the upper abdomen that starts 20-30 minutes after eating. These attacks of pain can last from several minutes to several hours, and then subside. Nausea and occasional vomiting may occur at the same time. Some patients can develop an infection of the gallbladder known as cholecystitis, in which a gallstone blocks the flow of bile from the gallbladder. This may lead to upper abdominal pain, fevers, and nausea. Other patients develop pancreatitis from gallstones blocking the pancreas, which cases pain and vomiting.

How are they diagnosed?

Gallstones are typically diagnosed by ultrasound imaging of the gallbladder and liver. Ultrasound is also used to diagnose cholecystitis and blockage of the bile ducts. Other less common tests include HIDA scan, in which nuclear imaging is used to measure how well the gallbladder empties bile into the intestine.

Treatment options

Again, many patients with gallstones may have no symptoms, and in this setting, gallstones are incidental findings that do not require treatment.

Symptomatic patients should consider undergoing cholecystectomy, or removal of the gallbladder and gallstones, as nonsurgical treatments tend to have low success rates. Cholecystectomy involves detaching the gallbladder from the bile ducts and removing it from the liver. The gallbladder is not an essential organ—many patients live without their gallbladder without any change in diet or bowel habits.

Gallbladder surgery is usually done on an outpatient basis. Patients arrive the morning of surgery, undergo the procedure, and are discharged home later that day.
Surgery is usually performed laparoscopically, using one to four small incisions. The abdomen is filled with carbon dioxide gas, and a camera mounted on a telescope is inserted to allow surgeons to perform the operation while viewing computer monitors. Long narrow instruments are inserted, and the gallbladder is removed through the belly button. The operation takes 30 minutes to an hour. Rarely, the operation cannot be safely completed laparoscopically, and a larger incision is made underneath the rib cage, and the gallbladder is removed in that fashion. This may require an overnight stay in the hospital.

At Ohio State, we offer even more advanced, newer techniques of gallbladder removal that may be available to certain patients. These techniques involve removing the gallbladder through natural orifices such as the belly button or the vagina, with one incision only. Please ask your doctor if you are interested in these options.

This information is not intended to replace a visit with your physician. To make an appointment with one of our surgeons, please call 614-293-3230.