

The gallbladder is a small pear shaped organ that stores and concentrates bile used for digestion of fats. Bile is a compound composed mainly of cholesterol, bile salts and bilirubin, produced by the liver and stored in the gallbladder during fasting states. When food is consumed, it is partially digested by the stomach and enters the small intestine, where bile is released by the gallbladder to aid in the breakdown of fats. Gallstones develop when the components of bile, such as cholesterol and bilirubin, remain in the gallbladder and solidify into "pebble-like" material. Gallstones may lodge in the bile ducts and block the release of bile causing a backup. Up to 80% of all gallstones do not cause symptoms but obstruction within the bile ducts can cause gallbladder swelling (distension) and severe pain and tenderness of right side of abdomen and/or back (biliary colic). If the obstruction persists, it results in inflammation, infection, and even lack of blood flow (ischemia), a common condition known as acute cholecystitis, or acute calculous cholecystitis (ACC). Repeated mild episodes of acute cholecystitis may result in chronic cholecystitis, causing thickening and shrinking of the gallbladder wall resulting in an inability to store bile.