Endoscopic Retrograde Cholangiopancreatography

Endoscopic retrograde cholangiopancreatography (ERCP) is performed by gastroenterologists or surgeons to evaluate the bile duct, pancreatic duct, and ampulla.

Bile and pancreatic enzymes are released into the small bowel to assist digestion. Bile flows from the liver, is stored in the gallbladder, then flows through the common bile duct. Similarly, pancreatic enzymes flow from the pancreas through the pancreatic duct. The ampulla is the confluence of the biliary and pancreatic ducts. Both of these ducts can become blocked or narrowed by stones, tumors, or inflammation.

**How ERCP Is Used**

The ERCP procedure is used to investigate abnormalities of the common bile duct, pancreatic ducts, and ampulla. It can also be used to perform certain therapeutic interventions. The procedure is performed with a specialized endoscope, a long, maneuverable tube with a camera that passes through the mouth, esophagus, and stomach to work within the duodenum. A miniaturized video camera on the tip of the endoscope allows the doctor to see a greatly magnified view of the inside of the gastrointestinal tract on a video monitor. Images of the bile and pancreatic ducts are made by injecting a special liquid (a radiocontrast agent) into the ducts while taking x-rays. Specialized instruments are passed through the endoscope to perform biopsies, retrieve stones, dilate a narrowing, or place a stent (a short hollow tube that allows bile or pancreatic fluid to flow past a narrowing).

**Side Effects**

Most patients tolerate ERCP without significant complications. Minor complications are associated with anesthesia and occur in 5% to 7% of patients. More significant risks include pancreatitis (inflammation of the pancreas) in 3% to 5% of patients (as high as 15% in high-risk patients), bleeding, infection, and, rarely, perforation of the intestines.

**What to Expect**

Prior to ERCP, you may be asked to abstain from eating and drinking for at least 6 hours. The procedure is performed using either deep sedation (a form of anesthesia in which a patient is allowed to breathe on his or her own) or general anesthesia (with a breathing tube) depending on the patient and the complexity of the procedure required. Patients undergoing the procedure are typically comfortable without significant pain during or afterward and generally do not remember the procedure at all. Often, ERCP is performed in an outpatient setting.

**FOR MORE INFORMATION**

- American College of Gastroenterology
  patients.gi.org/topics/ercp-a-patients-guide

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**Conflict of Interest Disclosures:** The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. No disclosures were reported.


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