

Preparing for ERCP

You have been scheduled for an ERCP. This document will help you better understand the procedure—specifically why it's performed, how it's performed, and what to expect both during and after the exam. Unlike the other original preparation and instruction aides offered through our office, this document is a modification of a brochure offered by the American Gastroenterological Association. We feel that the content and presentation offered exceeds that of our previous ERCP primer.

ERCP is short for **Endoscopic Retrograde Cholangio Pancreatography**. Endoscopic refers to the use of an instrument called an endoscope - a thin, flexible tube with a tiny video camera and light on the end. The endoscope is used by the gastroenterologist to diagnose and treat various problems of the GI tract. The GI tract includes the stomach, intestine, and other parts of the body that are connected to the intestine, such as the liver, pancreas, and gallbladder.

Retrograde refers to the direction in which the endoscope is used to inject a liquid enabling X-rays to be taken of the parts of the GI tract called the bile duct system and pancreas. The process of taking these X-rays is known as cholangiopancreatography. Cholangio refers to the bile duct system, pancrea to the pancreas.

ERCP may be useful in diagnosing and treating problems causing jaundice (a yellowing of the whites of the eyes), abdominal pain, or abnormal lab studies or specialized scans. To understand how ERCP can help, it's important to know more about the pancreas and the bile duct system.

Bile is a substance made by the liver that is important in the digestion and absorption of fats. Bile is carried from the liver by a system of tubes known as bile ducts. One of these, the cystic duct, connects the gallbladder to the main bile duct. The gallbladder stores the bile between meals and empties back into the bile duct when food is consumed. The common bile duct then empties into a part of the small intestine called the duodenum. The common bile duct enters the duodenum through a nipple-like structure called the papilla.

Joining the common bile duct to pass through the papilla is the main duct from the pancreas. This pathway allows digestive juices from the pancreas to mix with food in the intestine. Problems that affect the pancreas and bile duct system can, in many cases, be diagnosed and corrected with ERCP.

For example, ERCP can be helpful when there is a blockage of the bile ducts by gallstones, tumors, scarring or other conditions that cause obstruction or narrowing (stricture) of the ducts. Similarly, blockage of the pancreatic ducts from stones, tumors, or stricture can also be evaluated or treated by ERCP, which is useful in assessing causes of pancreatitis (inflammation of the pancreas).

Problems with the bile ducts or pancreas may first show up as jaundice or pain in the abdomen, although not

always. Also, there may be changes in blood tests that show abnormalities of the liver or pancreas.

Other special exams that take pictures using X-rays or sound waves may provide important information for use along with that obtained from ERCP.

How to Prepare for the Procedure

Prior to having ERCP, there are a number of things you will need to remember:

- First, don't eat or drink anything for at least six hours beforehand or after midnight if your ERCP is scheduled for first thing in the morning.
- Be sure to stop aspirin, aspirin-containing drugs, anti-inflammatory arthritis medications or other blood thinners 4-5 days prior to the exam.
- Identify any allergies or any reactions you have had to drugs, particularly antibiotics, iodine, or intravenous dyes. .

ERCP is most frequently done as an outpatient procedure, but may require hospitalization. We will explain the procedure and its benefits and risks, and you will be asked to sign an informed consent form. This form verifies that you agree to have the procedure and understand what's involved.

What Can You Expect During an ERCP?

Everything will be done to ensure your comfort. Your blood pressure, pulse, and the oxygen level in your blood will be carefully monitored. A sedative will be given through a vein in your arm. You will feel drowsy, then sleep through most if not all of the procedure. You may have the back of your throat sprayed with a local anesthetic to minimize discomfort as the endoscope is passed down your throat into your esophagus (the swallowing tube), and through the stomach into your duodenum.

In the duodenum, the instrument is positioned near the papilla, the point at which the main ducts empty into the intestine. A small tube known as a cannula is threaded down through the endoscope and can be directed into either the pancreatic or common bile duct. The cannula allows a special liquid contrast material, a dye, to be injected backwards - that is, retrograde - through the ducts.

X-ray equipment is then used to examine and take pictures of the dye outlining the ducts. In this way, widening, narrowing, or blockage of the ducts can be pinpointed.

Some of the problems that may be identified during ERCP can also be treated through the endoscope. For example, if a stone is blocking the pancreatic or common bile duct, it is usually possible to remove it.

First, the opening in the papilla is cut open and enlarged. Then, a special device can be inserted to retrieve the stone. Narrowing or obstruction can also have other causes, such as scarring or tumors. In some cases, a plastic or metal tube (called a stent), can be inserted to provide an opening. If necessary, a tissue sample or biopsy can be obtained, or a narrow area dilated.

What are the Possible Complications from an ERCP?

Thanks to ERCP, these kinds of procedures may help you avoid surgery. Depending on the individual and the types of procedures performed, ERCP does have a five to ten percent risk of complications. In rare cases,

severe complications may require prolonged hospitalization.

Mild to severe inflammation of the pancreas is the most common complication and may require hospital care, even surgery. Bleeding can occur when the papilla has to be opened to remove stones or put in stents. This bleeding usually stops on its own, but occasionally, transfusion may be required or the bleeding may be directly controlled with endoscopic therapy.

A puncture or perforation of the bowel wall or bile duct is a rare problem that can occur with therapeutic ERCP. Infection can also result, especially if the bile duct is blocked and bile cannot drain. Treatment for infection requires antibiotics and restoring drainage. Finally, reactions may occur to any of the medications used during ERCP, but fortunately these are usually minor.

What Can You Expect after Your ERCP?

When your ERCP is completed on an outpatient basis, you may need to remain under observation for 1-3 hours. Be sure you have arranged for someone to drive you, since you're likely to be sleepy from the sedative you received. Occasionally, admission to the hospital is necessary.

Usually, within a few hours after the procedure, you can take fluids, then progress to solid foods, but these instructions are individualized from patient to patient.

Because of the air used during ERCP, you may continue to feel full and pass gas for awhile, and it is not unusual to have soft stool or other brief changes in bowel habits. However, if you notice bleeding from your rectum or black, tarry stools, call your doctor. You should also report vomiting, severe abdominal pain, weakness, lightheadedness or fever over 100 degrees. Fortunately, these problems are not common.

HOW ERCP WORKS



Your doctor may determine that a stone is blocking a common duct.



An endoscope will be lowered down your esophagus, through the stomach, and into the duodenum. A small tube will be threaded down into the duct.



A dye will be injected backwards through the ducts, allowing X-rays to be taken.



Your doctor will be able to remove the stone that is blocking the duct with the endoscope.

