

ENDOSCOPIC RETROGRADE CHOLANGIO-PANCREATOGRAPHY (ERCP) Patient Information

What is ERCP?

Endoscopic retrograde cholangiopancreatography (ERCP) is a technique that uses a combination of endoscopy and X-ray to view the patient's bile and pancreatic ducts.

The functions of the common bile duct and the pancreatic duct are to drain the gallbladder, liver, and pancreas into the duodenum (the first part of the small intestine). The most common reason why someone would need an ERCP is because of a blockage of one of these ducts (often due to gallstones). Generally, prior to ERCP blood tests and non-invasive imaging tests such as ultrasound, computed tomographic (CT) scan or magnetic resonance imaging (MRI) are performed.

During ERCP, your doctor will examine the bile and/or pancreatic ducts, looking for abnormalities such as blockages, irregularity in the tissue, problems with the flow of bile or pancreatic fluid, stones, or tumours. If a problem is found, the doctor can often perform a procedure to repair or improve the condition. As a result, ERCP has replaced surgery in most patients with common bile duct and pancreatic disease.



How do I prepare for ERCP?

You will be asked not to eat or drink anything for six to eight hours before the test. It is important for the stomach to be empty to allow the endoscopist to visualise the entire area, and to decrease the chance of vomiting during the procedure.

You may be instructed to adjust the dose of your medications or stop taking specific medications prior to the examination. All medications and dietary supplements should be discussed with your doctor since some are more important than others. If you are taking a blood-thinning medication, the doctor will determine how and when you should stop taking this prior to ERCP. If you are diabetic, adjustments will be made to your morning doses of medication (tablets or insulin) because you cannot eat anything before your ERCP.

If you are pregnant, the ERCP should be postponed until after childbirth if possible, but if the procedure is urgent, it can be done safely during pregnancy by taking extra precautions.

You will need a friend or family member to escort you home after the examination. This is because the medications used for sedation can impair reflexes, judgment, and your ability to drive (similar to the effects of alcohol).

What to expect in the endoscopy unit?

Prior to the endoscopy, you will be asked some questions about your medical history and the medications you are currently taking, and the results of your blood tests will be checked. The ERCP procedure will also be explained in detail, and the doctor will verify that the consent form was signed.

Sedation — Before the procedure a light anaesthetic is given. You may be slightly aware of what is going on in the room, but generally you will not remember anything. A highly qualified anaesthetist and nursing team will monitor your vital signs and will keep as comfortable as possible. You are unlikely to require a general anaesthetic, however if this is the case your anaesthetist will speak to you first.

How is ERCP performed?

ERCP is performed in a room that contains X-ray equipment. You will lie on a special table during the examination, generally on your stomach.

Medications will be given through the intravenous (IV) line during the procedure. A plastic mouth guard is placed between the teeth to prevent damage to the teeth and endoscope. Many patients sleep during the test are not aware of the examination.

After discussing this with the patient and obtaining their consent, a suppository of an anti-inflammatory medication (indomethacin) is given to the patient at the start of the procedure. It is not a laxative. Studies have shown that this suppository can reduce the risk of pancreatitis, which is a complication that may arise from the ERCP procedure.

The ERCP endoscope is a special flexible tube, approximately the size of a finger. It contains a lens (on its side) and a light source that allows the endoscopist to view the inside of the patient's body; images are magnified on a monitor so that even very small details and changes can be seen. The endoscope also contains channels that allow the endoscopist to take biopsies (painless tissue samples) and introduce or withdraw fluid, air, or other instruments.

Once you are sedated, the scope is inserted through the mouth and advanced to the second part of duodenum. A small plastic tube (cannula) is passed through the endoscope into the opening of the bile duct through a structure called the papilla, dye is injected, and X-ray pictures are taken after the injection and displayed on a TV monitor so the endoscopist can examine the bile ducts and pancreatic duct.

Depending on what the endoscopist sees during the ERCP, he or she may perform a variety of procedures or treatments. If bile duct stones are present in the common bile duct, these will be removed. If the X-ray pictures show a narrowing of the bile duct, a stent (a small wire-mesh or plastic tube) can be inserted to allow the bile to bypass the blockage and pass into the duodenum.

What happens after ERCP?

After ERCP, you will be monitored while the sedative medications wear off. The most common discomfort after the examination is a feeling of bloating as a result of the air introduced during the examination. This usually resolves quickly. Some people also have a mild sore throat. Most people are able to drink clear liquids shortly after the examination.

The endoscopist can usually tell the patient the results of their examination right away. If biopsies were taken, the tissue will need to be sent to a lab for analysis.

What are the possible complications of ERCP?

ERCP is a safe procedure and serious complications are uncommon. If complications do occur, they are usually mild, and may include the following:

Pancreatitis (inflammation of the pancreas) is the most frequent complication, occurring in about 3 to 5 percent of people undergoing ERCP. When it occurs, it is usually mild, causing abdominal pain and nausea, which resolve after a few days in the hospital. In rare cases, pancreatitis may be more severe, and cause a prolonged hospital stay.

- Bleeding can occur during or after procedure, however it is usually minimal and stops quickly by itself or can be controlled during the ERCP procedure. For patients on warfarin or other blood-thinning medication there is an increased risk of post-procedure bleeding compared with patients who do not take these medications.
- The ERCP scope or other instruments can cause a tear or hole in the intestine being examined (called perforation). This is a serious condition, may require surgical intervention, although it occurs **rarely**.
- Infection of the bile ducts (cholangitis) is rare in general, but it can occur, particularly in patients with certain preexisting conditions. Treatment of infections requires antibiotics and drainage of excess fluid.
- Aspiration (inhalation) of food or fluids into the lungs. The risk of this complication is minimal in people who do not eat or drink for several hours before the examination.

If you have any of the following symptoms soon after or within 24 hours of procedure

- Severe abdominal pain (not just gas cramps)
- A firm, distended abdomen
- Vomiting
- Fever or chills
- Difficulty in swallowing or a severe sore throat

You should report immediately to the hospital or your doctor's rooms immediately using the contact details as above.