Royal Cornwall Hospitals
NHS Trust

Endoscopic retrograde cholangio-pancreatography (ERCP)

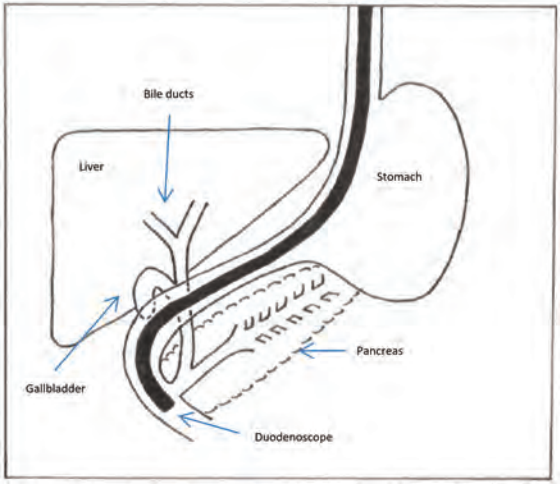
One + all | we care

About this leaflet

This leaflet explains about having an ERCP, including the benefits, risks and any alternatives and what you can expect when you come to hospital. If you have any further questions, please speak to a doctor or nurse caring for you.

What is an ERCP?

An ERCP is a type of X-ray and camera examination that enables your doctor to examine and/or treat conditions of the biliary system (liver, gallbladder, pancreas, pancreatic and bile ducts).



Why is it performed?

The most common reason to do an ERCP is for blockages of the bile duct. This is often due to gallstones, but can be the result of inflammation and scarring of the duct or tumours causing compression. Your consultant will tell you the reason you need this test.

During an ERCP, stents (small plastic or metal tubes) can be inserted into the bile ducts, to allow drainage of bile into the intestine. Stents can also be inserted into the duodenum for patients who have a blockage to the flow of food out of the stomach. An ERCP can give more information about the pancreas and bile ducts, and brushings and biopsies (specimens of cells for analysis) can be taken from the bile ducts or the pancreas. This test can also remove stones from the bile duct.

Why do I need it?

An ERCP allows your doctor to gain detailed and accurate information about your pancreatobiliary system. It offers a less invasive option than open surgery for treatment of both the bile duct and the pancreas, in particular obstructive jaundice (jaundice caused by a blockage in the bile drainage system). It is sometimes used to help remove pancreatic stones or to put a stent into a narrowed pancreatic duct. This can be helpful in dealing with pain.

What are the risks?

ERCP is generally safe but as with all procedures complications can sometimes occur.

Minor complications

- Mild discomfort in the abdomen and a sore throat, which may last up to a few days.
- Loose teeth, crowns and bridgework can be dislodged, but this is rare.
- Mild inflammation of the pancreas (pancreatitis). This can happen in approximately five in 100 people. If pancreatitis happens, you will have pain in the abdomen, usually starting a few hours after the procedure and lasting for a few days. The pain can be controlled with painkillers and you will be given an intravenous (into a vein) infusion of fluids in hospital to keep you hydrated until the pain subsides.
- Inability to gain access to the bile or pancreatic ducts.
- Irritation to the vein in which medications were given is uncommon, but may cause a tender lump lasting for a couple of days.

Possible major complications

- Severe pancreatitis can occur following an ERCP. We can treat this with medication or surgery. Although it is very rare, severe pancreatitis can be fatal (less than one in 500 cases).
- Infection in the bile duct can occur (cholangitis). Your doctor may suggest a course of antibiotics either in hospital or at home.
- If you had a sphincterotomy (a small cut in the bottom of the bile duct) performed, there is a risk of bleeding which usually stops quickly by itself.

If it does not stop by itself we may inject you with adrenaline through the endoscope. However, in severe cases, blood transfusion, a special X-ray procedure or an operation may be required to control the bleeding.

- Very frail and/or elderly patients can get pneumonia from stomach juices getting into the lung (approximately one in 500 cases).
- A hole may be made in the wall of the duodenum (perforation), either as a result of sphincterotomy or due to a tear made by the endoscope. This happens in less than one in 750 cases. It might require surgery to put right and may occasionally be fatal.
- A very rare complication is a reaction to one of the sedative drugs used.
- An ERCP involves the use of X-rays (ionising radiation) which have the potential to cause short term (reddening of skin, burns) and long term effects including a small risk of cancers. We ensure that the lowest possible amount of radiation is used.

Although ERCP carries risks, it is only carried out when the doctors have carefully balanced the risks of doing this test compared with doing any other test or operations, and the risks of doing nothing. Your doctor will be happy to discuss this with you further.

Are there any alternatives?

Percutaneous trans-hepatic cholangiogram (PTC), performed under X-ray guidance, is the only alternative which allows therapeutic intervention (treatment). However PTC does not allow us to see the bile ducts directly and is associated with more complications.

Possible diagnostic alternatives are listed below, although no actual treatment can be performed with any of these:

- A CT (computerised tomographic) scan can be performed, but the investigation is less sensitive, small growths (less than 1cm) can be missed, no biopsies can be obtained, and no stents can be inserted.
- An MRI (magnetic resonance imaging) scan can be performed, but the investigation does not allow direct vision of the bile ducts, no biopsies can be obtained and no stents can be inserted. Also, you cannot have an MRI scan if you have some internal metalwork (eg. pacemaker).

- An ultrasound scan can provide images of the biliary system, but a biopsy cannot be obtained and no stents can be inserted.
- An endoscopic ultrasound can be performed, but stones cannot be removed, a sphincterotomy (cut at the base of the bile duct) cannot be performed, and no stents can be inserted.

Giving consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves. If you would like more information about our consent process, please speak to a member of staff caring for you.

How do I prepare for an ERCP?

Before you have the ERCP, blood tests will be taken to check the clotting of your blood and your blood count.

In order for the doctor to be able to have a clear view with the camera, it is important that you do not eat or drink anything for six hours before the test.

Can I take my usual medications?

If you are taking any medicine that thins your blood, such as antiplatelet medicines (for example ticagrelor or clopidogrel) or anticoagulant medicines (for example warfarin or rivaroxaban), please tell your doctor or the nurse as you may need to stop them temporarily before your procedure. Also tell your doctor or nurse if you have diabetes as you may need to alter the dose of your diabetes medicines, as you will need to fast before the procedure.

Please let us know if you are taking any regular medicines (including anything you buy yourself over the counter or any herbal or homeopathic medicines) and if you have any allergies to any medicines. You should continue to take all of your medications as normal, unless you have been told otherwise by the doctor or endoscopy nurse.

What happens when I arrive at the Endoscopy Unit?

On arrival, please give your name to the receptionist or nurse. Please be aware that we have our endoscopy teams running multiple procedure rooms at the same time so sometimes another patient who arrived after you may be called in before you are. This does not mean you have been forgotten, but that the other person is on a different list to you. We do everything we can to avoid keeping you waiting any longer than necessary, but because every procedure takes a different length of time to complete, sometimes it's hard to give exact timings. We'll update you regularly as to how long you are likely to be with us.

At check in we will ask you to wait in the waiting area until you are seen by an endoscopy nurse, who will ask you about your medical history. Please tell the nurse if you have had any reactions or allergies to other examinations in the past.

To reduce risk of bleeding, you should not wear any metal during the procedure. We will ask you to take off all your jewellery before the examination. You may wish to leave any valuable jewellery at home, as we cannot be responsible for any valuables lost while in the unit.

You will be asked to remove your clothing and change into a gown when we are ready to start your test. You may want to bring your dressing gown and slippers with you. Your endoscopist will then explain more about the procedure and answer any questions you may still have. You will be asked to sign the consent form at this point if you decide to continue with the test.

What happens during the procedure?

ERCPs at the Royal Cornwall Hospital are performed by gastroenterologists (specialist consultants), assisted by specialist registrars.

Before the procedure starts, a nurse will attach a monitor to one of your fingers to record your pulse and oxygen level, as well as monitors of your blood pressure and heart rhythm. You will be given oxygen through a plastic tube placed just in the nose. As safety checklist will then be read out. You will be given a local anaesthetic throat spray to help to numb the throat. You will need to lie on your left side and a plastic mouth guard will be placed in your mouth.

You will also receive a suppository of an anti-inflammatory drug and a drip to decrease the risk of pancreatitis.

You will be given an injection of intravenous sedation and painkiller through a small needle in the back of your hand or arm. These medicines (known as conscious sedation), will relax you and may make you drowsy but will not necessarily put you to sleep. You will hear what is said to you and be able to respond to any instructions given to you. A nurse will sit by your head and monitor you for the whole of the procedure. Once you are drowsy, a flexible tube about the width of an index finger, with a tiny camera on the end of it (duodenoscope) will be passed through your mouth, down your gullet, into the stomach, and then into the top part of the small intestine (duodenum). During the procedure, the doctor will insert a fine wire through the scope into the bile ducts and inject a dye which shows up on X-ray. X-rays of various parts of your biliary or pancreatic system will be taken.

If the procedure is being performed to remove stones from the bile or pancreatic duct, a small cut (sphincterotomy) may be made in the lower end of the bile duct to allow a fine tube to pass through. This also allows a small basket or balloon to be inserted to grasp a stone, and for any stones that may get into the bile duct in future to easily pass into the intestine.

Specimens may be taken from the bile ducts using a small brush or forceps, and a plastic or metal tube (stent) may be inserted to help with the drainage of bile or pancreatic juice.

When using sedation, most patients will remember little or nothing of the procedure but will have a possible 'hangover' with some drowsiness afterwards. Following sedation you should not operate machinery, take alcohol, sign legal documents or drive for at least 24 hours, though insurance companies vary and you should check with your insurance company if you need to drive between 24 and 48 hours. You will need to be monitored in recovery for 6 hours after your procedure and will need someone to escort you home.

How long does it take?

The actual procedure lasts between fifteen minutes and one and a half hours, but half an hour is the average time.

Will I feel any pain or discomfort?

This procedure is usually performed under conscious sedation and on occasion general anaesthetic (GA). Please note your referring doctor will have notified you if you are to have this under a GA.

We will administer sedation and an opiate painkiller before and during your procedure to make you as comfortable as possible. You may experience cramping abdominal pain during or after the procedure from the air that we use to inflate your duodenum. You may also experience short periods of discomfort or pain from certain parts of the procedure, which should soon disappear.

We will give you painkilling suppositories (into your back passage) before the end of the procedure to reduce the risk of pancreatitis. Afterwards, simple painkiller tablets, such as paracetamol, may be taken. Taking peppermint (eg as peppermint tea or peppermint water) can help to pass the air.

If you develop severe abdominal pain, please inform your nurse immediately. If you have gone home, consult your GP or go to the nearest Emergency Department (ED). (Please take your endoscopy report with you).

Does this test involve radiation?

The proposed procedure involves the use of X-rays (ionising radiation). We all receive some ionising radiation every day from the environment. The amount of excess radiation you receive from the procedure has the potential to cause short term (reddening of skin, burns) and long term effects including a small risk of cancers. The benefits of the procedure far outweigh the risks involved. Our staff are trained and the equipment is calibrated regularly to ensure that we use the lowest possible amount of radiation needed to get the diagnostic information for the management of your condition.

What happens afterwards?

- The nurse will monitor your pulse and blood pressure regularly and observe you for any complications.
- You will need to stay in the Endoscopy Unit under observation for six hours, unless you are being transferred back to your own hospital by ambulance.

- If you are going home after your procedure, you will need to be escorted home by a responsible adult.
- You can usually eat as normal once you are fully awake. However, depending on the type of treatment you had during the procedure, you may be asked to fast (not eat anything) for 12 hours or more afterwards.
- You should continue to take your usual medications, unless we tell you otherwise. If you have been asked to stop any medicines before the procedure, we will confirm when to restart these before you leave the Endoscopy Unit.
- Your doctor or nurse will talk you through the results of the procedure, but sometimes you may be sleepy and not be able to remember the details. The results will be sent to your referring doctor (this can be either your GP or hospital doctor). If a follow-up appointment is necessary, it will be sent to you by post.

What happens when I go home?

The sedation lasts longer than you may think, so in the first 24 hours after your examination, do not:

- drive or ride a bicycle
- operate machinery or do anything requiring skill
- drink alcohol
- take sleeping tablets
- go to work
- make any important decisions, sign contracts or legal documents.

If you choose to have sedation or general anaesthetic, **you must arrange for a relative or friend to take you home around six hours after the test.** This person should be 18 years of age or older. It is recommended that someone stays with you overnight. You will not be able to drive or operate any machinery for the remainder of the day and will need to rest quietly at home. **Please note that your appointment will be cancelled on the day if you wish to have sedation but have not organised an escort home.** If you are unable to arrange someone to collect you, please contact us to discuss alternative arrangements.

What should I look out for?

You should not expect any problems. However, if you experience:

- severe abdominal pain
- severe throat or chest pain
- trouble swallowing or breathlessness
- vomiting blood
- passing blood or black stool rectally

call the Endoscopy department on 01872 253247 during working hours for further advice and guidance. Outside these hours, if your symptoms are severe go to the Emergency Department.

Delays to your appointment

We also deal with emergencies. These can take priority over your appointment, meaning we may have to ask you to wait or, rarely, have your appointment cancelled. We apologise in advance if this occurs but please be patient with us and check at the reception desk if you are concerned.

Will I need a repeat procedure?

For certain findings you may be invited to have a repeat ERCP in the future. You will be advised of the timing of this procedure on discharge, or if further discussion is needed you will be contacted by the team who referred you for the procedure.

Final points

Please note that we are a training centre. All training lists are closely supervised by a trainer specialising in endoscopy procedures. Please use the phone number on your appointment letter if you do not wish to participate.

Any questions?

We want to ensure you are completely comfortable about your procedure.
If you have any queries please contact the Endoscopy Booking Office using the contact telephone number on your appointment letter. The office is open Monday – Friday 9am – 4pm.

Preparation checklist

- If you are planning or have been advised to have sedation arrange for a friend or relative (18 years of age or older) to escort you home after your appointment.
- If you do not organise an escort, or if s/he is under 18 years old, we will not be able to give you sedation and the procedure may be cancelled.
- Make a note of the date of your appointment.
- If you are taking medications to prevent blood clots please contact us for advice before your appointment.
- DO NOT eat anything for six hours before your appointment or drink anything for four hours before. You may have small sips of water for up to two hours before.
- Wear loose-fitting clothes on the day of the test.

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

RCHT 268

Revised 08/2023 V8 **Review due 08/2026**