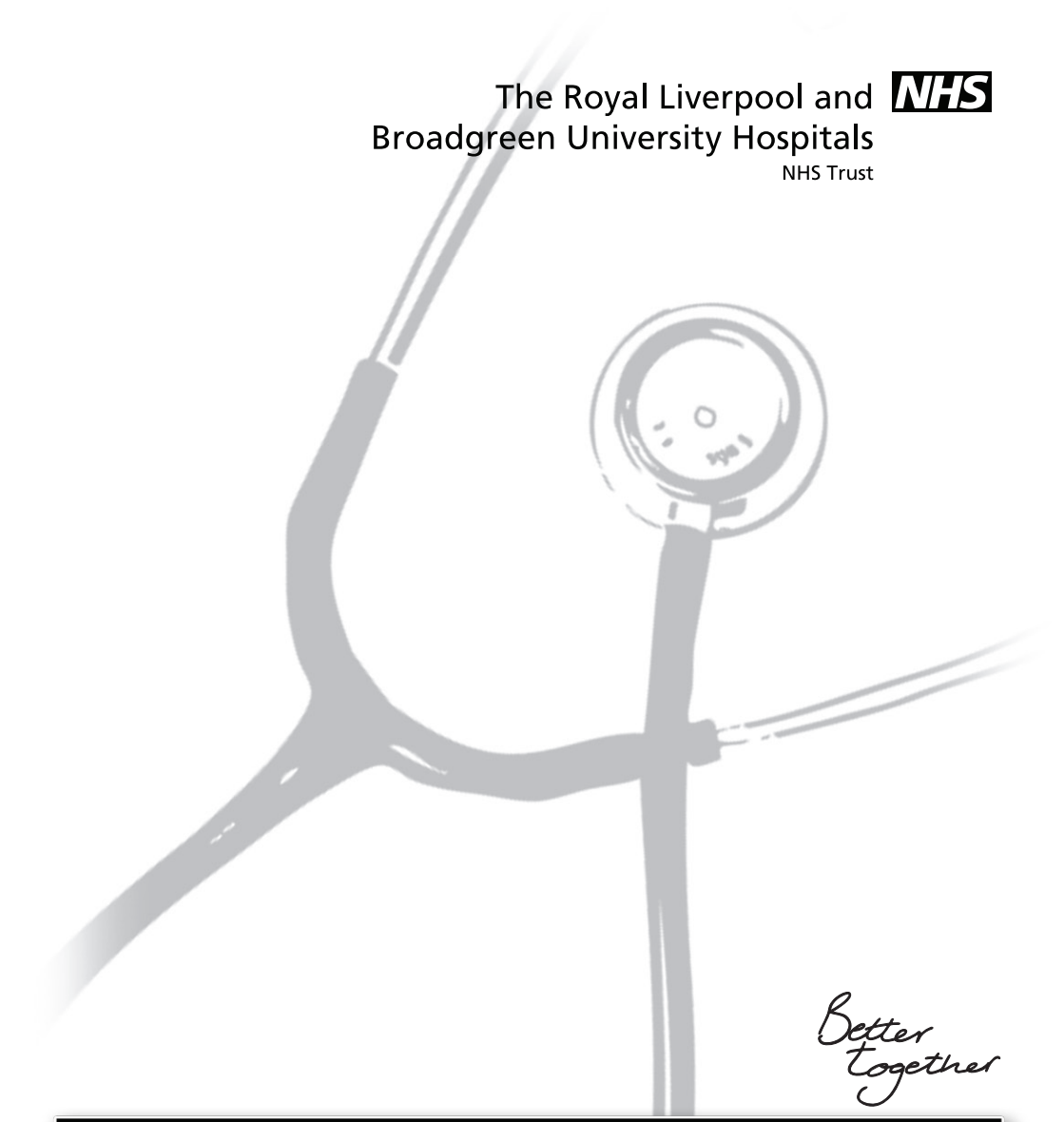
The Royal Liverpool and Broadgreen University Hospitals
NHS Trust



Better together

Patient Information

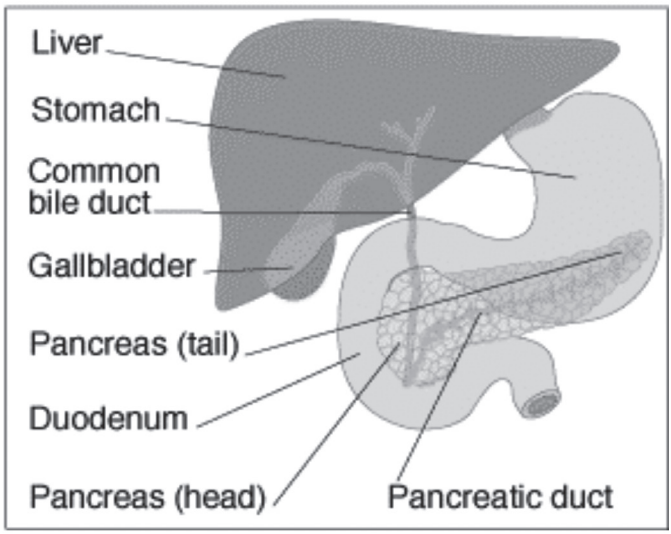
Acute Pancreatitis

Directorate of Surgery
Hepato-Pancreato Biliary (HPB) Surgical Team

PIF 1496 V1

The Pancreas Gland

The pancreas is a solid gland measuring 25-29 centimetres in length, four to six centimetres in width and three to four centimetres in depth. The head of the gland is situated just to the right of the midline of your abdomen and below your right ribcage. It is closely attached to the duodenum, which is the first part of the small bowel into which your stomach empties liquid and partially digested food.



What does it do?

Digestion

Digestion of food, which consists of carbohydrates, proteins and fats, is not possible without the pancreas. The pancreas produces enzymes, which are passed into the duodenum along the pancreatic duct; these are responsible for breaking down food into particles ready for absorption. The digestion of fat is very special; the pancreatic enzymes cannot digest the fat unless it has been prepared first.

Bile acids made in the liver and stored in the gall bladder work on the fat first to get them ready for the pancreatic enzymes to help digest them. The bile is passed down the bile duct and into the duodenum; therefore both pancreatic juice and bile are needed for efficient digestion and absorption.

Insulin and glucose metabolism

All the cells of the body use glucose as a source of energy. The pancreas is the organ responsible for the production of a hormone called insulin.

Insulin regulates the levels of glucose in our bloodstream, too much or too little glucose can be very dangerous. If part of the pancreas is removed or damaged there is usually enough pancreas left to prevent sugar diabetes forming, but sometimes diabetes will develop.

What is Acute Pancreatitis?

This is an inflammation of the pancreas which develops very suddenly. A blood sample usually shows the presence of a large amount of amylase (a pancreatic enzyme) in the blood. The majority of patients (about 75%) improve steadily with good hospital treatment over the course of a week or so.

Hospital treatment will involve hydration possibly in the form of intravenous fluids, close monitoring, pain management and regular blood testing.

We do not know why about 25% of patients develop an attack of severe acute pancreatitis. Once this occurs, then the chances of complications and death are high. Because we still do not understand all the factors responsible for causing the various complications, treatment is sometimes not successful and patients can unfortunately die.

For these reasons, it is important patients with severe pancreatitis are looked after by specialists if this is at all possible.

Severe pancreatitis places a stress on all the main organs of the body: the heart, lungs, kidneys, other gut organs, the brain and the peripheral vasculature (the blood vessels that nourish all the organs).

Causes of Acute Pancreatitis

The two major causes of acute pancreatitis are either gallstones or alcohol. The Department of Health recommends an alcohol daily limit of two to three units for women and three to four units for men.

Other causes of acute pancreatitis include hyperlipidaemia (excessive level of lipids in blood), mumps, pregnancy, hereditary (genetic) and idiopathic (cause not known).

Choleycystectomy

If gallstones are the cause of your pancreatitis and if you are fit enough you will need to have your gallbladder removed through an operation called a choleycystectomy. If possible your surgeon will try to remove your gallbladder through keyhole surgery called a laparoscopic choleycystectomy, however if this is not possible then you would need a larger operation called an open choleycystectomy.

Investigations

While in hospital your doctor may ask for ask for some of the following investigations

Ultrasound

An ultrasound takes place in the X-ray department. A scanning device with jelly on is passed over your abdomen and pictures are obtained on a screen. Information about the pancreas, liver, gall bladder and bile ducts can be obtained.

CT Scan (Computed Tomography Scan)
A CT scan is another type of X-ray that gives more in-depth pictures of the abdomen and involves you lying on a bed that moves in and out of the scanner that is shaped like a large polo mint, while pictures are taken.

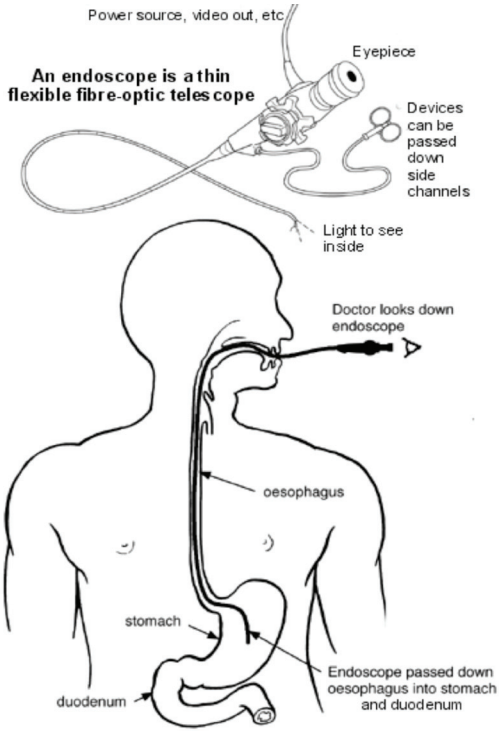
Special liquids are often used to allow particular areas of the body to be seen more clearly on the scan. You may be asked to drink some liquid or it may be given as an injection.

Endoscopic retrograde cholangio-pancreatography (ERCP)
This test is performed under sedation. A small flexible tube called an endoscope is passed through your mouth and stomach, and out into the biliary tract. A special dye is injected which shows the common bile duct and pancreatic duct. If gallstones are present they may be removed.

If there is a stricture causing obstruction to the flow of bile then a stent (narrow tube) can be pushed down the inside of the blocked duct to hold it open.

This is a temporary measure until jaundice settles and any surgery needed can be carried out. Sometimes the stents are left in permanently if surgery is considered unlikely.

During the procedure pictures are taken and the doctor carrying out the examination writes a written report on his findings afterwards



Endoscopic ultrasound (EUS)
This is a very similar procedure to an ERCP and involves an ultrasound probe being passed down the endoscope to take an ultrasound scan of your pancreas and surrounding organs.

Fine Needle aspiration (FNA)
Occasionally a small piece of tissue from the pancreas is needed to help make a diagnosis. This involves a fine needle being passed through the skin into the pancreas and a sample taken. CT scan or ultrasound scan is used as a guide to ensure the sample is taken from the correct place.

Magnetic Resonance Imaging (MRI)
An MRI scan is similar to a CT scan but uses magnetic fields to image the pancreas instead of X-rays. Very powerful magnets are used to generate the pictures. MRI scans can be used to provide good pictures of the bile and pancreatic ducts and is called MRCP.

Discharge home

Following discharge you will be followed up in the outpatient clinic. Depending on the cause of your pancreatitis you will be advised if further treatment will be necessary

What can I eat?

For a few weeks after an attack of acute pancreatitis you should eat at regular intervals. It is usually better to take four or five snacks a day than a full meal. If you have gallstones, and for some reason your gall bladder has not been removed, avoid fatty foods such as butter, eggs, fried foods, sausages and bacon.

Following removal of your gall bladder you are free to eat anything you wish. You will have a very healthy appetite and you may put on more weight than you would otherwise, unless care is taken to avoid excess calories.

Can I drink alcohol?

Alcohol is not recommended for patients who have recurrent acute pancreatitis and should be avoided in patients for whom the cause of their acute pancreatitis is alcohol.

Further Information

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Support Groups

Pancreatitis Supporter Network www.pancreatitis.org.uk

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