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## Acute Pancreatitis

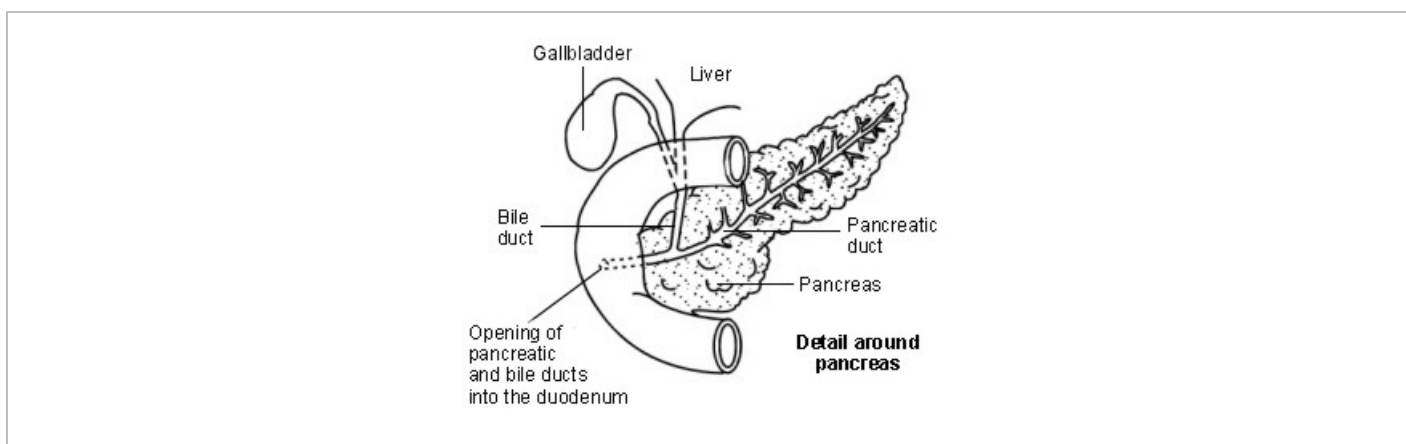
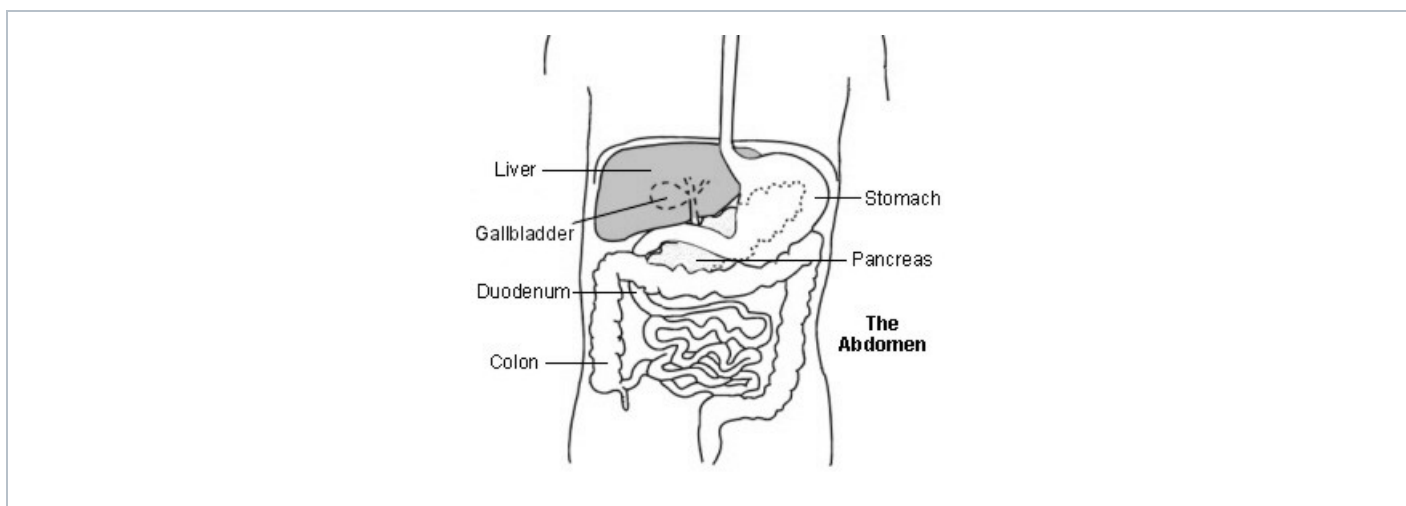
Acute pancreatitis means inflammation of the pancreas that develops quickly. The main symptom is tummy (abdominal) pain. It usually settles in a few days but sometimes it becomes severe and very serious. The most common causes of acute pancreatitis are gallstones and drinking a lot of alcohol.

### What is the pancreas?

The pancreas is in the upper tummy (abdomen) and lies behind the stomach and guts (intestines). It makes a fluid that contains chemicals (enzymes) which are needed to digest food. The enzymes are made in the pancreatic cells and are passed into tiny tubes (ducts). These ducts join together like branches of a tree to form the main pancreatic duct. This drains the enzyme-rich fluid into the part of the gut just after the stomach (called the duodenum). The enzymes are in an inactive form in the pancreas (otherwise they would digest the pancreas). They are 'activated' in the duodenum to digest food.

Groups of special cells called 'islets of Langerhans' are scattered throughout the pancreas. These cells make the hormones insulin and glucagon. The hormones are passed (secreted) directly into the bloodstream to control the blood sugar level.

The bile duct carries bile from the liver and gallbladder. This joins the pancreatic duct just before it opens into the duodenum. Bile also passes into the duodenum and helps to digest food.



### What is pancreatitis?

Pancreatitis means inflammation of the pancreas. There are two types:

- Acute pancreatitis - the inflammation develops quickly, over a few days or so. It often goes away completely and leaves no permanent damage. Sometimes it is serious.

- Chronic pancreatitis - the inflammation is persistent. The inflammation tends to be less intense than acute pancreatitis but as it is ongoing it can cause scarring and damage. Chronic pancreatitis is not dealt with further in this leaflet. [See separate leaflet called Chronic Pancreatitis for more details.](#)

About 4 in 100,000 people have acute pancreatitis each year in the UK. Acute pancreatitis has become more common in recent years. One of the reasons for this is that there has been an increase in alcohol consumption recently - in particular, binge drinking.

## What are the causes of acute pancreatitis?

Gallstones or alcohol cause more than 8 in 10 cases. Other causes are rare.

- **Gallstones - the most common cause in the UK.** A gallstone can pass through the bile duct and out into part of the gut just after the stomach (the duodenum). This usually does not cause a problem. However, in some people a gallstone becomes stuck in the bile duct or where the bile duct and pancreatic duct open into the duodenum. This can affect the chemicals (enzymes) in the pancreatic duct (or even block them completely) and trigger a pancreatitis.
- **Alcohol - the other common cause.** How alcohol actually triggers the inflammation in the pancreas is not clear. Symptoms typically begin about 6-12 hours after a heavy drinking session. In some people pancreatitis can develop even after a small amount of alcohol. In these people, a 'sensitivity' to alcohol develops in their pancreas.
- **High blood fat levels** - hypertriglyceridaemia. This is reported to cause 1 to 4 percent of all cases of AP and up to 56 percent of pancreatitis cases during pregnancy.
- **Uncommon causes** - include the following:
  - Viral infections (for example, the [mumps virus](#), [HIV](#)).
  - A rare side-effect to some medicines.
  - Injury or surgery around the pancreas
  - Infections with parasites (parasites are living things (organisms) that live within (or on) another organism).
  - High blood calcium levels.
  - Abnormal structure of the pancreas.
  - There is also a rare form of pancreatitis which can be inherited from a parent (hereditary).
- **Autoimmune** - your own immune system attacks the pancreas. This can be associated with other autoimmune diseases - for example, [Sjögren's syndrome](#) and [primary biliary cirrhosis](#).
- **Unknown** - no cause is found in about 1 in 10 cases. However, a number of these cases are probably due to tiny gallstones or 'gallstone sludge' which passes through the bile duct but is too small to be seen on scans or other tests.

## What happens in acute pancreatitis?

The digestive chemicals (enzymes) that are made in the pancreas become activated and start to 'digest' parts of the pancreas. They are normally only activated after they reach the part of the gut just after the stomach (the duodenum). This leads to a range of chemical reactions that cause inflammation in the pancreas. How the above causes actually trigger this sequence of events is not clear.

- In most cases (about 4 in 5), the inflammation is mild and settles within a week or so. Symptoms may be bad for a few days but then settle and the pancreas fully recovers.
- In some cases (about 1 in 5) the inflammation quickly becomes severe. Parts of the pancreas and surrounding tissues may die (necrose). Pancreatic enzymes and chemicals may get into the bloodstream and cause inflammation and damage to other organs in the body. This can lead to shock, respiratory failure, kidney failure and other complications. This is a very serious situation which can be fatal.

## What are the symptoms of acute pancreatitis?

- Tummy (abdominal) pain, just below the ribs, is the usual main symptom. It usually builds up quickly (over a few hours) and may last for several days. The pain can become severe and is typically felt spreading through to the back. The pain may be sudden and intense, or it may begin as a mild pain that is aggravated by eating and slowly grows worse. However, it is occasionally possible to have acute pancreatitis without any pain. This is more common if you have diabetes or have kidney problems.
- Being sick (vomiting), a high temperature (fever) and generally feeling very unwell are common.
- Your abdomen may become swollen.
- If the pancreatitis becomes severe and other organs become involved (for example, your heart, lungs or kidneys) then various other symptoms may develop. You may become lacking in fluid in the body (dehydrated) and have low blood pressure.

Acute pancreatitis can cause you to be very poorly and can even be life-threatening.

## What happens if acute pancreatitis is suspected?

You will need to be admitted to hospital if your doctor suspects that you have acute pancreatitis. There are lots of causes of tummy (abdominal) pain and being sick (vomiting) so tests are done to rule out other problems and to confirm the diagnosis. Blood tests can check the blood level of amylase and/or lipase (these are enzymes made by the pancreas). Although not 100% reliable, a high blood level of these enzymes strongly suggests that pancreatitis is the cause of your symptoms.

[An ultrasound scan may be done](#) to look for a gallstone if this is the suspected underlying cause. Other types of scans may be needed if an ultrasound scan does not give a clear answer.

## What is the treatment for acute pancreatitis?

The treatment depends on how bad your attack of acute pancreatitis is. There is no specific treatment that will take the inflammation away. However, in most cases the pancreatitis settles over a few days, although symptoms can get worse before they get better.

- Strong painkillers by injection are usually needed to ease the pain.
- A tube may occasionally also be passed down your nose into your stomach (nasogastric tube) to suck out the fluid from your stomach. This can be useful if you are being sick (vomiting) a lot.
- A nasogastric tube may also be passed into the stomach to feed you, as you will not be able to eat properly.
- A 'drip' is needed to give fluid into your body until symptoms settle.
- A catheter - a thin tube going into your bladder to drain urine - is likely to be inserted so the doctors can monitor accurately the amount of urine you are passing.

Less commonly, complications develop and the situation can become very serious. Other treatments that may then be needed include the following:

- Intensive care treatment. If you have a severe attack of pancreatitis then you will be monitored very closely in the intensive care unit.
- A procedure to remove a blocked gallstone if this is found to be the cause.
- Medicines called antibiotics if the pancreas or surrounding tissue become infected.
- Surgery is sometimes needed to remove infected or damaged tissue.

## What is the outlook (prognosis) for acute pancreatitis?

As mentioned, acute pancreatitis is classified as mild if no complications develop (about 4 in 5 cases). In this case the outlook is very good and full recovery is usual.

Severe acute pancreatitis (about 1 in 5 cases) means that one or more complications develop. Despite intensive care treatment, up to a quarter of people with severe acute pancreatitis die.

## Will it happen again?

An attack of acute pancreatitis may be a one-off event. However, if there is an underlying cause, then it may happen again (recur) unless the cause is corrected. One of the following may be relevant to prevent a recurrence, depending on the cause:

- An operation to remove your gallbladder is usually advised if a gallstone was the cause.
- Alcohol-related concerns.
  - You should not drink alcohol for at least several months after a bout of acute pancreatitis, even if alcohol was not the cause of your pancreatitis.
  - If alcohol is the cause of pancreatitis, you should stop drinking alcohol altogether.
  - Sometimes a pancreatitis is the first indication of an alcohol dependency problem. Further help, advice and counselling may be offered to you if this is the case. It can be very difficult to stop drinking without some extra support.
- A high blood fat level (hyperlipidaemia) is sometimes the cause. This may need treating with medication.
- A side-effect from some medication is a rare cause of acute pancreatitis. A change in your medication may be needed if this is your cause of pancreatitis.

## Further reading & references

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