

Patient information from BMJ

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Chronic pancreatitis

Chronic pancreatitis is a **long-term** condition. It causes inflammation (swelling) of the pancreas that can't be reversed. This inflammation causes abdominal pain and other problems.

You can use our information to talk with your doctor about what treatments are right for you.

What is chronic pancreatitis?

Chronic pancreatitis happens when your pancreas becomes damaged over time by **inflammation** (swelling).

Your pancreas is a gland that lies just behind your stomach. It helps you break down food to use as energy. If your pancreas becomes damaged, it won't work as well as it should. The damage can also affect other structures or organs around your pancreas too.

Chronic pancreatitis is usually linked to years of **heavy drinking**. It tends to happen in people aged 36 to 44 years. But other things that can make the condition more likely include:

- smoking
- having a condition called celiac disease
- your genes - pancreatitis can be hereditary (inherited)
- eating a high-fat, high-protein diet.

Chronic pancreatitis that's linked to drinking alcohol happens in adults. But **hereditary** chronic pancreatitis can happen in children, usually between 10 and 14 years old.

In some cases, people get the condition for no obvious reason. This is called "**idiopathic**" chronic pancreatitis. This type of pancreatitis can also happen in young people, usually when they are between 19 and 23 years old. If this happens, the condition is known as "juvenile idiopathic" chronic pancreatitis. In older people, the condition is called "senile idiopathic" chronic pancreatitis. This usually happens in people 56 to 62 years old.

Chronic pancreatitis can sometimes cause other problems including:

- diabetes.

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- pancreatic exocrine insufficiency. This is where your gut can no longer digest food properly because the pancreas is working less well.
- pancreatic calcifications. These are stones in the pancreas that form because of calcium build-up.
- pancreatic pseudocysts. These are collections of fluid that form outside of your pancreas.
- obstructions. Inflammation can cause blockages that affect the flow of fluid from your liver, or stop your stomach from emptying properly.
- gastrointestinal bleeding (bleeding in the abdomen).
- pancreatic cancer. This is uncommon in people less than 45 years old, except in hereditary chronic pancreatitis.
- an increased chance of fractures.

Chronic pancreatitis is very different to acute pancreatitis.

- In **acute** pancreatitis, the inflammation is short-lasting and reversible. Abdominal pain is usually severe and comes on suddenly.
- In **chronic** pancreatitis, inflammation causes damage to your pancreas that is irreversible. Abdominal pain is usually dull and comes in repeated attacks, or is more lasting.

What are the symptoms of chronic pancreatitis?

The main symptom of chronic pancreatitis is dull pain in your upper abdomen that spreads to the back. This pain usually gets better when you sit and lean forward. It gets worse about a half hour after eating.

Other signs and symptoms are less common. They include:

- jaundice (yellowing of the skin). This can happen if chronic pancreatitis blocks the flow of fluid from the liver.
- having a lot of fat in your stools. They might be foul smelling and hard to flush. This is called steatorrhea. It can happen if your pancreas is no longer working properly to help break down food in your gut.
- bloating and excess wind. This might also happen if digestion is working less well.
- frequent urination, thirst, and tiredness. These might be signs of pre-diabetes.
- weight loss and malnutrition (a serious condition that can happen if your body doesn't get the right nutrition). This happens partly because people are afraid to eat in case the pain gets worse. But it can also happen if your gut is absorbing food less well or because of diabetes.

If your doctor thinks you might have chronic pancreatitis, they will first recommend that you have a CT or MRI scan of your abdomen.

These scans can show small lumps or calcifications (stones) in the pancreas.

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But it might be difficult to tell if you have chronic pancreatitis if it's in its early stages. If the results are unclear, your doctor will follow up with you to see how your symptoms develop. Or they might do some further tests such as: blood and stool tests, genetic testing, and a biopsy of your pancreas.

What treatments work for chronic pancreatitis?

There is no cure for chronic pancreatitis but treatments can help with symptoms and other problems. These treatments aim to:

- reduce pain and steatorrhoea (fat in your stools)
- stop you from losing too much weight
- help you get the right nutrition
- manage diabetes and other complications
- help maintain or improve your quality of life.

Treatments include changes to your lifestyle, pain relief, medications to help you get nutrition from your food, and, in some cases, endoscopy or surgery.

Lifestyle changes

If you smoke, drink alcohol, or both, your doctor will strongly advise you to **stop**. This won't reverse the damage to your pancreas, but it might stop your condition from getting worse. Avoiding alcohol can also help reduce repeat attacks of pain from chronic pancreatitis. This is the case even if your condition wasn't caused by alcohol to begin with.

Nutrition

Nutrition is very important to manage with chronic pancreatitis. This is because the condition affects how your body digests foods, especially fats. With less fat, your body can't take in important vitamins properly.

A dietician will help you plan a well-balanced diet that is not low in fat. They may suggest you eat high-protein, high-energy food. This should be through small, regular meals, in a "little and often" way.

You might be given treatments called **pancreatic enzymes**. These are medications that help you digest the food you eat.

Most people with chronic pancreatitis can achieve good nutrition with a normal diet and pancreatic enzyme replacement. Only some people require nutritional supplementation on top of this. These supplements are taken by mouth to help you meet your nutritional needs. There are different options available and your dietician will help to recommend which is best for you.

If you have diabetes, there are other ways you will need to manage your nutrition too. For example:

- eating more high-fibre starchy foods with your meals

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- reducing your sugar intake with your meals, snacks, and drinks
- including a source of protein with your meals.

Your dietician will be able to give you more specific nutrition advice if you do have diabetes.

Severe pain and nutrition

If you have severe pain, you may need to be treated in the hospital to help manage your pain and ensure you are getting the right nutrition. This is usually with tube feeding, combined with a low-fat diet. People who have this treatment will normally experience weight gain and less pain.

There are different types of tube feeding. This can be through: a small tube that goes from your nose to your stomach, or a tube that goes directly into your stomach or small bowel.

If your doctor thinks you might benefit from this treatment, they will explain the benefits and risks to you, and recommend a specific type of tube feeding.

Pain relief

You might be able to control your pain using simple pain relief medications such as acetaminophen or ibuprofen. But if these don't help your doctor might give you stronger pain relief. Always follow your doctor's advice when taking these medications. Regular use of stronger pain relievers can lead to tolerance. This is where your body gets used to the medication and you either need a higher dose, or a different medicine, to help with pain.

If your pain continues and pain relievers aren't helping, your doctor might recommend different treatments to help, such as:

- **low-dose antidepressants.** These medications are usually used to treat conditions such as depression and anxiety. But in some people they help with pain.
- **gabapentinoids.** These are medications that are usually used to treat epilepsy but in some people they can help with pain. Your doctor might suggest combining this with certain antidepressants.
- **antioxidants.** These are medications that include supplements such as vitamin C and vitamin E.
- **celiac plexus block.** This procedure involves injecting local anesthetic into a bundle of nerves in your upper abdomen.
- **extracorporeal shock wave lithotripsy.** This procedure uses shock waves to break up pancreatic calcifications (stones).

Endoscopy

This is a medical procedure that can help treat complications from chronic pancreatitis. It can also sometimes help with pain. Your doctor might offer endoscopy if you have:

- strictures (narrowings that cause blockages in and around your pancreas)

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- pancreatic calcifications (stones)
- pseudocysts.

If your doctor recommends endoscopy, they will speak to you about what happens during the procedure as well as the risks and benefits.

Surgery

Surgery is only an option if other treatments haven't worked for you. Surgery can:

- get rid of, or reduce, persistent pain
- treat any problems that have developed such as obstructions
- protect the parts of your pancreas that are not damaged by inflammation.

If your doctor suspects you might have pancreatic cancer, surgery can help to exclude this.

There are different types of surgical procedures available for chronic pancreatitis.

Decompression (drainage)

Decompression surgery might be offered if you have pseudocysts that are causing persistent pain or other problems, or are getting bigger. These fluid collections will be drained during the procedure.

This type of surgery can also be used to reduce pressure on the pancreatic duct (a small tube in your pancreas that carries digestive juices), or the biliary system (a collection of tubes that drain fluid from the liver).

Denervation

Denervation involves cutting off the nerve supply to parts of the pancreas. It aims to reduce the constant and severe pain you get with chronic pancreatitis.

Resection

Resection involves removing parts of your damaged pancreas, or in severe cases, your entire pancreas. Different types of resection include:

- Distal pancreatectomy: where the tail-end of the pancreas is removed.
- Pancreaticoduodenectomy (Whipple's procedure): where the head of the pancreas is removed.
- Total pancreatectomy: where the whole pancreas is removed. It is combined with a transplant of your own islet cells into your liver. These are special cells that produce the hormone insulin.

If your doctor recommends surgery, they will speak with you in more detail about what type is recommended, as well as the risks and benefits.

What will happen?

The pain of chronic pancreatitis usually decreases or disappears over time, although this can take several years. If you have pain that doesn't get better, tell your doctor. They may be able to offer you different treatments to help.

There is no cure for chronic pancreatitis, but living a **healthy** lifestyle is key to managing pain and reducing the risk of malnutrition. If you smoke or drink alcohol and need help stopping, your doctor can refer you to other health professionals for support.

Chronic pancreatitis can sometimes lead to other conditions, such as diabetes, pancreatic cancer, and an increased chance of fractures. Your doctor will recommend yearly follow-up visits to monitor you. This will usually involve reviewing your symptoms, ordering blood and stool tests, and checking your bone health. Your doctor might also advise that you have regular screening for pancreatic cancer, especially if your pancreatitis is inherited.

People with chronic pancreatitis tend to die younger than would be expected if they didn't have the condition, especially those with juvenile or hereditary pancreatitis. But research shows that most people won't die from chronic pancreatitis itself. The most common causes of death among people with chronic pancreatitis include cancer, heart disease, or complications from the condition.

The pain and stress of chronic pancreatitis can be difficult to deal with emotionally. Getting **support** can help, as can talking to other people with the condition. There are several charities and organisations that can offer information, advice, and a chance to meet others with the condition. Your doctor might be able to help you find support groups online too.

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