

# Pancreatic Cancer UK



**Diet and pancreatic cancer**

# Introduction

This booklet is for anyone with pancreatic cancer. Their family may also find it helpful. It explains how pancreatic cancer and the treatments for it can cause problems with diet, eating and nutrition. We provide information on how to manage these problems, and some tips for dealing with some of the different symptoms people may get. We also provide details of other sources of support and information about diet.

Not all the information in this booklet might be relevant to you. It's been designed so that you can dip in to find the information you need, when you need it.

If you have any questions about anything you read here, or about diet and pancreatic cancer, speak to your doctor, nurse or dietitian. You can also speak to our specialist nurses on our Support Line.



Call the specialist nurses free on **0808 801 0707**  
or email **[support@pancreaticcancer.org.uk](mailto:support@pancreaticcancer.org.uk)**

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## **Key words used in this booklet**

We've explained some of the key words around diet that we've used in this booklet. You can find a glossary with more medical words on page 49.

### **Diet**

Your diet is the food you eat. When we talk about symptoms or problems around diet in this booklet, we mean problems that can affect your eating and digestion.

We are not talking about the kind of diet people often go on to help them lose weight. Most people with pancreatic cancer won't need to lose weight – many often need to put weight back on.

### **Nutrients**

Nutrients are the things you get from your food that you need to be healthy. They include protein, carbohydrates, fats, vitamins and minerals.

### **Digestion**

Digestion is what your body does to break down your food to get the nutrients out of it.

### **Enzymes**

Enzymes are substances produced by different glands in the body, including the pancreas. Different types of enzymes have different roles in the body. Pancreatic enzymes help break down our food and drink.

### **Absorption**

Once your food has been broken down, the nutrients pass into the blood so that they can be used by the body.

## Section 1

# How does pancreatic cancer affect diet and nutrition?

Pancreatic cancer and some of the treatments for it can affect how well the body is able to digest food and absorb nutrients.



## **The pancreas and digestion**

The pancreas plays an important role in digesting food, as it produces enzymes that help to break down the food. Nutrients from the food can then be absorbed into the blood and used by the body (see page 4).

Different pancreatic enzymes help to break down foods containing fat, protein and carbohydrate.

## **Pancreatic cancer and digestion**

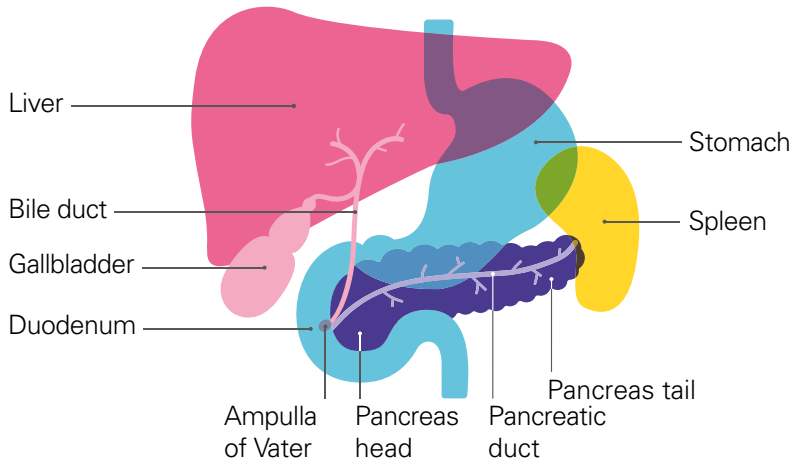
Pancreatic cancer can reduce the number of enzymes that your pancreas makes. It can also block the enzymes from getting to the bowel, where they are needed for digestion. For example, the cancer can block the pancreatic duct, which carries the enzymes from the pancreas to the small intestines.

This means that food is not properly digested, and the nutrients in the food aren't absorbed. This is called malabsorption. This can be treated with pancreatic enzyme supplements – see page 10.

The pancreas also produces hormones, including insulin, which control sugar levels in the blood. Pancreatic cancer can reduce the amount of hormones the pancreas produces. This can cause diabetes – see page 30.

Surgery for pancreatic cancer, where all or part of the pancreas is removed, will also affect the amount of enzymes and hormones produced by the pancreas – see page 19.

## The pancreas and surrounding organs



## What symptoms are related to diet?

It's common for people with pancreatic cancer to get symptoms caused by problems with eating and digesting food.

These can include:

- loss of appetite
- weight loss
- feeling and being sick (nausea and vomiting)
- loose watery stools (diarrhoea)
- yellow, oily, floating stools (steatorrhoea – see page 8)
- abdominal (tummy) discomfort or pain
- bloating
- wind
- feeling full up quickly
- urgency in opening your bowels, especially after eating
- some people also develop diabetes.

These symptoms can be a sign that your body can't digest food or absorb nutrients properly. However, they can also be caused by other things. If you have any of these symptoms, speak to your doctor or nurse. There are ways to manage them.

Some diet symptoms can also be caused by jaundice.

## What is jaundice?

Jaundice is a symptom of pancreatic cancer. It develops when there is a build-up of something called bilirubin in the blood. Bilirubin is found in bile, which is produced by the liver. You might get jaundice if your cancer has grown to block the bile duct, which carries the bile from the liver to the small intestines.

Jaundice can cause loss of appetite, taste changes, feeling and being sick, and steatorrhoea. These usually improve once the jaundice is treated.



You can read more about treatments for jaundice in our fact sheet, **Surgery and other procedures to control symptoms**, or at **[pancreaticcancer.org.uk/surgeryinoperable](http://pancreaticcancer.org.uk/surgeryinoperable)**

## What is steatorrhoea?

Steatorrhoea is caused by fat in stools (poo). Stools are usually yellow or clay coloured, and can be oily, smell horrible, and are difficult to flush down the toilet. It happens if your body can't digest fat in your food properly – because the pancreas isn't producing enough enzymes.



## **What support is there for problems with diet and eating?**

A dietitian is a professional who provides advice about diet and nutrition. Specialist pancreatic or oncology dietitians are experts in diet and cancer, and can help manage your dietary symptoms and prevent weight loss.

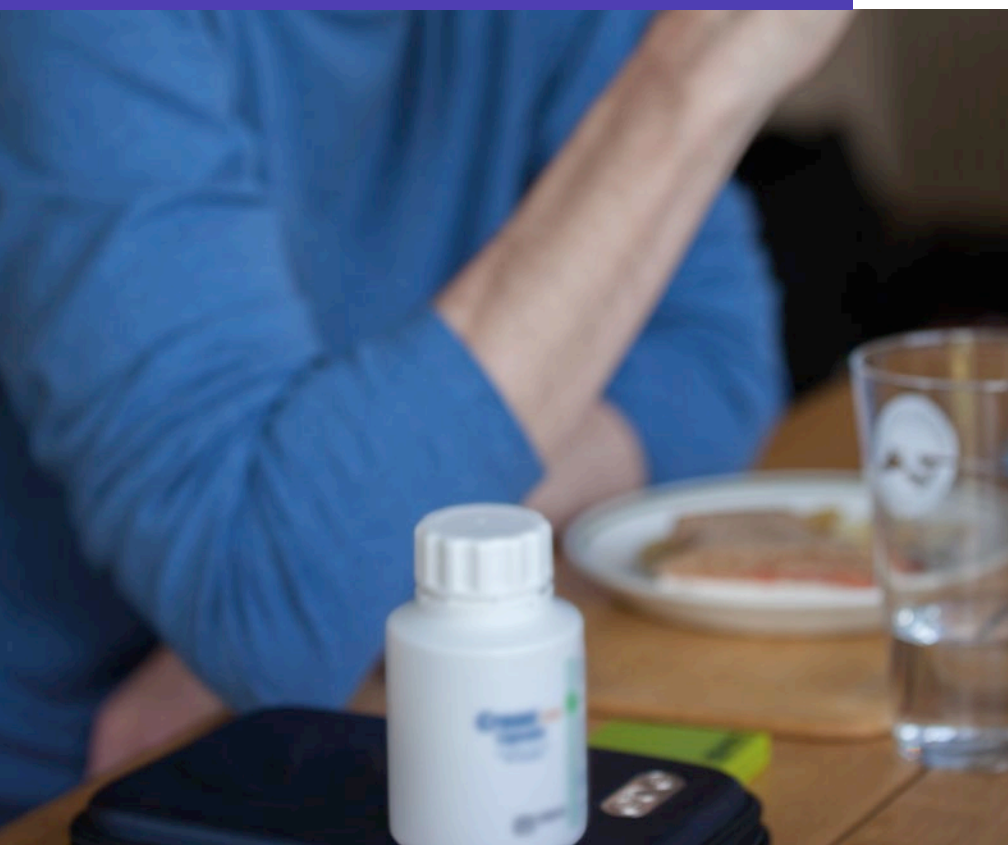
A dietitian will assess your symptoms around diet and eating. They will help you make changes to your diet to help you eat as well as possible. They will also assess whether you need pancreatic enzyme supplements (see page 10) to help with digestion.

Finding ways to manage your dietary symptoms can help you feel better generally. If you haven't seen a dietitian, and you are having problems with your diet and eating, or are losing weight, ask your medical team or GP to refer you to one.

## Section 2

# What are pancreatic enzyme supplements and how can they help?

Pancreatic enzyme supplements replace the enzymes that your pancreas would normally produce. This is known as pancreatic enzyme replacement therapy (PERT).



Pancreatic enzyme supplements help to break down food, and can help to manage the symptoms on page 7. They can make a big difference to how you feel.

You should be told about pancreatic enzyme supplements by your doctor, nurse or dietitian. If you think you have symptoms, ask about enzyme supplements. You could even take this booklet with you to show them.

Different types of enzyme supplements are available in the UK:

- Creon®
- Pancrease®
- Nutrizym®
- Pancrex®.

Some enzyme supplements have a number after the name – for example, Creon 25,000. This shows the strength of the dose of enzymes. See page 12 for more information about the dose.

Pancreatic enzyme supplements are usually prescribed as capsules, but they are also available as granules or powder.

All pancreatic enzyme supplements are made from pork products, and unfortunately there is no alternative. Organisations representing Jewish and Muslim communities have said that these treatments are acceptable to use. Talk to your doctor if you are allergic to pork products. Vegetarian enzymes are sold in some health food shops and online, but they provide very low doses, are expensive and there is no evidence to show that they work.

## What does pancreatic enzyme replacement therapy involve?

The dose of pancreatic enzyme supplements that you need will depend on your own situation. For example, any surgery you have had, which part of your pancreas has been affected by the cancer, other medications that you may be taking, and what you are eating.

Speak to your doctor, nurse or dietitian about what dose of enzymes to take. A normal dose to start with may be 50,000 units for a main meal and 25,000 units for snacks or milky drinks. This can be increased if you need to – for example, if you still have symptoms. Most people will need to increase the amount of enzymes from this starting dose.

This may sound like a lot of enzymes. But it's not actually as much as the pancreas would normally produce. For example, during and after a small meal, the pancreas may produce more than 720,000 units.

The dose of enzyme supplements you need will vary, depending on what you eat. You will need to take more enzyme supplements for larger meals and more fatty foods, as these need more enzymes to digest them. Don't change what you eat to try to manage your symptoms – for example, don't reduce the amount of fat in your diet if you have steatorrhoea (see page 8). Just make sure you take enough enzymes for what you are eating.

Your dietitian or nurse can tell you how to work out the best dose of enzymes. It may take a little while to find the right dose for you, and the amount of enzymes you need may change over time.

## **How should I take the enzyme supplements?**

It's important that you take the enzymes properly, to make sure they work well.

- Enzyme supplements should be taken with all meals and snacks, as well as milky drinks – such as milky coffee.
- You should take the enzymes with the first few mouthfuls of food.
- If you are taking more than one capsule, eating a larger meal, or your meal lasts more than half an hour, you can take half the capsules when you start eating, and half during the meal.
- The enzymes work best if you take them at the beginning or during a meal. They won't work as well if you take them after a meal.
- Swallow the capsules whole with a couple of sips of a cool drink.
- You will need more enzymes for larger meals or fatty foods – for example, if you have takeaways, roasted or fried food, pizzas, curries, doughnuts, pastries, puddings, oily dressings and sauces, or food with lots of cheese or chocolate.
- Don't store them in hot places – for example, don't leave them in the glove box of your car in hot weather, near radiators, in direct sunlight, or in trouser pockets.
- Don't worry if you forget to take your enzyme supplements. Just take the usual dose with your next meal or snack.
- If you have been prescribed nutritional supplement drinks (see page 18), you will need to take your enzyme supplements with these as well.

## **When NOT to take enzyme supplements**

- Don't take the enzyme supplements without food or milky drinks as they won't be helpful.
- You don't need to take them if you have drinks with only a splash of milk, fruit squashes, or fizzy drinks.
- You don't need to take enzyme supplements with small amounts of fruit (except avocados and bananas) or dried fruit.
- You won't need them with small amounts of vegetables (except potatoes, beans, and pulses such as lentils).
- You don't need them with sugary sweets – for example, jelly babies, wine gums and fruit pastilles.

## **What if I can't swallow the capsules?**

It is best to take the capsules whole as they work better this way. If you find it difficult to swallow capsules, speak to your doctor, nurse or dietitian – there may be smaller capsules available.

You can open them and mix the granules inside with a teaspoon of soft, acidic food – such as apple sauce, fruit puree, jam or yoghurt. Swallow the food straight away and wash it down with a cool drink to rinse your mouth. Don't chew the granules. If the granules aren't swallowed quickly, or they get stuck between your teeth or dentures, they can cause mouth ulcers.

Don't mix them with hot foods or drink as this will stop the enzymes working. And don't sprinkle the granules on a plate of food as the enzymes won't work this way, and they may affect the taste.



If you have any questions about how to take your enzyme supplements, speak to your doctor, nurse or dietitian. You can also call our specialist nurses on our free Support Line.

## **How do I know if I am taking enough enzymes?**

If you are taking enough enzymes, your symptoms (see page 7) should improve.

If you continue to have symptoms while using the enzymes, or are losing weight, speak to your dietitian, nurse or doctor. They may increase the dose of enzymes. They may also suggest taking a medicine called proton pump inhibitors (page 16), or arrange tests to check for other digestion problems. Your dietitian may also suggest changes to your diet.

## **What happens if I take too many enzymes?**

There is no maximum dose of enzyme supplements for people with pancreatic cancer. Any enzymes that your body doesn't need will pass through you. If you think you've taken too many, make sure you drink plenty of fluids, and take your enzyme supplements at your next meal as usual. If you feel unwell, speak to your doctor or nurse.

## **What if the enzymes don't help?**

If your symptoms don't improve, the most likely reason is that the dose of enzyme supplements is too low, so the dose may need to be increased. You may also need to change the brand or type of enzyme supplement.

Sometimes, the enzymes don't work because of acid from the stomach. It's normal for the stomach to produce acid. But too much acid in your bowel can stop the enzyme supplements working. Medicines called proton pump inhibitors (for example, omeprazole or lansoprazole) or H2 antagonists (for example, ranitidine) can reduce the amount of acid your stomach produces, and make the enzymes more effective.

Your symptoms can also be caused by other things. If they don't improve, speak to your doctor, nurse or dietitian.



You can also call our specialist nurses on our free Support Line with any questions about taking enzyme supplements.

### **Are there any side effects of enzyme supplements?**

Some people get tummy discomfort or pain, nausea, or vomiting when taking enzyme supplements. Less common side effects include bloating, cramping, feeling full, and loose watery stools (diarrhoea). You can find more information about the side effects in the leaflet that comes with your enzyme supplements.

Some of these symptoms can also be a sign that your dose of enzyme supplements is too low, so increasing the dose may help. Speak to your doctor, nurse or dietitian if you have any of these symptoms.

The side effects usually settle down. Trying a different brand or type of enzyme may help.



## Section 3

# Other supplements

For some people, it may be helpful to take vitamin and mineral supplements or nutritional supplements.



## **Vitamin and mineral supplements**

If you are not digesting your food properly, you may not be getting enough vitamins and minerals from your food. You may need to take a vitamin and mineral supplement to help make sure you are getting enough vitamins and minerals.

Ask your dietitian, doctor or nurse whether vitamin and mineral supplements would be helpful. If you are taking pancreatic enzyme supplements and you also need a vitamin and mineral supplement, take it with a meal or snack, when you are also having the enzyme supplement.

## **Nutritional supplements**

If you are still losing weight or are struggling with what you're eating, despite trying a build-up diet and enriched food (see page 40), your doctor, nurse or dietitian may recommend nutritional supplements. These can provide extra calories (energy), protein, vitamins and minerals.

There are different types of nutritional supplements available. They include supplements that are milk-based, some that are similar to juices or yoghurts, powders and soups. Try different supplements to find one you like. For example, some people find they prefer a savoury supplement to a sweet one.

You will need to take pancreatic enzyme supplements with nutritional supplements. Speak to your dietitian about what dose to take.

## Section 4

# Diet and surgery

There are different types of surgery for operable pancreatic cancer. They all involve removing all or part of the pancreas.



## How will my diet be affected by surgery?

### Before surgery

The fitter you are before surgery, the better. This will help your wounds to heal, reduce the risk of infection, and help your recovery from the operation. It's important that you eat as well as possible in the weeks before your operation. If you have lost weight or you have a poor appetite, you may find the tips on page 39 helpful. This will aim to increase the energy and protein you have in your diet.

Physical activity can also help to improve your fitness for surgery. See page 36 for more information.

### After surgery

You won't be able to eat or drink anything for the first few hours after surgery. How you are fed in the days following surgery will depend on your hospital and your own situation.

You may be able to have a few sips of water a few hours after your operation. You will slowly start to drink and eat normally again, starting with clear fluids such as water and squashes. You can then try other fluids, including fruit juice, tea, coffee, milk and nutritional supplements. Next, you can try eating softer foods that you should chew well. Once you are managing this, you can slowly have more normal food.

At some hospitals, you might be fed through a tube to begin with. This is to give your digestive system time to recover, and to make sure you are getting all the nutrients you need. You may have either a tube that passes up your nose directly into the small intestines, or through a cut in your tummy (enteral feeding).

You might be fed in this way for a few days. Not all hospitals use feeding tubes, and it might depend on your own situation.

Everyone will recover differently from their surgery. How quickly you start eating and drinking again will depend on your own recovery.

You may see a dietitian after your surgery. They can provide advice on managing any symptoms from the surgery, putting on weight, and using pancreatic enzyme supplements. They can also give you tips on how to eat enough and get the nutrients you need.

There are no foods which you should totally avoid after your surgery. To begin with, you will need more energy and protein in your diet to help you heal and recover.

Physical activity can also help with your recovery. Physiotherapists at the hospital can provide advice about this. Read more on page 36.

## **Diet symptoms after surgery**

Having all or part of the pancreas removed will affect how well the pancreas produces enzymes and hormones. You may need to take pancreatic enzyme supplements (see page 10) to help you digest food. You may also develop diabetes and need medication to manage this (see page 30). Speak to your doctor, nurse or dietitian about this.

You may have lost weight before or after surgery. It may take a few months for you to start to put weight back on. Try not to lose more weight, as this will affect how well you recover from the operation. Even if you are overweight you should try to keep your weight stable.

You may find that your weight becomes stable at a certain point and you don't put any more on. If you are having problems putting on weight, speak to your doctor, nurse or dietitian. The tips for a build-up diet on page 40 may help with putting weight back on.

Some people find that they have a small appetite and can't manage big portions following surgery. This may last for several months or be long-term. The tips on page 39-41 may help.

Some types of surgery involve removing part of your stomach. This may mean that you feel full more quickly than before. Eating small amounts often may help you get the nutrients you need. Try having three small meals and three snacks a day.

You may find that some foods don't taste the same after surgery. Taste can take some weeks to return to normal. See page 43 for tips on dealing with taste changes.

If you notice your tongue has a creamy white coating, or your mouth is sore, speak to your doctor. This could be an infection such as oral thrush. This is common after any large operation. It can reduce your appetite and cause taste changes.

If you are having chemotherapy after your surgery, speak to your doctor, nurse or dietitian about any eating problems, to make sure these don't delay the chemotherapy.



If you have any concerns or questions about managing diet problems after surgery, speak to your doctor, nurse or dietitian. You can also call our specialist nurses on our free Support Line.



You can read more about surgery for pancreatic cancer on our website at **[pancreaticcancer.org.uk/surgery](http://pancreaticcancer.org.uk/surgery)**



## Section 5

# Diet and inoperable pancreatic cancer

If it's not possible to remove your cancer with surgery (inoperable pancreatic cancer), you may be offered other treatment.



Treatment for inoperable cancer can help control the cancer's growth, relieve any symptoms, and improve how you feel generally. Preventing weight loss and improving diet symptoms are an important part of this.



You can find more detailed information about treatments on our website at **[pancreaticcancer.org.uk/treatment](http://pancreaticcancer.org.uk/treatment)**

## How should I manage my diet if I have inoperable pancreatic cancer?

If you have inoperable pancreatic cancer, keeping your weight stable may improve how you feel and help you cope better with the cancer and treatment. There are no foods that you should stop eating because of the cancer.

If you are eating well and haven't lost any weight, you can carry on with your normal diet.

But if you have lost weight, are struggling to eat or have a poor appetite, speak to your dietitian. They can help you manage any symptoms (see page 7). For example, they can give you advice about what to eat to make sure you get all the nutrients you need. There are tips that might help with weight loss on pages 39-41.

The dietitian can also help you with pancreatic enzyme replacement therapy (see page 10), and with diabetes if you have been diagnosed with this (see page 30). If you haven't seen a specialist pancreatic or oncology dietitian, ask to be referred to one.

Sometimes the dietitian may recommend nutritional supplements (see page 17). They may also suggest medicine



to stimulate your appetite, such as steroids (for example, dexamethasone) or hormonal therapy (for example, megestrol acetate). This will depend on your own situation.

It's common for people with pancreatic cancer to lose muscle. Gentle physical activity and eating well can help to reduce muscle loss. Preventing muscle loss can help you have more energy, feel better, and cope with treatment. There's information about suitable exercises on page 36.

Some research has suggested that some omega-3 fatty acid supplements may also help with muscle loss, although other studies have found that they make no difference.



Diet and pancreatic cancer is complicated, and it's important that you get the right advice. Speak to your dietitian about any questions or concerns you have. You can also ask our specialist nurses on our free Support Line about any questions you have about diet.

## Diet and a duodenal stent

Sometimes the cancer can block the duodenum (first part of the small intestines). If this happens, you may need to have a stent (hollow tube) inserted. This unblocks the duodenum and allows food to pass through. This should also relieve symptoms caused by the blockage, such as feeling full, and feeling and being sick.



Read more about duodenal stents in our fact sheet, **Surgery and other procedures to control symptoms** or at [pancreaticcancer.org.uk/surgeryinoperable](http://pancreaticcancer.org.uk/surgeryinoperable)

## How should I manage my diet with a duodenal stent?

After the stent has been inserted, it needs to settle into place. For the first few days you will only be able to have liquids and very sloppy foods. If you can manage these without being sick, you should be able to build up to a soft diet over the next one to four weeks.

You will need to be careful about what you eat to make sure the stent doesn't get blocked. The following tips may help.

- Eat smaller meals but more often.
- Take your time eating, and make sure you chew your food well.
- Eat a variety of food to make sure you get enough nutrients.
- For more ideas about how to put on weight, see page 39-41.

You will need to eat soft foods, such as:

- porridge or cereal soaked in milk
- soup (add cream, milk or cheese for extra nutrients and calories)
- minced meat and poached fish
- eggs, including boiled, poached or scrambled eggs and omelette
- fish pie, shepherd's pie or macaroni cheese
- mashed potato (add butter, cream or cheese)
- vegetables cooked until tender with no skins or pips
- rice pudding, stewed fruit, yoghurt, mousse, custard or ice cream.

Try to avoid foods that might block the stent. These include:

- raw or bulky vegetables, such as salads, celery and sweetcorn
- nuts and dried fruit
- fruit with a pith, such as grapefruit or oranges
- tough or gristly meat
- bread, as it expands in your stomach when it mixes with liquid.

If your stent gets blocked you will feel full and may be sick.

If this happens contact your specialist nurse, or go to your local accident and emergency department (A&E) if it is out of normal hospital hours.

Speak to your doctor, nurse or dietitian for more advice about what to eat after you have had a duodenal stent put in.



You can also speak our specialist nurses on our free Support Line with any questions.

## Section 6

# Diet and chemotherapy

Chemotherapy is one of the most common treatments for pancreatic cancer. Some people are also offered radiotherapy along with their chemotherapy. This is called chemoradiotherapy.



## How will chemotherapy affect my diet?

Eating well can help you to cope with chemotherapy or chemoradiotherapy treatment. However, you may get side effects that affect how much you are able to eat or drink.

Common chemotherapy side effects include:

- feeling and being sick (nausea and vomiting)
- loss of appetite
- taste changes
- loose watery stools (diarrhoea)
- difficulty opening your bowels (constipation).

There are ways to manage these side effects – speak to your doctor, nurse or dietitian if you have any of them. The tips on pages 38-45 may also help.

Chemotherapy can also cause a sore mouth and mouth ulcers. Cleaning your teeth regularly with a soft toothbrush may help. Your doctor or nurse can give you an anti-bacterial mouthwash that should help.



Read more about chemotherapy and the different drugs used on our website at  
**[pancreaticcancer.org.uk/chemotherapy](https://pancreaticcancer.org.uk/chemotherapy)**

## Section 7

# Diabetes and pancreatic cancer

Diabetes is a condition where the amount of sugar in your blood (blood sugar level) is too high. The pancreas plays an important role in controlling this.



Your pancreas produces a hormone called insulin, which helps to control your blood sugar level. When you digest food and drink, carbohydrate is broken down into glucose, which is a type of sugar. This passes into your blood, and is used by the body.

Normally, insulin controls the blood sugar level. But if you have pancreatic cancer or you have had all or part of your pancreas removed, your pancreas may not produce enough insulin. This means your blood sugar level may not be properly controlled, and you may develop diabetes.

If your blood sugar level is too high (hyperglycaemia), you may feel very thirsty, pass more urine, get headaches and feel tired.

Your pancreas also produces a hormone called glucagon which also helps to control your blood sugar level. If your pancreas doesn't produce enough glucagon when you need it, your blood sugar level may drop and become too low (hypoglycaemia). You may feel hungry, shaky or sweaty.

## **Managing diabetes**

If you are diagnosed with diabetes, you should see a doctor or diabetes nurse for help with managing it.

It's important to get advice about diabetes that's relevant to you. There are different types of diabetes, and information on the internet may not be right for you, because of your pancreatic cancer. Speak to your doctor, nurse or dietitian for advice about what to eat.

If you are well, have a good appetite and have not lost weight, you may be told to follow a healthy, balanced diet. Diabetes UK have information about food that you may find helpful.

If you have lost weight or are struggling to eat, the usual advice about diet and diabetes may not be appropriate for you. You may need more calories (energy) in your diet to help you put weight back on (see pages 39-41). This may include eating foods that increase your blood sugar level. Your diabetes will be managed around this. For example, your diabetes medication may be increased if necessary.

You may need to monitor your blood sugar level, and take tablets or have insulin injections to stop your blood sugar level becoming too high or too low. Diabetes UK have more information about monitoring your blood sugar level and taking medication, including injecting insulin. Do be aware that this information is aimed at people who don't have pancreatic cancer.

### **Diabetes and pancreatic enzyme supplements**

If you are having problems digesting your food, you may have low blood sugar levels. This is because you won't be able to digest and absorb sugars from your food properly. Once you start taking enzyme supplements, your blood sugar level may start to rise because you will start to digest your food properly again.

Speak to your doctor, nurse or dietitian about this. You may need more diabetes medication.

If you forget to take enzyme supplements with food, your blood sugar level may drop.



## What else can affect my blood sugar level?

Some treatments for pancreatic cancer or its symptoms contain sugar. These include some medications to relieve pain, some chemotherapy treatments and some steroids. These may increase your blood sugar level. Your medical team may need to monitor this.

If you have symptoms such as sickness or diarrhoea, and take tablets for your diabetes, you might not be able to absorb the medication properly. Speak to your doctor, nurse or dietitian if you have these symptoms.

If you are prescribed nutritional supplements, be aware that some of these are high in sugar. Speak to your dietitian or nurse before taking these if you have diabetes.

Exercising can lower your blood sugar level, as your body uses the sugar as energy. If you are fit enough to do a lot of exercise, and have diabetes, you may need to eat more when you are exercising. This won't be necessary if you are just doing gentle physical activity.

Managing diabetes if you have pancreatic cancer can be difficult and confusing. If you have any questions or concerns, speak to your cancer nurse, dietitian, doctor or diabetes nurse.



You can also call our specialist nurses on our free Support Line with questions about diabetes.

## Section 8

# The emotional impact of diet symptoms

You may find that symptoms affecting your diet are difficult to cope with and have a big impact on you.



Food is an important part of everyday life for many people, and eating with friends and family can be an important social activity.

Some people may find that concerns about eating and other related symptoms can affect their mood – for example, they may feel more anxious or down than usual. Common concerns include worries about losing weight, and pressure to eat more than you feel you can manage. If you are coping with diarrhoea (loose watery stools), you may worry about going out in case you can't find a toilet when you need it.

Your family and friends may also find it difficult. They may worry about you, and whether you are eating enough. But they can be a huge support. Try talking to them about things that you might find helpful. For example, some people need smaller meals and more snacks. Others find that the smell of food makes them feel sick, and manage better if family or friends do the cooking.

There are practical tips on pages 38-45 that may help you and your family deal with the emotional impact of diet problems.

It may take some time to get used to changes in your diet. But finding ways to manage your diet and symptoms can help you feel more in control.



If you are struggling at all, speak to your dietitian, doctor or nurse. Or call our specialist nurses on our free Support Line.

## Section 9

# Physical activity

Being less active, as well as eating and drinking less, can lead to loss of muscle strength and overall fitness. These are common effects of pancreatic cancer, surgery and chemotherapy.



Gentle physical activity can help to maintain or improve your strength and fitness. It may also help you feel better, and cope better with treatment.

It is important to exercise within your own limits. You may find that some days are better than others. Take it easy and only do what you are able to. It's a good idea to speak to your doctor or nurse before starting any kind of exercise plan.

For most people, doing ten minutes of gentle exercise three times a day would be suitable. This could include:

- going for a walk around the block or garden
- light housework or gardening
- sitting in a chair or lying on a bed or floor, raising your leg, and holding it for a few seconds, before lowering it and repeating a few times
- lifting some small weights, tins of food or bottles of water while sitting in a chair
- walking up and down a few steps.

If you usually do a lot of exercise, you may wish to do more than this. Don't do any vigorous exercise without talking to your doctor or physiotherapist first.

Even if you are in hospital, some form of physical activity can help maintain your level of fitness. This can help you cope better once you leave hospital.

## Section 10

# Diet tips

The following tips may help you manage different symptoms that may affect your eating and diet. If you have any questions about any of these tips, speak to your doctor, nurse or dietitian. Or you can call our specialist nurses on our free Support Line.



## Some general tips

If you are having problems eating or are losing weight, the following tips may help.

- If you can't manage large portions, try eating little and often – for example three small meals and three snacks a day.
- Pancreatic enzyme supplements can help improve symptoms and may make you feel better. Don't forget to take them when you eat, but don't worry if it takes time to work out the right dose for you.
- Every mouthful helps. If you feel sick or very full, have a break and eat some more an hour or so later.
- Eating even a small amount can be a big achievement – try to set realistic goals for yourself.
- Freeze individual portions of homemade dishes that are quick to defrost when you do feel like eating.
- How food is presented on the plate can help it look more tempting.
- Gentle support and encouragement from family can help.

**“ I managed to get her to eat more food simply by leaving time in between meals and snacks, and leaving snacks in front of her. I noticed that she would go back to them to take another mouthful from time to time.”**

**“ I was told to eat anything that I fancied, such as chocolate, biscuits, sweets.”**



**“ I shopped for food for her, and baked and cooked her favourite foods. She was eating but needed tempting now and again. It made me feel that I could do something for her.”**

## **Tips for a build-up diet**

If you have lost weight or have a small appetite, you might need a build-up diet to help you put weight back on. This can increase the amount of energy (calories) and protein in your diet.

- Have high calorie foods, such as full fat milk, yoghurt and butter. You can also enrich your food (see page 41).
- If you are eating higher fat meals, you may need to increase the amount of enzyme supplements you take.
- Try to have a pint of full cream milk every day.
- Try to eat more foods that are high in protein, such as meat, fish, milk, cheese, eggs, beans and lentils, nuts, and yoghurt. Try to include protein in at least two of your meals each day.
- Try to have snacks between meals. Snacks can include sweet things like cake, yoghurt, fruit, teacakes and malt loaf. Or you can have savoury things like toasted crumpets, samosas, nuts, cocktail sausages, cheese and crackers.
- Have a snack instead of a main meal if this is easier.
- Have a pudding once or twice a day – for example, yoghurt, ice cream, cake, sponge pudding, or ready-made desserts.
- Drink about eight cups of fluids a day. Have nutritious drinks such as milk, fruit smoothies (made with yoghurt, ice cream or full cream milk), hot chocolate and fruit juice.
- If you find drinks fill you up at meals, it may help to have your drinks in between your meals, rather than with them.



- Use ready meals if that's easier. These will save you time and energy. There is a wide range of frozen, chilled or packet ready meals available.
- Eat what you feel like, and try not to worry about 'normal' meals. It's fine if you fancy breakfast cereal for supper, your pudding before your main course, or soup for breakfast.
- Avoid low fat or 'diet' food.
- Have some fruit and vegetables every day – but don't fill up on these if it means you can't eat foods that are high in energy and protein.

## Enriched food

Enriched food can help you get more calories and protein, without needing to eat more food.

- Enrich milk by mixing four tablespoons of milk powder into a pint of full cream milk. Use this enriched milk instead of ordinary milk in tea and coffee, on cereals, in soups, to make sauces, and in milk-based puddings.
- Add sugar, jam or honey to cereal, porridge, puddings and hot drinks.
- Add cheese, cream, dried milk powder, lentils or pasta to soup.
- Add grated cheese, cream, butter, margarine, mayonnaise or salad cream to meat, potatoes and vegetables.
- Add cream, evaporated milk or cheese to milk-based sauces.
- Add cream, custard, evaporated or condensed milk, ice cream, honey, sugar, dried fruit, or nuts to puddings.

If you have other health problems, for example heart problems, you may have been told in the past to reduce the amount of fat in your diet. But if you have lost weight because of pancreatic cancer, eating higher fat food can help you put weight on.

If you're not sure about how much fat to eat, speak to your dietitian.

If you can't eat a build-up diet and are still struggling with eating, or you are still losing weight, speak to your dietitian. If you haven't seen a specialist dietitian, ask your doctor or nurse to refer you to one.

## **Tips for coping with nausea and vomiting**

Feeling and being sick (nausea and vomiting) can be a symptom of pancreatic cancer, or a side effect of some treatments, such as chemotherapy.

- Nausea is often worse when there is nothing to line the stomach – even eating a little dry toast may help.
- Try eating plain foods, for example, toast, bread and biscuits.
- If the smell of food makes you feel sick, avoid strong smelling foods.
- Try eating cold foods, which smell less than cooked food.
- If the smell of food cooking makes you feel sick, ask someone to cook for you, use ready meals, or get takeaways.
- Try sipping cold fizzy drinks between meals – it may help to let them go flat first.
- Try salty foods, such as crisps and salted nuts.
- Try food or drink containing ginger, such as ginger ale and ginger biscuits.
- Eat meals slowly, and try to sit upright for an hour after you've eaten.

- Remember to drink plenty so that you don't get dehydrated, especially if you are being sick. Try to have nutritious drinks, such as milk, milkshakes, fruit juice, smoothies and soup.

If you are having problems with feeling and being sick, speak to your medical team. There are several anti-sickness medications available that can help. If one type of medication doesn't work, try a different type, or a combination of drugs.

## **Tips for coping with taste changes**

Some chemotherapy drugs can make food taste different. People often describe it as a metallic or cardboard taste, or as if they have cotton wool in their mouth. Food may lose its flavour and taste bland, or you might be put off your favourite meal or drink.

Taste changes usually improve with time. You might find the following tips helpful in the meantime.

- Eat the foods that you do like the taste of, and avoid those that you don't. Try different foods to find some that you do like.
- Try foods that you no longer like again after a few weeks, as your taste may have returned to normal.
- If meat tastes bitter or metallic try marinating it before cooking – for example, in wine, barbecue sauce or sweet and sour sauce. Cold meats may taste better served with pickle or chutney.
- If you find you can't eat meat, other good types of protein include fish, eggs, beans, pulses, lentils, milk, yoghurt and cheese.
- Season your food with strong flavourings, such as mustard, herbs, pepper, spices or lemon juice.

- Sharp tasting foods such as grapefruit, lemon, and drinks such as bitter lemon may help stimulate your taste buds, increase the flow of saliva and get rid of any unpleasant taste in your mouth.
- Try foods that you need to chew – this will also increase saliva.
- Some people find cold or warm foods easier than hot food.
- If tea and coffee taste strange, try milky drinks, fruit juices or fizzy drinks.
- Some people find that artificial sweeteners taste metallic – avoid them if they do.
- Try to drink plenty of fluids and keep your mouth and tongue clean. Brush your teeth regularly, and use a soft toothbrush to clean your tongue if necessary.
- Use plastic or wooden cooking spoons, rather than metallic ones.
- Ask your doctor or nurse to check for oral thrush. This can cause taste changes and sickness, and is usually easy to treat.

## **Tips for coping with a dry mouth**

Some treatments for pancreatic cancer can cause a dry mouth.

- Sip drinks frequently.
- Suck ice cubes or ice lollies.
- Suck sweets or mints, or chew sugar-free chewing gum to increase saliva.
- Make your food moist with sauces, gravy, custard or cream.
- Keep your mouth clean. Brushing your teeth before and after meals might help.

- Use mouthwashes regularly.
- Use lip balm to soothe dry lips.

There are also some prescription products available to help with a dry mouth. These include artificial saliva sprays (for example Saliva Orthana® or Glandosane® sprays), saliva stimulating tablets, and the Biotene® range of products (which include toothpaste, mouthwash and gel). Ask your medical team whether these might help.

If your mouth is sore, ask your doctor or nurse to check to make sure you don't have oral thrush. This can usually be easily treated.

## **Tips for coping with diarrhoea**

Treatments such as chemotherapy can cause loose watery stools (diarrhoea). There are treatments available for diarrhoea. Changes to your diet may help to reduce it, but there are also other causes so speak to your medical team about it. The following tips may help.

- Eat small, frequent meals.
- Drink plenty to replace fluids lost with diarrhoea.
- It can help to avoid spicy foods, alcohol, tea and coffee.
- It may help to avoid eating high fibre foods – although this won't help if you have diarrhoea as a side effect of chemotherapy. High fibre foods include beans, wholemeal bread, brown pasta or rice, high fibre cereals, nuts and dried fruits.
- If you have very bad diarrhoea, you may need to replace lost salts with salty and sugary foods, isotonic sports drinks such as Lucozade, or a rehydrating solution such as Dioralyte®.

## Section 11

# Questions to ask

You might find it helpful to write down any questions you have for your medical team to ask at your next appointment.





Are my symptoms caused by problems digesting my food?

Can I be referred to a specialist pancreatic or oncology dietitian?

How soon can I see a dietitian?

Would pancreatic enzyme supplements help with my diet symptoms?

How do I take pancreatic enzyme supplements?

What should I do if my symptoms don't improve?

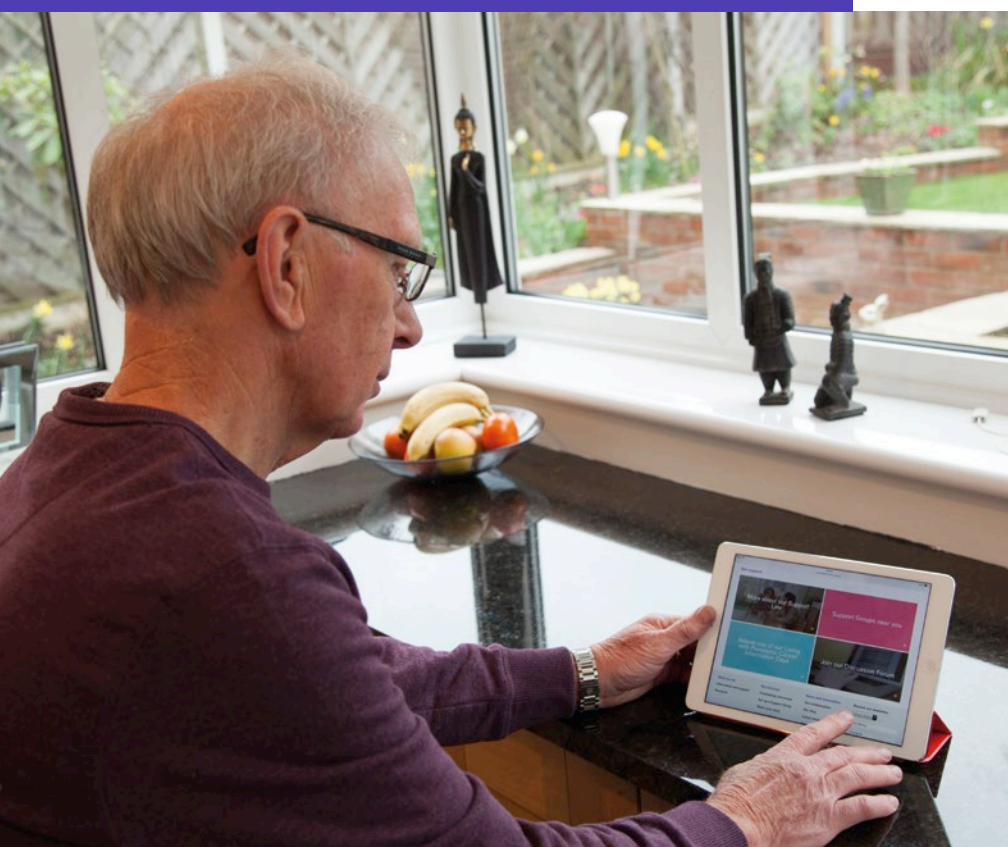
Who should I ask about help with managing diabetes?

What support is available?

## Section 12

# Further information and support

In this section, we explain some key medical words, and provide information about our services and other organisations that can support you.





## Glossary

We have explained some of the medical words that you may hear when you are finding out about pancreatic cancer and how it is treated.



You can find more medical words on our website –  
**[pancreaticcancer.org.uk/medicalwords](https://pancreaticcancer.org.uk/medicalwords)**

**Bile:** fluid which helps digestion. It is produced by the liver.

**Bile duct:** tube that carries bile from the liver to the small bowel.

**Bilirubin:** a yellow substance found in bile. It is the waste product of the normal break down of old red blood cells. Jaundice develops when there is a build-up of bilirubin in the blood.

**Chemoradiotherapy:** treatment that uses chemotherapy together with radiotherapy.

**Chemotherapy:** treatment that uses anti-cancer drugs to destroy cancer cells.

**Dietitian:** a professional who provides expert advice about diet and nutrition, including how to manage the dietary symptoms of pancreatic cancer.

**Duodenum:** the first part of the small intestines.

**Glucose:** a sugar found in foods and drinks. Our body turns all carbohydrates that we eat (such as starch) into glucose, and uses it as energy.

**Hormones:** chemical messengers that are carried in the blood and affect different processes in the body.

**Insulin:** a hormone that is produced by the pancreas and helps to control blood sugar level.

**Jaundice:** A condition that develops when there is a build-up of bilirubin (see page 49) in the blood. This can happen if the cancer blocks the bile duct. It can cause yellow skin and eyes, itching, loose pale stools, dark urine, fatigue and sickness.

**PERT:** pancreatic enzyme replacement therapy, which is used if the pancreas isn't producing enough enzymes. It involves taking pancreatic enzyme supplements to help to break down food.

**Radiotherapy:** radiotherapy uses high-energy x-rays (radiation) to destroy cancer cells.

**Steatorrhoea:** caused by fat in stools. Symptoms include pale yellow or clay coloured stools, which can look oily or greasy, smell horrible, float and are difficult to flush down the toilet.

**Stools:** poo. You may also hear it called faeces or bowel motions.

## Pancreatic Cancer UK services

We have a range of services to support you and your family in dealing with pancreatic cancer.

### Our Support Line

Our Support Line is a lifeline for thousands of people affected by pancreatic cancer. Our specialist nurses understand the issues you might be facing. They are there for you, giving you personalised information and support that you need, when you need it.

Call us free and confidentially on **0808 801 0707**  
(Monday to Friday, 10am-4pm), or email us at  
**[support@pancreaticcancer.org.uk](mailto:support@pancreaticcancer.org.uk)**

### Our information

We have the most up-to-date information on everything you need to know about pancreatic cancer on our website. We can help you every step of the way, from explaining your diagnosis and treatment options, to managing symptoms, and questions to ask at your appointments.

Go to **[pancreaticcancer.org.uk/informationandsupport](https://pancreaticcancer.org.uk/informationandsupport)**  
Download or order our publications, for free, at  
**[pancreaticcancer.org.uk/publications](https://pancreaticcancer.org.uk/publications)**

### Our online community

Our online community is a supportive place where everyone affected by pancreatic cancer can be there for each other. You'll find others who understand what you're going through, because they are going through it too.

Visit our forum at **[forum.pancreaticcancer.org.uk](https://forum.pancreaticcancer.org.uk)**

## Support groups

We help set up local support groups across the UK. You can meet other people to get support and share experiences.

Find out if there's a group near you at  
**[pancreaticcancer.org.uk/supportgroups](https://pancreaticcancer.org.uk/supportgroups)**

## Notes

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## Other organisations

### **Cancer Research UK**

[www.cancerresearchuk.org](http://www.cancerresearchuk.org)

**Helpline: 0808 800 4040** (Mon-Fri 9am-5pm)

Information for anyone affected by cancer.

### **Diabetes UK**

[www.diabetes.org.uk](http://www.diabetes.org.uk)

**Careline: 0345 123 2399** (Mon-Fri 9am-7pm)

Information on managing different types of diabetes.

### **Macmillan Cancer Support**

[www.macmillan.org.uk](http://www.macmillan.org.uk)

**Support Line: 0808 808 0000** (Mon-Fri 9am-8pm)

Provides practical, medical and financial support for anyone affected by cancer.

### **Maggie's**

[www.maggiescentres.org](http://www.maggiescentres.org)

Centres around the UK, and an online centre. Offer free, comprehensive support for anyone affected by cancer.

### **NHS 24**

[www.nhs24.com](http://www.nhs24.com)

**Tel: 111** (24 hours a day, 7 days a week)

Provides health information and advice, and you can search for local services in Scotland.

### **NHS Choices**

[www.nhs.uk](http://www.nhs.uk)

Provides information about different health conditions, living well and care and support, and local services in England.

## **NHS Direct Wales**

**[www.nhswales.nhs.uk](http://www.nhswales.nhs.uk)**

**Tel: 0845 46 47** (24 hours a day, 7 days a week)

Health information in Wales, including local services.

## **NICaN (Northern Ireland Cancer Network)**

**[survivorship.cancerni.net](http://survivorship.cancerni.net)**

Information about services in Northern Ireland to support people with cancer and their families.

## **nidirect**

**[www.nidirect.gov.uk](http://www.nidirect.gov.uk)**

Information about local services in Northern Ireland, including health services.

This booklet has been produced by the Support and Information Team at Pancreatic Cancer UK. It has been reviewed by healthcare professionals and people affected by pancreatic cancer.

References to the sources of information used to write this booklet, and a list of health professionals who reviewed it, are available on our website – **[pancreaticcancer.org.uk/diet](https://pancreaticcancer.org.uk/diet)**

Pancreatic Cancer UK makes every effort to make sure that our services provide up-to-date, unbiased and accurate information about pancreatic cancer. We hope that this information will add to the medical advice you have received, and help you make decisions related to your treatment and care. This information should not replace information and advice from your medical team – please speak to your doctor, nurse or other members of your medical team about any questions or concerns.

### **Give us your feedback**

We hope you have found this information helpful. We are always keen to improve our information, so let us know if you have any comments or suggestions.

Email us at **[publications@pancreaticcancer.org.uk](mailto:publications@pancreaticcancer.org.uk)** or write to the Information Manager at the address on the back cover.

The photographs in this booklet are of people affected by pancreatic cancer, including family members, as well as people who haven't been affected by pancreatic cancer.

# Pancreatic Cancer UK

## Pancreatic Cancer UK

6th Floor Westminster Tower  
3 Albert Embankment  
London SE1 7SP

020 3535 7090  
[enquiries@pancreaticcancer.org.uk](mailto:enquiries@pancreaticcancer.org.uk)  
[pancreaticcancer.org.uk](http://pancreaticcancer.org.uk)

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