

Dietary information for chronic pancreatitis

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The pancreas is a small organ located behind the stomach and below the ribcage. It has two main functions, making different enzymes and hormones to aid the digestion of food. This includes digestive enzymes that help to break down the macronutrients in food (carbohydrates, protein and fats) into small particles that are more suitable for absorption and also insulin, for regulating our blood glucose.

Acute pancreatitis is a condition where the pancreas becomes inflamed over a short period of time. It is most commonly caused by gallstones or increased alcohol consumption.

Typical symptoms include:

- Severe abdominal pain
- Nausea
- Vomiting
- Diarrhoea
- Indigestion
- Temperature

Acute pancreatitis normally lasts for about a week but for some people (15-20% of cases) they may go on to develop **chronic pancreatitis**.

In chronic pancreatitis, the pancreas is permanently damaged by long term inflammation. A major consequence of chronic pancreatitis is pancreatic enzyme insufficiency (PEI), with approximately 50% of patients requiring pancreatic enzyme replacement therapy (PERT). These enzymes do the job of a normal healthy pancreas, to ensure nutrient absorption and prevent malnutrition. Not all people will show obvious signs of malabsorption (some may just experience pain) but PERT should be offered.

The main symptoms of PEI are steatorrhea (stools that are loose, fatty, pale and particularly smelly), gastrointestinal discomfort with associated pain and bloating, and weight loss. Treatment goals are to improve nutritional status and overall quality of life through managing these symptoms.

Without having pancreatic enzymes, the body will not be able to absorb sufficient nutrients and can lead to conditions such as osteoporosis (thinning of the bones). It is therefore important to have your vitamins and mineral levels checked, and supplemented as needed.

If you do need to take a vitamin and mineral supplement, please read the leaflet provided. Often, these supplements should be taken with a meal to improve absorption.

Pancreatic enzyme replacement therapy (PERT)

PERT works by mimicking the work of a normal healthy pancreas. This ensures that the correct amounts of enzymes are delivered to the small bowel, where they are activated with food allowing for nutrient absorption.

These enzymes are to be taken with all meals and snacks, to include milky drinks. It is important that you swallow them whole with a cold drink – a hot drink, such as tea or coffee can damage the enzymes, making them less effective. As these enzymes can be damaged at high temperatures, it is important to not keep the capsules in warm places such as near radiators, in the car or any other places of direct sunlight. Another thing to consider is that enzymes kept in your trousers pocket can be damaged by your body heat, so think of another place to keep them safe!

If you are having difficulty swallowing them, you can open the capsules and mix the granules (without crushing) with an acidic fruit puree, such as apple sauce or yogurt. It is vital that the mixture chosen is swallowed straight away, without any chewing.

Without them, symptoms of malabsorption can occur. It is important to note that you can experience deficiencies without any symptoms, so it is important that you don't just stop taking your enzymes even if you are feeling well or think you no longer need them.

When not to take PERT:

- If you miss a meal. PERT is not to be taken on an empty stomach.
- PERT is not to be taken with black tea/coffee, fruit juice or fizzy drinks
- With small snacks such as fruit (other than avocados which can also be known as avocado pears), vegetables (other than beans, pulses and potatoes), dried fruit and sugary sweets (e.g. jelly babies, wine gums, fruit pastilles and mints).

If you are having a particularly large meal such as a starter, main and dessert, the dose can be split up. If you find that you are taking a long time to eat your meals, then it would be advised to take half the dose at the beginning and the rest halfway through. Also, if the fat content of a certain meal is more than normal, you may require more enzymes.

PERT comes in different forms and strengths, such as capsules and powder. The dose you require will be individual to you. It will depend on your condition and the types of foods you eat. You may find that your starting dose will have to increase several times until your symptoms are managed. Your doctor and dietitian can guide you on how to adjust the dose.

PERT is made from pork products and there is currently no alternative. If you have any questions or concern about this, please discuss it with your doctor.

PERT examples are Creon/Nutrizyme/ Pancrex V Powder.

Do I need a low-fat diet?

It is no longer advised that people with chronic pancreatitis follow a low-fat diet, although it is important to be able to identify foods that are high in fat, so you are aware to take more enzymes with these foods.

Food	LOW FAT foods	HIGH FAT foods
Meat	Lean red meats Chicken/turkey (no skin) Gammon	Fried/fatty meats such as bacon, lamb, goose, duck, corned beef, pies, sausages and burgers
Fish	Tinned fish in brine/water/tomato sauce White fish e.g. cod, plaice, haddock	Fish in batter or breadcrumbs
Dairy	Semi skimmed or skimmed milk Low fat cheese such as cottage cheese Low fat yogurt/mousse	Full fat milk i.e. blue top Full fat/thick and creamy yogurts
Eggs	Scrambled, boiled, poached	Fried or scotch egg
Fruit	All fresh, tinned or dried fruit	Avocado
Vegetables	All vegetables or salad	Vegetables that have been roasted in oil/butter
Carbohydrates	Oven chips Jacket/mashed/boiled potato Boiled rice Pasta Noodles All flour is allowed so most breads Breakfast cereals	Chip shop bought chips Waffles Croquettes Crisps Potato salad made with mayonnaise Fried rice or noodles Naan bread, croissants Italian breads
Pulses/lentils	All	None
Spreads	Low fat spread	Butter Cream
Puddings, biscuits, sweets	Jelly Sorbet Meringue iced buns Teacakes Jaffa cakes Rich Tea biscuits Low fat mousse/yogurt with fruit Pastilles to include fruit gums Boiled sweets and jellies Marshmallows Liquorice	Ice-cream Custard Pastry to include Danish pastry Tarts Cakes such as cheesecake/gateaux Doughnuts Sponge Scones Digestives and shortcakes Cream-filled and chocolate biscuits Flapjacks Dumplings Chocolate Fudge

Food	LOW FAT foods	HIGH FAT foods
Spreads, preserves,	Maple syrup Lemon curd Honey Marmite Bovril	Peanut butter Chocolate spread such as Nutella
Sauces, dressings and seasonings	Tomato ketchup BBQ sauce Salsa Tomato based sauces Pickle Soya sauce Salt and pepper Herbs and spices Instant gravy	Mayonnaise Salad cream Oil based dressings Hummus Tartare sauce Curry sauce Coleslaw Creamy sauces Gravy made from meat juices
Drinks	Drinks made on semi/skimmed milk Water Fruit juice Squash Fizzy drinks	Full cream milk/yogurt based drinks such as smoothies

For those who have lost weight or have a low BMI (body mass index less than 20kg/m²), higher fat foods may be beneficial. There are many strategies you can adapt to maximise the calorie content of your diet. Your dietitian can provide you with further information.

Nutritional supplementation

If you are struggling with your weight or not managing to meet your energy and protein needs orally, your dietitian may advise that you start oral nutritional supplements.

There are a variety of nutritional supplements options so your dietitian will guide you on one that is appropriate for you.

Diabetes risk

Developing diabetes secondary to endocrine insufficiency can occur. Current evidence highlights a lifetime risk as high as 80%, and this risk continues to increase with the duration of pancreatitis.

If you have diabetes already, it is important that your HbA1c is monitored at least every 6 months to assess the need for insulin therapy or ensure your treatment plan is working.

Further information

If you have any queries, please do not hesitate to contact the dietetic team.

Nutrition and Dietetic Department
North Devon District Hospital
Barnstaple

Telephone: 01271 322306 (Monday – Friday, 8am – 4pm)

Useful websites

Guts UK! Chronic pancreatitis Information Leaflet. Available at:
<https://gutscharity.org.uk/advice-and-information/conditions/chronic-pancreatitis/>

NHS, Chronic Pancreatitis. Available at: <https://www.nhs.uk/conditions/chronic-pancreatitis/>

References

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PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email ndht.pals@nhs.net. You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

Have your say

Northern Devon Healthcare NHS Trust aims to provide high quality services. However, please tell us when something could be improved. If you have a comment or compliment about a service or treatment, please raise your comments with a member of staff or the PALS team in the first instance.

'Care Opinion' comments forms are on all wards or online at www.careopinion.org.uk.

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