

# Advice on taking enzyme replacement capsules

Hepatobiliary Services  
Information for Patients



University Hospitals of Leicester **NHS**  
NHS Trust

*Caring at its best*

# Introduction

## What is the pancreas?

The pancreas is part of your digestive system. It is a gland (an organ that releases chemicals for use in the body) that lies underneath your stomach. It produces insulin and glucagon to control your blood sugar levels and digestive enzymes that are important to help you break down the food you eat.

If your pancreas has been damaged or inflamed by disease (for example, cancer of the pancreas or pancreatitis), or if you have had some of your pancreas removed, it may not produce enough enzymes to help break down the food you eat.

Without these important enzymes, food will pass through your digestive system without being broken down and absorbed. This is known as malabsorption.

The three main types of enzymes that the pancreas produces to help break down different parts of your food

- protease breaks down protein
- amylase breaks down carbohydrate
- lipase breaks down fat

## How do I know if I am suffering with malabsorption?

If you are not fully digesting and absorbing some of the food you eat, you may have symptoms including:

- bloating
- wind and cramping.
- unintentional weight loss
- loose and frequent bowel pattern
- pale, orange or yellow coloured stools, which may float and be difficult to flush away. They may also be oily and foul smelling.

**If you have any of the above symptoms you may be suffering with malabsorption.**

## What are pancreatic enzyme supplements?

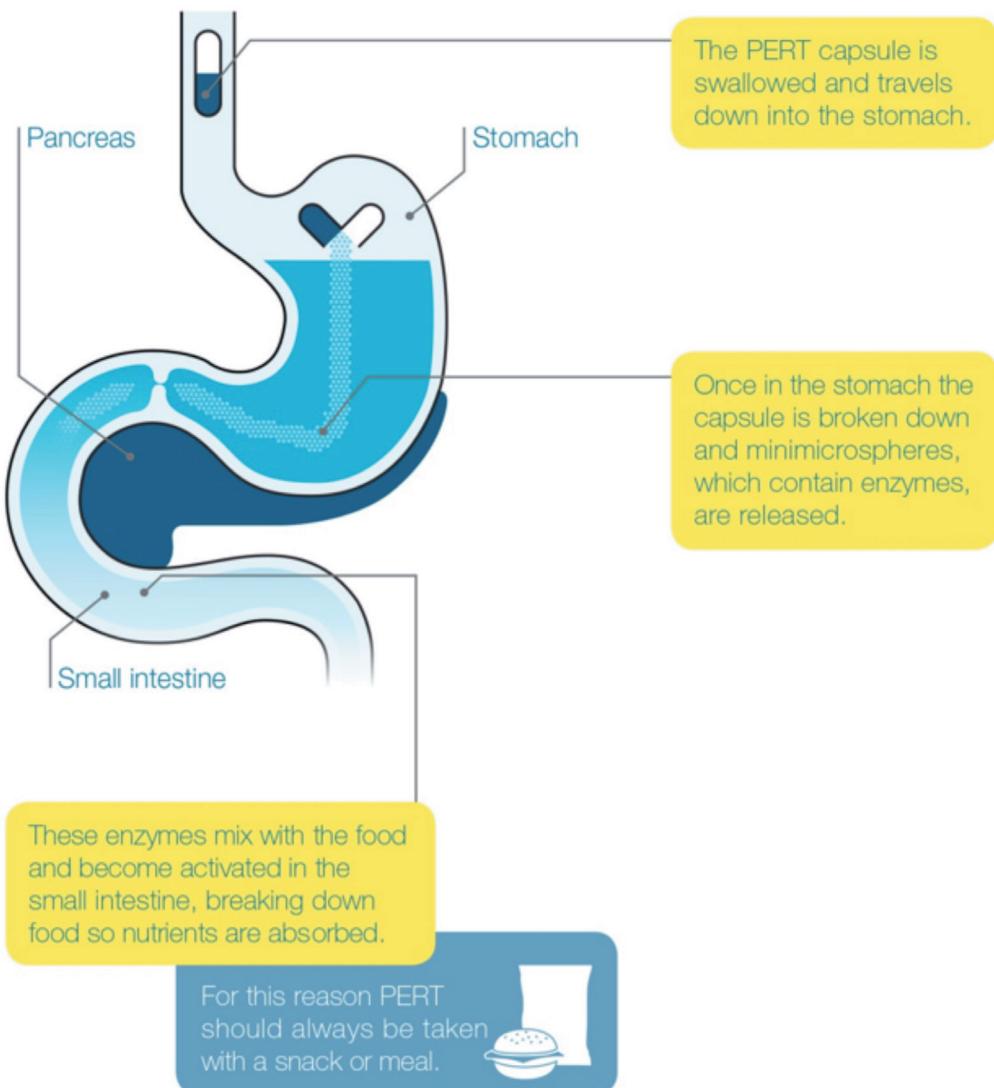
We treat malabsorption by replacing the enzymes that your body is not producing effectively. You will usually be prescribed one of the following medications:

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

Most come in capsule form, however some also come in powder or granule form. All of the preparations contain a mixture of the three pancreatic enzymes amylase, protease and lipase, which your pancreas is unable to produce. The enzyme replacement therapy comes in different strengths for example Creon 40,000. The number shows the amount of lipase in each capsule. The enzymes are mainly pork based, please discuss with your doctor if you have concerns regarding this.

# How do the enzymes work?

PERT is short for Pancreatic Enzyme Replacement Therapy.



## How do I take the pancreatic enzymes?

It is important that you understand how to take the supplements to make sure they work well.

- You will need to take your enzyme replacement whenever you eat, including meals, snacks, milky drinks and with nutritional supplements (if you have been prescribed these by your doctor or dietitian).
- Take them just before you start eating, with a glass of cold water or with the first few mouthfuls of food, as they only work when mixed with food.
- It is important that you swallow the capsules with a cold drink like water, as swallowing with a hot drink (like coffee or tea) may make the tablets less effective.
- Drink plenty of liquid daily (about eight to ten glasses a day).
- If you have a particularly large meal or meal times lasting longer than 30 minutes, you may need to take half your enzymes at the beginning and the other half in the middle of your meal.
- If you forget to take your enzyme replacement wait until the next time you eat.
- The capsules should not be chewed or crushed as this will destroy the enzymes. Ideally the capsules should be swallowed whole. However if you find this difficult you can empty the capsule and take the contents with a teaspoon of jam, but again do not chew.

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

The dose you need is individual to you. It depends on your condition and the types of food that you eat. If you are still having symptoms (as listed above) when you take your current dose, you may need to increase the amount of enzyme replacement that you take.

The dose may also need to be increased to help you digest very fatty foods (such as fried foods, takeaways, pastry dishes). Sometimes you may need to reduce your dose if you are eating smaller meals, or recovering from surgery.

Keeping a food diary can be very helpful in working out if you need a larger dose. Record your food intake, symptoms and enzyme replacement dose.

If you need advice on the amount of enzyme replacement to take, please discuss this with your hospital doctor, GP, nurse specialist or dietitian.

## Do I need to take my enzymes with all foods?

You do not need to take your enzymes with some foods because they are low in fat and protein. These include:

- fruit (fresh, tinned, frozen or dried), except for avocado.
- vegetables (fresh, tinned, frozen or dried) with no added butter, oil or dressing.
- fat free sweets, such as boiled or mints.
- fizzy drinks.
- ice lollies.
- fruit juice.
- jelly or sorbet.
- squash.

## How do I store the enzymes?

The enzymes can be damaged at high temperatures; do not keep them in warm places such as near radiators, near direct sunlight, or in the car. Please refer to the information leaflet enclosed with your enzymes for information on the maximum storage temperature.

## Can I take too much enzyme replacement?

Very occasionally this can happen, but it is not usually dangerous. If you do take too much enzyme replacement, you may get an itchiness and burning feeling around your bottom. Drink plenty of fluids and continue to take your enzymes with the next meal as usual. If you feel unwell, please contact your GP.

## Do I have to restrict my diet?

No, you do not have to restrict your diet - it is important if you are underweight that you are receiving adequate calories and protein. Remember your dose of enzyme replacement therapy can always be adjusted.

You need to follow a balanced diet that will help you maintain your weight or if needed to put some weight on. Your dietitian can give you more information on this.

## What about nutritional supplements?

If you have lost weight and/or have a poor appetite you may need to have high energy and protein supplement drinks. These supplements can help make sure you are getting enough calories, protein, vitamin and minerals. They are available through your GP, hospital consultant or dietitian.

It is very important that you take your enzymes with each supplement drink. Your dietitian will let you know if you need nutritional supplements.

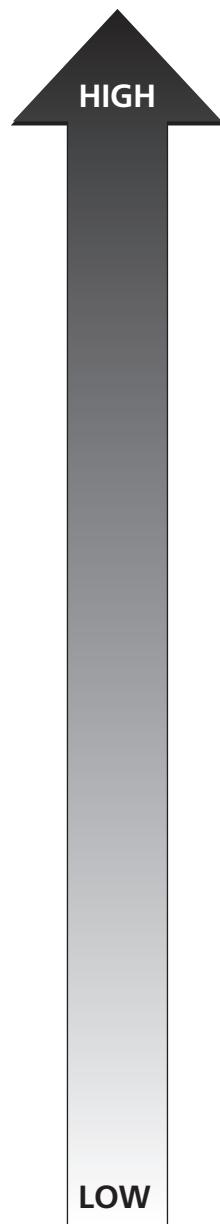
# What foods contain the most fat?

Below are some of the common foods, the arrow indicates the lower and higher fat food options.

## High fat options

- Take away chicken curry and rice
- Beef pie and chips
- Chicken Kiev
- Doner kebab
- Take away pizza
- Fish and chips
- Fried chicken pieces in breadcrumbs
- Quiche
- Sausage roll
- Pastie
- Cooked breakfast (bacon, eggs, toast and butter)
- Cheesecake
- Spaghetti bolognese
- Chilli con carne with rice
- Milk shakes
- Grilled sausage
- Baked beans, scrambled egg on toast (with butter)
- Crackers and cheese
- Trifle
- Apple crumble
- Grilled fish
- Macaroni cheese
- Milk pudding
- Tin of soup with bread
- Pasta in tomato sauce
- Cornflakes
- Jaffa cakes
- Low fat yogurt
- Baked crisps
- Rich tea biscuits
- Cereal and skimmed milk

## Lower fat options



## Questions

If you have any questions write them down here to remind you what to ask when you speak to your consultant.



If you would like this information in another language or format, please contact the service equality manager on 0116 250 2959

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如果您想用另一种语言或格式来显示本资讯，请致电 0116 250 2959  
联系“服务平等化经理”(Service Equality Manager)。

જો તમને આ પત્રાનું લેખિત અથવા ટેઇપ ઉપર ભાગ્યાતર જોઈનું હોય તો  
મહેરબાની કરી સર્વિસ ઇક્વાલિટી મેનેજરનો 0116 250 2959 ઉપર સંપર્ક કરો.

यदि आप को इस लीफलिट का लिखती या टेप पर अनुवाद चाहिए तो कृपया  
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Jeżeli chcieliby Państwo otrzymać niniejsze informacje w tłumaczeniu na inny język lub w innym formacie, prosimy skontaktować się z Menedżerem ds. równości w dostępie do usług (Service Equality Manager) pod numerem telefonu 0116 250 2959.

નેકર ઉરાનું હિસ સ્લીડાસ્ટ દા સિખરી જાં ટેપ ક્રીતા અનુવાદ ચાચીદા હોવે તં કિરપા કરવે ડેબ બેકર, સર્વિસ  
ઇક્વાલિટી મેનેજર નાલ 0116 250 2959 'ચે સેન્ટર કરવે।

Ak by ste chceli dostať túto informáciu v inom jazyku, alebo formáte, kontaktujte prosím manažéra rovnosti služieb na tel. čísle 0116 250 2959.

Haddaad rabto warqadan oo turjuman oo ku duuban cajalad ama qoraal ah fadlan la xiriir, Maamulaha Adeegga Sinaanta 0116 250 2959.