This leaflet has been designed to give you important information about your condition / procedure, and to answer some common queries that you may have.
Introduction
This leaflet aims to provide information on taking pancreatic enzymes. It explains why and how you need to take pancreatic enzymes replacement therapy.

What is the pancreas?
The pancreas is an organ in the body that helps to digest food. It does this by producing a fluid that contains enzymes that help to break down food.

The pancreas also produces a hormone called insulin which helps to control the amount of glucose in your blood.

Why do I need to take replacement enzymes?
If you have chronic pancreatitis, pancreatic cancer, cystic fibrosis or have had some of your pancreas removed, your pancreas may not produce enough enzymes to digest your food. As a result you may not be able to absorb the food very well, may lose weight or may not be able to gain weight despite eating well. This is called malabsorption.

How do I know if I have malabsorption?
Some signs of malabsorption include:

- Pale yellow or orange stools, which may float and be difficult to flush away
- Oily and foul smelling stools
- Loose stools and needing to go frequently
- Abdominal discomfort or pain
- Bloating, cramping and excessive wind

Treatment
Malabsorption is treated by replacing the enzymes that you are unable to produce.

Most enzyme replacements come in capsules. Each capsule contains a mixture of enzymes:

- Lipase – to digest fats
- Amylase – to digest starchy carbohydrates
- Protease – to digest protein

There are a number of brand names including Creon, Nutrizym, Pancrease and Pancrex. The capsules come in different strengths and this refers to the amount of Lipase units. For example Creon comes in doses of 10000, 25000 and 40000. Creon 10000 has less lipase units than Creon 40000. The higher the strength, the larger the capsule.

How do I take pancreatic enzymes?
You need enzymes to digest food, so it is important to take enzyme capsules with all meals and snacks. They also need to be taken with nutritious drinks such as milkshakes or nutritional supplements, for example Fortisip, Ensure, Scandishake and Calogen.

The capsules have a special coating that helps to protect them from stomach acid. This allows the enzymes to pass into the intestines which is where they would normally be released:

- Enzyme capsules should be taken whole, do not crush, chew or hold the capsule in your mouth
- Take the enzyme capsule at the start of the meal, snack or drink

For more information about our Trust and the services we provide please visit our website: www.nlng.nhs.uk
Information for patients and visitors

- Take them with a cold drink as hot liquids can damage the enzymes.
- If meals are large or take a long time to eat, take half the dose at the start of the meal and the other half in the middle.
- If meals contain a lot of fat, you may require a larger dose. Your dietitian can advise you on how many capsules you need to take.
- If you have difficulty swallowing large capsules, you can ask your doctor for a smaller capsule size, but this will mean that you would need to take more capsules.

How many enzyme capsules do I need to take?
The amount of capsules depends on:
- You – because everyone is different
- How much of your pancreas is working, or how much is left if you have had surgery
- The amount of food you eat
- The amount of fat in the food you eat

A starting guide: (e.g. Creon):
- Take One Creon 25000 capsule with a nourishing drink / snack / small meal
- Take Two Creon 25000 capsules with a meal

You will need to increase the number of enzyme capsules if, for example, you were having a large or high fat meal. Adjust the amount gradually and look for signs of malabsorption.

Avoid exceeding 10000 lipase units per kilogram body weight per day.

For example, if you weigh 65kgs: 65 x 10000 = 650000 units of lipase is your maximum daily limit.

You do not need to take enzymes with fat free items such as mints, wine gums, jelly, fruit juice, or small amounts of fruit, salad or vegetables (except avocado).

How do I know if I am taking enough capsules?
If your weight is stable and you do not have any signs of malabsorption, it is likely that you are taking the right amount.

What if I am not able to swallow the capsules?
If you find the enzyme capsules difficult to swallow, you can open the capsules and sprinkle the content onto room temperature acidic food / drink, such as fruit puree, milk or apple juice. It is important not to hold this in your mouth as this can irritate the lining of your mouth. You must drink plenty of fluid to wash it down and eat your meal/snack straight away.

What if I have a poor appetite?
- Try to eat little and often, for example 3 small meals and 2 or 3 snacks per day
- Increase the amount of dairy in your diet, for example full cream milk, cheese, thick and creamy yoghurts
- Snack on high calorie foods. If you have diabetes, try to maintain good control of your blood glucose levels by having high fat, but less sugary foods such as nuts, crisps, savory biscuits
- Avoid drinking before eating as this can fill you up
Remember to adjust your pancreatic enzymes if you are increasing your fat intake.

**Do I have to follow a low-fat diet?**

It is not necessary to restrict your diet but it is important to have a balanced diet as it can be more difficult to absorb fat soluble vitamins including vitamins A, D, E and K.

**What if I miss a dose?**

If you forget to take your enzyme capsules, take the usual dose with your next meal or snack, do not try to make up for your missed dose.

**How do I store my enzyme capsules?**

Pancreatic enzymes can be damaged by heat. Avoid storing the enzyme capsules near a radiator or any heat source and even in a trouser pocket.

**Side effects**

The most common side effects are diarrhoea, constipation, nausea and abdominal discomfort. Excessive enzyme doses can cause your anal area to become red and sore. The information sheet that comes with your medication provides more details of side effects.

**Other information**

Pancreatic enzymes are pork based. There are currently no alternatives available.

**Useful Links**

[www.nhs.uk](http://www.nhs.uk) – search pancreatic enzymes

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

**Reference Section**


**Contact Details for Further Information**

Nutrition and Dietetic Department:

Scunthorpe: 01724 203751

Grimsby: 01472 875218

**Concerns and Queries**

If you have any concerns / queries about any of the services offered by the Trust, in the first instance, please speak to the person providing your care.

**For Diana, Princess of Wales Hospital**

Alternatively you can contact the Patient Advice and Liaison Service (PALS) on (01472) 875403 or at the PALS office which is situated near the main entrance.

**For Scunthorpe General Hospital**

Alternatively you can contact the Patient Advice and Liaison Service (PALS) on (01724) 290132 or at the PALS office which situated on C Floor.
Information for patients and visitors

Alternatively you can email:
nlg-tr.PALS@nhs.net

Northern Lincolnshire and Goole NHS Foundation Trust
Diana Princess of Wales Hospital
Scar tho Road
Grimsby
DN33 2BA
01472 874111

Scunthorpe General Hospital
Cliff Gardens
Scunthorpe
DN15 7BH
01724 282282

Goole & District Hospital
Woodland Avenue
Goole
DN14 6RX
01405 720720

Date of issue: October, 2016
Review Period: October, 2019
Author: Dietitian
IFP-930

© NLGFT 2016

For more information about our Trust and the services we provide please visit our website: www.nlg.nhs.uk