Department of Nutrition and Dietetics

Information for people taking pancreatic enzymes for pancreatic insufficiency

You have been prescribed pancreatic enzymes. This information sheet explains why you need them and how to take them.

Digestion

The foods and drinks you have go from your mouth into your stomach, where they are mixed around. From here they are passed into your intestines where they are absorbed into the body. In order for you to absorb food/milky drinks they need to be broken down. Enzymes break them down. Enzymes are made in the pancreas and released into your intestines. Here they break down the food so it can be absorbed and the nutrients used by the body.

The diagram on the right shows you where the pancreas is in relation to the stomach and intestines.

Pancreatic insufficiency

Pancreatic insufficiency means the pancreas is not producing enough enzymes for your body to digest (break down) food properly, or that those enzymes are blocked from reaching your intestine. When this happens, one or more of the following symptoms can occur:

- oily or fatty stools (stools may be surrounded by an orange oil)
- pale, orange or yellow stools, which may float and be difficult to flush away
- offensive smelling stools
- wind, flatulence, bloating, abdominal pain or cramping
- problematic blood glucose (sugar) levels
- struggling to gain or maintain your weight
- vitamin and mineral deficiencies

This can lead to problems with your bones and general health. To absorb food properly and avoid these problems you will need to take pancreatic enzymes in the form of a capsule when you eat or drink most foods.

Which pancreatic enzymes have I been prescribed?

You have been prescribed ______________________

Please note that all pancreatic enzyme preparations are pork-based. Most religious leaders give consent for people to take them as there is no alternative. Please discuss this with your dietitian or religious leader if you have any concerns.
Creon 25,000/ Nutrizym 22/ Pancrease HL

These three brands are equivalent to each other. They are all capsules that contain small beads. Inside these beads are the enzymes that are needed to break down food. They replace those not produced by your pancreas. The beads contain three main enzymes which digest different nutrients:

- **Lipase** – to digest fat
- **Protease** – to digest protein
- **Amylase** – to digest starch (a type of carbohydrate)

**How and when to take pancreatic enzyme capsules**

The capsules need to be swallowed whole with any foods containing these nutrients. The only foods **not requiring** pancreatic enzymes are:

- Fruit and dried fruits
- Vegetables (except potato, avocado and beans/pulses)
- Sweets such as chewing gum, mints, jelly babies, dolly mixtures, marshmallows, fruit pastilles and wine gums
- Jelly
- Squash, juice, water, carbonated drinks, alcoholic drinks (except cream liqueurs)
- Tea and coffee (unless they contain ½ or more milk)

Pancreatic enzymes need to be taken with all other food and drinks, including nutritional supplements (e.g. Fortisip, Ensure, Fresubin, Meritine, Aymes, Complan). The capsules should be swallowed whole with a drink that is not hot. Take the first capsule with the first few mouthfuls of food or drink. If you take more than one capsule, space them throughout the meal, drink or snack. If you have problems swallowing them please contact your dietitian for advice on alternatives.

If you have been advised to take a multivitamin then you need take pancreatic enzymes with it. It may therefore be best to take the vitamin supplement when you are eating.

**Pancrex V powder**

This also contains the enzymes described above, it is usually recommended for people who are receiving their nutrition with a feeding tube rather than from food and drinks. If you need to do this, you will receive further information on how to do it.

**Cautions**

- Pancreatic enzymes are not useful unless you take them with a meal, snack or drink.
- Do not chew or crush the capsules as this will mean they do not work properly and could irritate your mouth.
- If you cannot swallow the capsules then let your dietitian know and they will give you alternative suggestions.
• It is important to ensure you are well hydrated whilst taking these enzymes. Most people need 8-10 drinks per day, more when hot or exercising. If you are concerned you may be dehydrated discuss this with your doctor, nurse or dietitian.

All pancreatic enzymes can be damaged by high temperatures. It is therefore recommended to keep them below 25°C/ 77°F. Do not store them in warm places such as the window sill, glove box of a car, trouser pockets or in direct sun light. When you take your enzymes out of the house, take what you expect to need for the day rather than a whole pot. This will help reduce the risk of all of the capsules being damaged by heat. Ask your dietitian if you would like a travel pot to help with this.

**How many pancreatic enzyme capsules do I need?**

Your dietitian or doctor will advise you how many capsules to take. The number you need depends on your anatomy and what and how much you eat and drink. Your dietitian or doctor will calculate your dosage.

Your starting dose is ______________ with breakfast, lunch and evening meal, ______________ with a snack or milky drink. Sometimes it can be difficult to distinguish between a meal and a snack, if you are not sure, it is better to take one more capsule than one less.

Most people need to increase from this starting dose. This will be assessed by your dietitian, doctor or specialist nurse. Taking antacid medication (e.g. omeprazole, lansoprazole, pantoprazole, ranitidine) can help to activate pancreatic enzymes, you may also be advised to take this.

You do not need to change what you eat because you have pancreatic enzyme insufficiency. You just take enough capsules to give your body the enzymes it needs to digest what you eat and drink. You may be advised to change what you eat for other reasons, for example to help you gain weight.

**Foods that need more enzymes to digest them adequately**

- fried foods, such as fried eggs, crisps, chips, sausages
- anything deep fried such as samosa, pakora, battered fish, popadums
- pastries, croissants, doughnuts, pasties
- most takeaways
- foods containing cheese or chocolate

**How do I know if I’m not taking enough enzymes?**

If you notice any of the signs or symptoms shown above in the section called ‘Pancreatic insufficiency’, you should speak to your dietitian, specialist nurse or doctor for advice. These signs and symptoms may mean you need to take more pancreatic enzymes.
Can I have too many pancreatic enzymes?

There is no maximum dose of pancreatic enzymes. Your dietitian or doctor calculates the amount of enzymes you need. If you do take more than your body really needs, you can get irritation of the anus (bottom). Please discuss with your dietitian or doctor if you notice this symptom. You can have some cream to apply after each bowel motion to help reduce the irritation. Your enzyme doses will be reviewed and you may be given other medication to help your enzymes work more efficiently.

Taking a few more enzyme capsules than you need is not harmful. However, regularly taking less than you need will lead to nutritional deficiencies.

The most common side-effects of pancreatic enzymes are nausea, bloating and abdominal discomfort, but these are also symptoms of not taking enough enzymes. If you experience these after taking enzymes discuss this with your dietitian, doctor or specialist nurse. The information leaflet that comes with the medication tells you about the uncommon side effects reported by some people.

What are the benefits of taking pancreatic enzymes?

By taking adequate pancreatic enzymes you will be able to digest your food properly and absorb the nutrients, giving you the nourishment you need. Taking the enzymes may also reduce the symptoms described in the ‘pancreatic insufficiency’ section above.

What are the alternatives?

Let your dietitian, doctor or specialist nurse know if you are not doing well with your enzyme preparation. They will be able to look at alternatives for you. If you do not take enough of the pancreatic enzymes, you will be at risk of nutritional deficiencies.

If you have any concerns about your eating, drinking, bowels or weight, or if you would like to comment on this leaflet please contact your dietitian.

Your dietitian is: ____________________________

Telephone number: ____________________________

Document history

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