

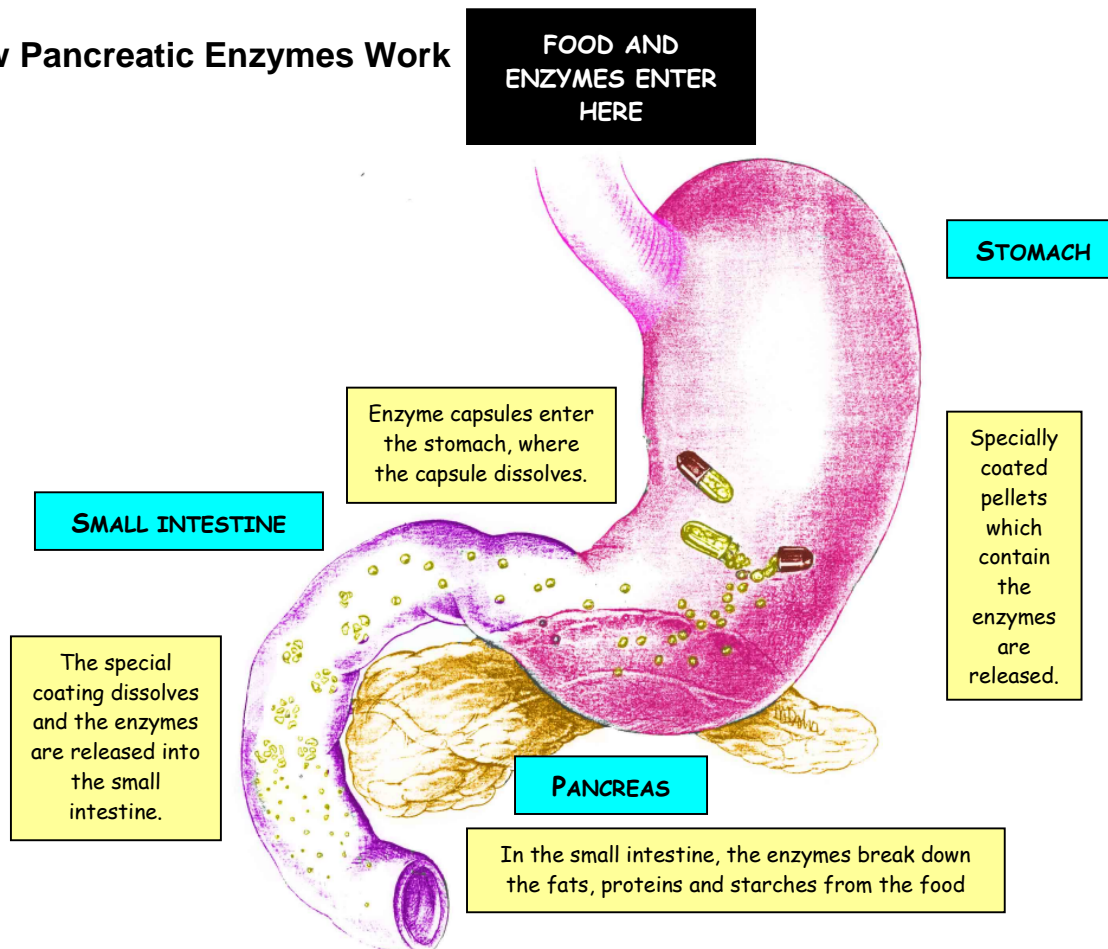
Why, How, What and When ? An Individual Guide to Pancreatic Enzymes

Why? When you have Cystic Fibrosis, part of your digestive system called the pancreas does not work properly. The pancreas normally produces enzymes to help us to breakdown and absorb the food we eat. Your pancreas is not able to produce enough enzymes so you have been prescribed a special enzyme supplement called:



This enzyme supplement will replace the enzymes usually produced by the body and will help you breakdown and absorb the food you eat.

How Pancreatic Enzymes Work



Acknowledgement: This diagram was adapted by the University Hospital of North Staffordshire from a design by Solvay.

Information for Patients

MAXIMISE EACH MOUTHFUL!

Taking your pancreatic enzymes correctly will ensure you digest your food well. Try to follow these guidelines to maximise the action of your pancreatic enzymes.



DO

- ✓ Always swallow the capsule whole.
- ✓ Take them before and during meals and snacks.
- ✓ Vary the number of capsules you take according to the fat content and the size of your meal or snack.
- ✓ Take more capsules with fatty foods, e.g.; fried foods and takeaways.
- ✓ Take less capsules with low fat foods, e.g.; cereal and milk.
- ✓ Always carry your enzymes with you.
- ✓ Store in an airtight container at room temperature in a dry place.

DO NOT

- ✗ Open the capsule up.
- ✗ Take them after eating.
- ✗ Take the same amount of capsules with all foods.
- ✗ Miss enzymes with snacks.
- ✗ Miss enzymes with milky drinks and supplements.
- ✗ Use enzymes that are out of date.
- ✗ Do not store in the fridge.

ARE THERE ANY FOODS THAT DO NOT NEED ENZYMES?

YES!

The only foods that you do not need to take enzymes with are:- Boiled sweets, pastilles and mints, squash, fizzy pop, tea and coffee (unless made with lots of milk), water, alcohol, fruit juice and fresh fruit, ice lollies, sorbet.



HOW MANY ENZYMES SHOULD I TAKE?

Pancreatic enzymes work slightly differently for everyone. You will be advised what is the best dose for you. You will still need to think about what you are eating and vary your dose according to the fat content of your food.

HOW WILL I KNOW IF I AM TAKING THE CORRECT AMOUNT OF ENZYMES WITH MY FOOD?

You can check this by monitoring your bowel habit. Keep a check on the appearance of your stools and how often you open your bowels. You should look for:-

- **Colour:** Are they orange/pale/light in colour?
- **Consistency:** Are they loose/greasy?
- **Smell:** Are they very smelly? Do you have a lot of wind?
- **Flushing:** Are they difficult to flush away?
- **Pain:** Do you have any tummy ache or abdominal pain?



If you answer yes to any of these questions you may be experiencing **symptoms of malabsorption**.

Information for Patients

WHAT IS MALABSORPTION?

Malabsorption means you are not digesting and absorbing your food properly. Malabsorption can make weight gain more difficult and may cause stomach ache/abdominal pain.

This can be caused by:-

- Not taking enough enzymes.
- Not taking enough enzymes with fatty foods.
- Missing enzymes with meals or snacks.
- Using enzymes that are out of date.



Taking enzymes properly can help you to gain weight. Sometimes malabsorption or a change in your bowel habit can be caused by:-

- Antibiotics may cause a change in stool consistency.
- Stomach upsets.

If you are having symptoms of malabsorption or change in your bowel habit – discuss your enzyme dose with your CF Doctor or CF Dietician.

LOOKING AT LABELS

Labels can help you find out:

- **If you need to take enzymes**
- **How much fat is in the food**

Look to see if the food has:

- **Fat, protein or starch**

TYPICAL NUTRITIONAL INFORMATION - PIZZA		
	Per pack	Per 100g
Energy	1462kJ	975kJ
	350Kcal	230Kcal
Protein	10g	7g
Carbohydrate	30g	20g
Of which starch	25g	15g
Of which sugars	5g	5g
Fat	20g	15g
Fibre	1.5g	1.0g
Sodium	0.6g	0.4g
PER SERVING - 350Kcal - 20g Fat		

The amount of fat can help you see if the food is low in fat or high in fat. Look at the amount **per serving** or the **amount per pack**.

THE FAT CONTENT OF FOODS

Information for Patients

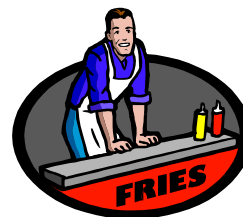
The amount of pancreatic enzymes you need will depend on:-

- The amount you eat
- How fatty the food is, how much fat is added to it in cooking, spreads, sauces or dressings.

Use the list below and on the following pages as a guide for varying your enzyme dose.

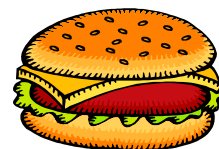
Very High Fat Meals (>40g fat per portion)

- Take-away chicken curry and pilau rice
- Take-away beef chow mein and prawn crackers
- Fish and chips (standard portion) from the chip shop
- Large Doner kebab
- Take-away pizza (4 slices)



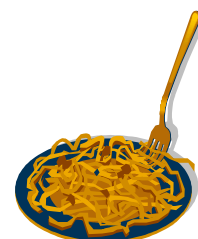
High Fat Meals (up to 40g fat per portion)

- Meat pie with potatoes, vegetables and gravy
- Fried chicken pieces in breadcrumbs (X2) and regular fries
- Quarter pounder with cheese and regular fries
- A pastie or sausage roll
- Cooked breakfast (bacon X2, sausage X1 and fried egg)
- Roast beef/lamb with roast potatoes (X3), Yorkshire pudding and gravy



Medium Fat Meals (up to 25g fat per portion)

- Spaghetti bolognese or chilli con carne with rice
- Roast chicken with mashed potato and gravy
- Grilled sausage (X2) or fish fingers (X2) and oven chips
- Baked beans/scrambled egg on buttered toast (X2 slices)
- Macaroni cheese



Low Fat Meals (up to 15g fat per portion)

- A bowl of tinned soup and bread
- Pasta with tomato sauce
- Instant pot snacks
- A bowl of breakfast cereal and whole milk
- Meat or fish salad without a dressing



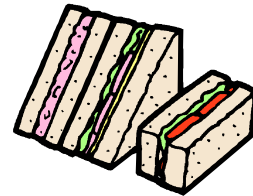
Snack foods, Puddings and Supplement Drinks

Information for Patients

Remember, if you have more than one snack food together take enough enzymes for both items.

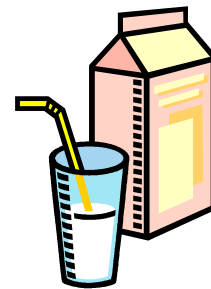
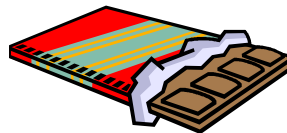
High Fat Snacks (>15g of fat per portion)

- 2 cream crackers with cheese and butter
- 1 pint of whole milk
- A cream cake/Danish pastry
- Small packet of peanuts (25g)
- A Scandishake or Calshake made with whole milk
- A bowl of sponge pudding and custard
- Pre-packed sandwiches



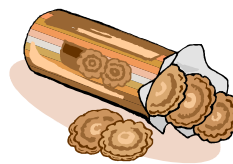
Medium Fat Snacks (<15g of fat per portion)

- Bar of chocolate (50g)
- Whole milk yoghurt (200g)
- 1 cake bar or slice of fruit cake
- Bag of crisps (30g)
- Dairy ice cream (2 scoops)
- Toast with butter/margarine and jam (2 slices)
- Fruit pie (individual)
- 1 pint of semi-skimmed milk
- A milk based ready to drink supplement (200ml)



Low Fat Snacks (<5g of fat per portion)

- A bowl of breakfast cereal and semi-skimmed milk
- Plain biscuits (X4)
- Digestive biscuits (X2)
- Chocolate biscuit (X1)
- Rice pudding (small tub or ½ tin)
- Jaffa cakes (X3)
- A packet of Snack-a-Jacks
- A low fat yoghurt
- A cereal bar
- Fruit juice based ready to drink supplement (200ml)



Information for Patients

Contact us:

If you have any queries concerning your enzyme dose or symptoms of malabsorption, please contact your CF Dietician on :- 0121 424 1796 (direct line with answer phone)

or 0121 424 2000 / Bleep 2425 or E-mail: joanne.barrett@heartofengland.nhs.uk,
toni.osborne@heartofengland.nhs.uk, elizabeth.glennon@heartofengland.nhs.uk,
rebecca.jones@heartofengland.nhs.uk

Additional Information Sources:

For more information on all aspects of living with Cystic Fibrosis you can visit the Cystic Fibrosis Trust web site at: www.cftrust.org.uk. For local news and events the West Midlands Regional Cystic Fibrosis Unit based at Heartland Hospital has its own website at: www.heartlandscf.org.uk .

This booklet was produced with help from Solvay Healthcare
16/Guide to Pancreatic Enzymes (Jul06)

Please use the space below to write down any questions you may want to ask: