



# Enzymes

## Information for Children and Adults

Digestive enzymes are made in the pancreas, released when you eat or drink, and travel through small passages (ducts) to the small intestine. There, they digest foods so nutrients can be absorbed. In CF, thick mucus can block the ducts and the body's enzymes cannot reach the food. Without enzymes the calories and nutrients in the food you eat flushes away with each bowel movement (BM). Taking enzyme capsules helps overcome this.

### How Do I Take Enzymes?

- [ ] Take with all foods and drinks that have fat and protein, including supplements. Ask your CF Center Registered Dietitian for a list of the few foods and drinks that do not need enzymes.
- [ ] Take \_\_\_\_\_ capsules with each meal and \_\_\_\_\_ capsules with each snack.
- [ ] Increase your enzyme dose to \_\_\_\_\_ capsules if your meal or snack has more fat than usual.
- [ ] Take the capsules at the start of each meal and snack or as directed by your CF Center Team.
- [ ] Eat scheduled meals and snacks. Avoid "grazing" all day long. Grazing makes it difficult to know when, and how many enzyme capsules to take.
- [ ] Take part of your enzyme dose at the start and the rest in the middle when eating meals lasting longer than usual, such as holiday meals.
- [ ] Swallow the capsules whole, followed by liquids. If you open the capsules do not chew or crush the beads.
- [ ] Other actions: \_\_\_\_\_

### Enzyme Hints

- Keep your enzymes with you so you don't have to skip taking them; use a pill case to keep a supply handy.
- Keep the capsules in a cool, dry place. Do not keep them in the car or refrigerator.
- Keep the enzyme bottle tightly closed.
- Check the expiration date on the enzyme bottle. Get a refill before the enzymes expire.

### Why Should I Care?

Healthy absorption and nutrition may help you have healthy lung function. Not taking enzymes can cause malabsorption. This can mean either frequent, large BMs or intestinal blockage (obstruction). Eating and taking your enzymes can help you gain weight, grow, and have good vitamin and mineral levels. Sometimes you can have malabsorption even if you take your enzymes. Talk to a member of your CF Center Healthcare Team if this happens.

### Bowel Movements

INDICATOR	NORMAL	MALABSORPTION
Frequency	1 or 2 daily	3 or more daily, or none if obstructed
Color	Brown	Very light brown
Shape	Solid	Loose, fills toilet bowl
Amount	1 flush	Many flushes
Smell	Mild	Really strong
Sink or Float	Sink	Float
Oil or mucus	No signs of oil or mucus	Oil slicks (could be orange or red), or mucus

### Other Symptoms of Malabsorption

- Slow, or no weight gain and/or growth even if you are eating a lot of food
- Hungry all the time
- Frequent gas
- Belly pain or cramps
- Feeling bloated or full
- Rectal prolapse

### Can I Take Too Many Enzyme Capsules?

Yes. Taking too many enzyme capsules can cause intestinal problems. Do not change your enzyme dose on your own. If you have any problems with or questions about your enzymes, talk to your CF center Healthcare Team.

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