

MALABSORPTION AND EXOCRINE PANCREATIC INSUFFICIENCY (PI)

Pancreatic Insufficiency is a condition in which a person does not have enough enzymes and bicarbonate being delivered from the pancreas to the intestine for digestion. This causes mal-absorption of nutrients, failure to gain weight and grow, weight loss, vitamin and mineral deficiency, and gastrointestinal symptoms.

Most people with CF have mal-absorption due to PI. Onset usually occurs in the first one to two years of life, often in early infancy, but can start at anytime.

Symptoms of mal-absorption

- Change in number of stools
- Large, bulky stools
- Stools may be bulky and soft
- Greasy, oily or floating stools, oil in toilet water
- Stools may smell worse than usual or normal
- Rectal prolapse
- Mal-absorption of calorie providing nutrients and poor weight gain or weight loss

Fat9 calories/gram

Protein.....4 calories/gram

Complex Carbohydrate4 calories/gram

-Results in poor weight gain, weight loss, poor growth, decreased immune function and decreased lung health.

-Mal-absorption of FAT SOLUBLE VITAMIN and deficiency: Vitamin A, Vitamin D, Vitamin E, Vitamin K

-Mineral deficiencies: Calcium, Zinc, Sodium, Chloride

Learn more about vitamins and minerals at:
<http://www.cff.org/treatments/Therapies/Nutrition/Vitamins/>

Tests to Diagnose PI and Mal-absorption

- 72 hr fecal fat test
- Pancreatic Fecal Elastase

Treatment of PI and Mal-absorption

Pancreatic Enzyme Replacement Therapy (PERT)

Pancreatic enzymes are taken with each meal, snack, breast feed, bottle , and drink that contains fat protein and or complex carbohydrate.

Antacid and acid blocking medicines can be added to make enzymes work better

Fat Soluble Vitamin Supplementation with special supplements made for mal-absorption are prescribed

Each enzyme company offers programs that provide free nutritional support and/or CF therapy support

High Calorie, high protein diet

Even with PERT, not all calories and nutrients from food are absorbed as expected and calories and nutrients are lost and need replacement.

Learn more about Pancreatic Insufficiency, Mal-absorption and Treatment at:

<http://www.cff.org/UploadedFiles/LivingWithCF/StayingHealthy/Diet/EnzymeReplacement/Nutrition-Pancreatic-Enzyme-Replacement.pdf>