

Understanding Exocrine Pancreatic Insufficiency (EPI)

WHAT IS EXOCRINE PANCREATIC INSUFFICIENCY (EPI)?

Exocrine pancreatic insufficiency is a condition resulting from a deficiency in the production and/or secretion of pancreatic enzymes that are necessary to digest food and allow nutrients to be absorbed. EPI can lead to steatorrhea, a type of oily diarrhea, and malabsorption, and left untreated, severe EPI can lead to chronic malnutrition.

HOW PREVALENT IS EPI?

EPI can occur as a complication of a variety of diseases and conditions, including cystic fibrosis, pancreatic cancer, gastrointestinal surgery and chronic pancreatitis. Statistics show that more than 80% of cystic fibrosis patients have severe EPI. However, there are no reliable statistics on the worldwide incidence of this life-threatening condition.

WHAT ARE THE SYMPTOMS OF EPI?

The symptoms of EPI include steatorrhea, diarrhea, stomach cramps and weight loss.

WHO IS AT RISK FOR EPI?

- People with cystic fibrosis
- People with chronic pancreatitis
- People with celiac disease
- People with diabetes
- People with Crohn's disease
- People with other conditions that may impact pancreatic function such as pancreatic cancer or pancreatic resection surgery

HOW IS EPI DIAGNOSED?

There are different ways to test for EPI including fecal examination, direct measurement of pancreatic enzymes in the small intestine and indirect measurement via breath tests. Assessing the coefficient of fat absorption (CFA) is another way to measure the absorption of fat as a percentage of fat intake in patients being tested for EPI.

HOW IS EPI MANAGED?

Patients with EPI and symptoms of malabsorption are prescribed pancreatic enzyme replacements to help them digest food properly. The replacement enzymes are taken during each meal and snack to help prevent maldigestion and malabsorption. Pancreatic enzyme

EPI AND CYSTIC FIBROSIS

What Is Cystic Fibrosis (CF)?

Cystic fibrosis (CF) is a genetic disease that causes production of thick mucus in certain bodily organs, most commonly the lungs and pancreas. As mucus build-up increases in the lungs, breathing can become very difficult. Infections caused by bacteria trapped in the mucus can lead to severe lung damage if left untreated.

Why Does CF Cause EPI?

In CF patients, mucus secretions can block the pancreatic ducts. As a result, digestive enzymes produced in the pancreas are not able to reach the small intestine to properly digest food. People with CF are often prescribed pancreatic enzyme products, which they take during meals and snacks to aid in the digestion of food and absorption of nutrients.

EPI AND PANCREATITIS

Chronic pancreatitis (CP) is a result of digestive enzymes attacking and destroying the pancreas and surrounding tissue. As a consequence, the pancreas fails to produce enough digestive enzymes, and nutrients from food are not absorbed. Progressive damage to the pancreatic tissue can lead to weight loss.

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products are often given an enteric coating to protect the enzymes from stomach acid until they reach the small intestine where they are released and can begin facilitating digestion. Currently available pancreatic enzyme products are derived from porcine (pig) pancreas and contain primarily amylase, lipase and protease.

DIETARY RECOMMENDATIONS

Dietary modifications are extremely important in maintaining optimal health in patients with EPI. For CF patients with EPI, a high-fat diet, coupled with pancreatic enzymes, is necessary to ensure adequate nutrition. CF patients generally require a greater fat intake (35-40% of calories) than is recommended for the general population. The dietary recommendations for CP patients include small, nutritious meals that are low in fat. CP patients are also advised to stay well hydrated, but to avoid beverages that contain caffeine. Tobacco and alcohol should also be avoided, even in early stages of CP.

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