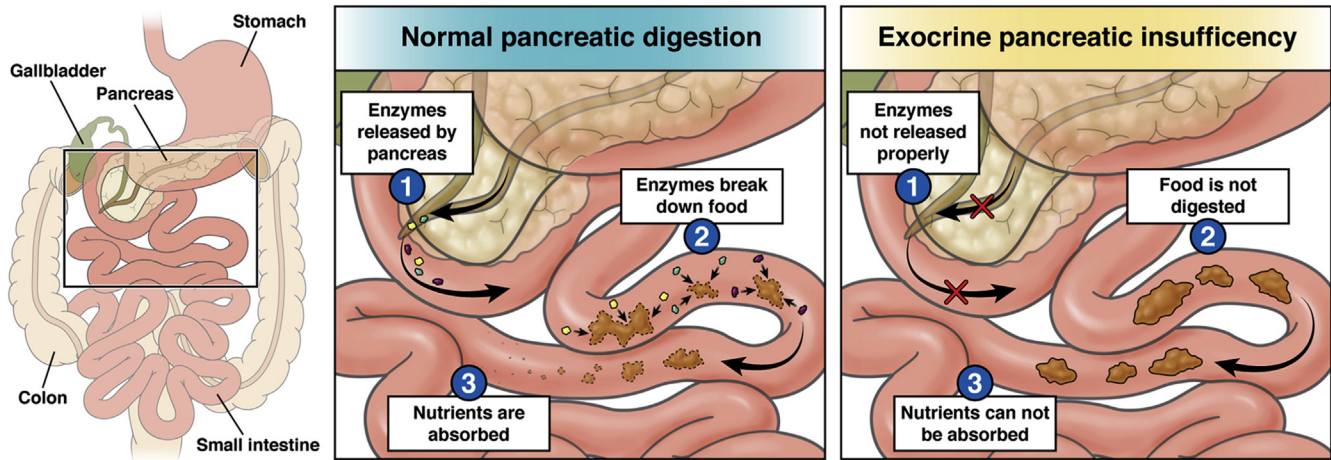


AGA Patient Education Section

Exocrine Pancreatic Insufficiency



Exocrine pancreatic insufficiency (EPI) is caused by a problem with the pancreas, an organ that plays an important role in digestion.

Normally, the pancreas produces enzymes (substances that trigger chemical reactions in the body) that break down food and allow it to be absorbed. If the pancreas cannot provide these enzymes or they do not work normally, digestion and absorption cannot happen as they should. This can lead to troublesome symptoms, even malnutrition.

Causes of Exocrine Pancreatic Insufficiency

EPI often results from damage to the pancreas from diseases, such as chronic pancreatitis, pancreatic cancer, or cystic fibrosis. Removal of some or all of the pancreas or surgery to other parts of the digestive tract (such as the intestines or stomach) may also cause it. Visit <https://www.gastro.org/practice-guidance/gi-patient-center/topic/pancreatitis> for more information about pancreatitis.

Signs and symptoms

- Gas and bloating
- Abdominal pain
- Greasy, oily bowel movements (stools)
- Diarrhea (very loose stools)
- Foul-smelling stools
- Unexplained weight loss

Tests for Exocrine Pancreatic Insufficiency

- **Fecal elastase test** (also called FE-1) looks for an enzyme called elastase that is released from the pancreas during digestion. Normally, this enzyme is found in stool.

- **Fecal fat test** measures fat in the stool. Too much fat in the stool means that food is not being broken down and absorbed properly.
- **Secretin stimulation test**, or pancreatic function test, checks whether the pancreas has a normal response to secretin, a hormone released when food enters the duodenum from the stomach, triggering the pancreas to send digestive enzymes into the duodenum.

Treatment

Talk with your health care provider before making any lifestyle changes.

- Aim to eat a nutritious diet high in vegetables, fruits, whole grains, and healthy proteins.
- Do not avoid eating fat, which is needed for absorption of many essential vitamins.
- Consider eating smaller meals throughout the day.
- Discuss any new medications, supplements, or herbal remedies with your health care provider before taking them.
- Supplements might be needed if your body is having trouble absorbing certain nutrients, causing vitamin and mineral deficiencies.
- If you use tobacco or alcohol, it may be a good time to stop.

The main treatment for EPI is replacing the enzymes that are no longer provided by the pancreas, which is called pancreatic enzyme replacement therapy (PERT). PERT involves taking pancreatic enzymes with every meal and snack. These digest the food you eat so you no longer experience symptoms.

For more information on EPI, talk to your gastroenterologist and visit <https://www.gastro.org/practice-guidance/gi-patient-center/topic/exocrine-pancreatic-insufficiency-epi>. This content was reviewed by Rajeev Jain, MD, AGAF, AGA Patient Education Advisor, Texas Digestive Disease Consultants, Dallas.