

# Understanding Exocrine Pancreatic Insufficiency (EPI)

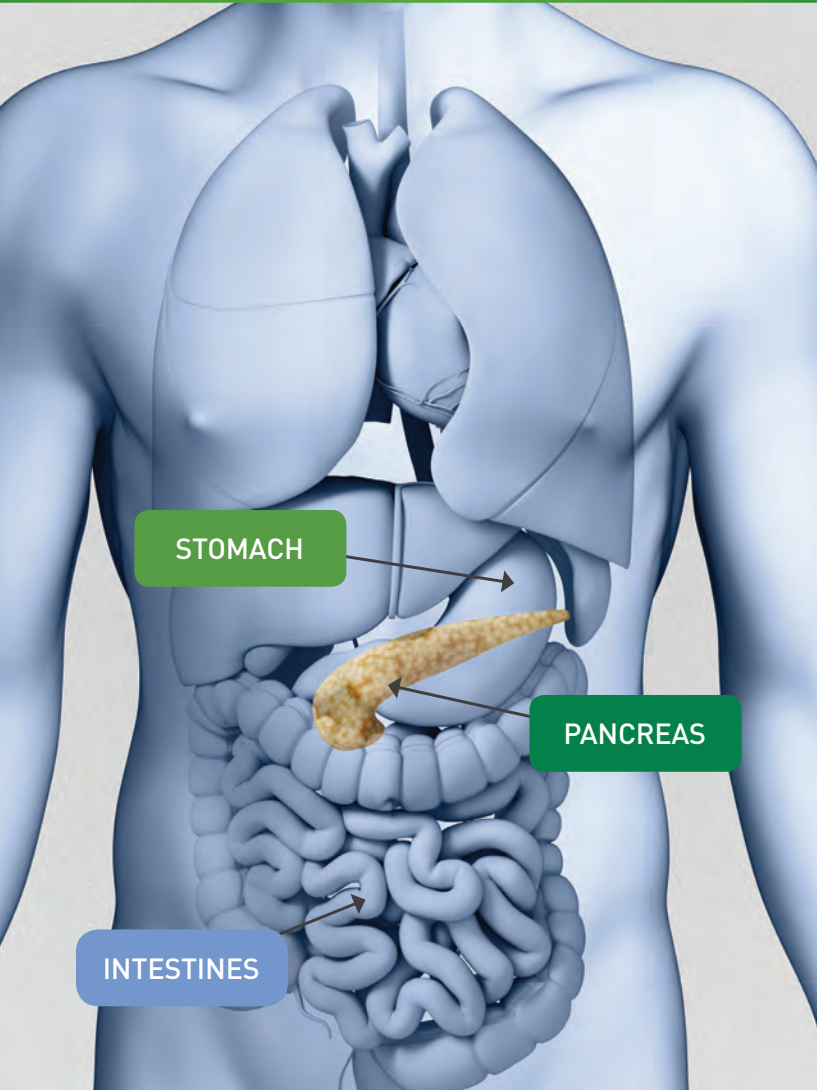
Important Information About  
What EPI Is and How It's Managed



**RUTGERS**

Cancer Institute  
of New Jersey

# What Is Exocrine Pancreatic Insufficiency (EPI)?



*EPI is a long-lasting medical condition that affects the pancreas. EPI upsets the way the body breaks down (digests) food and can cause stomach and bowel problems.<sup>1-4</sup>*

## Who Gets EPI?

- EPI is related to a few medical conditions that affect the pancreas. It can develop in some people who have<sup>1,5</sup>:
  - Chronic pancreatitis (swelling of the pancreas that lasts a long time)
  - Cystic fibrosis
  - Pancreatic cancer
  - Pancreatectomy (an operation to remove all or part of the pancreas)
  - Diabetes



# How Does EPI Affect the Pancreas?

- The pancreas is an organ that makes proteins called enzymes. These enzymes help people digest food so that their bodies can break down and absorb nutrients, like fat, protein, and carbohydrates<sup>3</sup>
- When you have EPI, your pancreas doesn't make enough enzymes. This means your pancreas can't break down the food you eat, and it can cause stomach and bowel problems<sup>1-4</sup>
  - You may find that you have diarrhea often, stools that are oily and smell bad, gas, bloating, and stomach pain. You also may notice that you're losing weight without knowing why

*People with EPI can't break down the food they eat, and they have trouble absorbing nutrients.*



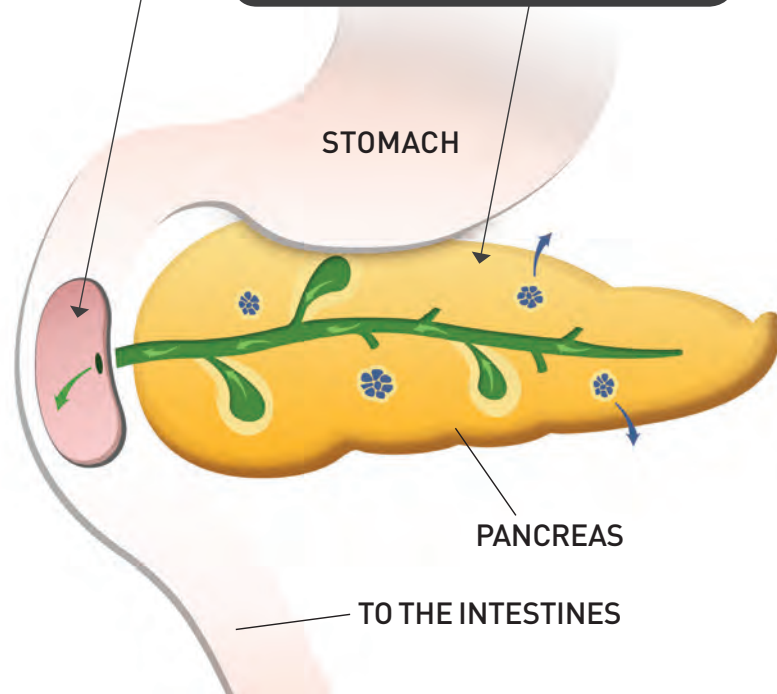
# The Pancreas Has 2 Important Jobs<sup>6</sup>

## THE EXOCRINE FUNCTION

makes digestive enzymes to help break down food so the body can absorb nutrients

## THE ENDOCRINE FUNCTION

makes insulin, a hormone that helps the body process the sugar we eat



In people with EPI, it is the **exocrine function** of the pancreas that is affected. And it is the undigested food moving through the intestines that causes the unpleasant symptoms of EPI.

# What Are the Symptoms of EPI?

Not everyone with EPI has the same symptoms. People with EPI may have one, some, or all of the problems listed below<sup>1-4</sup>:

- Diarrhea that happens often
  - EPI can cause undigested food to move too fast through the stomach and intestines, and this can lead to diarrhea
- Losing weight without trying
  - People with EPI can't digest and absorb nutrients in the food they eat, and this can cause weight loss
- Oily and bad-smelling stools called steatorrhea (*stee-at-uh-REE-uh*)
  - Because people with EPI aren't able to absorb all of the fat that they eat, fat from their food is passed in their bowel movements. If you have steatorrhea, your bowel movements can look oily and greasy. Stools also float, smell really bad, and are hard to flush. Not all people with EPI have steatorrhea
- Gas and bloating
  - Because people with EPI have trouble digesting food, they may feel gassy and bloated
- Stomach pain
  - Gas and bloating from EPI can cause stomach pain

***Remember, not everyone with EPI has the same symptoms, so talk to your doctor about all your stomach and bowel problems.***



## How Is EPI Diagnosed?

- The symptoms of EPI can be a lot like other medical conditions that affect the stomach and bowels.<sup>1-4,7-11</sup> This can sometimes make EPI hard to diagnose. That's why it's important to be open and honest with your doctor about all of your stomach and bowel problems
- Tell your doctor about:
  - Any medical conditions you have
  - What types of foods you eat
  - Any and all stomach and bowel problems you have, even if they seem embarrassing
  - When your symptoms started
  - Any weight you've lost
  - Any differences in how your stools look and smell or how often you have bowel movements
  - Any prescription or over-the-counter medicines or herbals you take
- Your doctor may also:
  - Ask you other questions about your health
  - Have you fill out a form to help rate your symptoms
  - Ask you to take a laboratory test to decide if you have EPI



***Only a doctor can decide if EPI is the cause of your symptoms.***

## Which Doctors Diagnose EPI?

- Only a doctor can decide if EPI is the cause of your symptoms. Your primary care doctor may be able to diagnose EPI. Or, he or she may ask you to see a specialist
- If your doctor asks you to see a specialist, it will likely be a gastroenterologist
  - Gastroenterologists are doctors who specialize in medical conditions that affect the pancreas, stomach, and bowels. They do many of the tests used to diagnose conditions related to the pancreas, including EPI

## How Is EPI Treated?

- If you have EPI, your doctor may prescribe pancreatic enzyme replacement therapy (PERT) for you. PERT is a medicine that replaces the enzymes your pancreas no longer makes to help you digest your food<sup>2</sup>
- PERT is a medicine that needs to be taken long term. This means that most patients with EPI will need to take PERT for the rest of their lives
- PERT has to be taken with food to work right. It's important to take it every day during meals and snacks<sup>12,13</sup>
- Along with PERT, your doctor may tell you to make sure that you eat a healthy diet and may also prescribe vitamins for you



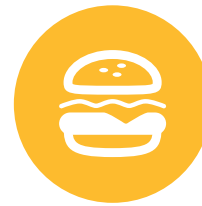
***PERT has to be taken with food to work right. It's important to take it every day during meals and snacks.***<sup>12,13</sup>

## How Do I Take My PERT?

Your PERT dosing is personal. Your doctor will decide on the right treatment for you based on your weight and lifestyle. Your daily dose is usually taken with each of your 3 meals plus 2 or 3 snacks during the day.<sup>13</sup>



BREAKFAST



LUNCH



DINNER



MORNING  
SNACK



AFTERNOON  
SNACK

You should see your doctor 2 weeks after you start taking PERT. Your doctor will ask you about how you have been feeling and what foods you have been eating. He or she may change your dose to make sure it is right for you.<sup>13</sup>

## Are There Side Effects of PERT?

Each type of PERT has its own side effects. Ask your doctor about the possible side effects of your medicine.



## What Else Do I Need to Do if I Have EPI?

When you have EPI, it's very important that you take good care of yourself so that you stay healthy. Below are some useful tips to help lead a healthier life with EPI.

- Take PERT the way the doctor tells you<sup>12,13</sup>
  - Take PERT every day during meals and snacks
  - Sometimes your PERT dose may need to be changed based on your diet, weight, and EPI symptoms. It's important to tell your doctor about the types of foods you eat, if you gain or lose weight, and how you feel at each visit
- Talk to your doctor about vitamins<sup>3</sup>
  - People with EPI may have problems absorbing fat-soluble vitamins such as A, D, E, and K, from their food. Ask your doctor if vitamin supplements are right for you
- Eat healthy food<sup>1,3</sup>
  - When you have EPI, it's hard for your body to take in nutrients from your food. That's why it's very important to eat a healthy diet
- Kick bad habits<sup>12</sup>
  - When you have EPI, smoking tobacco and drinking alcohol can cause more damage to your pancreas. All people with EPI should not smoke or drink

*It's important to tell your doctor about the types of foods you eat, if you gain or lose weight, and how you feel at each visit.*



## Where Can I Learn More About Exocrine Pancreatic Insufficiency (EPI)?

To learn more about EPI, visit the *identifyEPI* website at [www.identifyepi.com](http://www.identifyepi.com). You may also find the websites below helpful.

### **American Cancer Society**

*Pancreatic Cancer*

[www.cancer.org/cancer/pancreaticcancer/](http://www.cancer.org/cancer/pancreaticcancer/)

### **American Diabetes Association**

[www.diabetes.org](http://www.diabetes.org)

### **National Pancreas Foundation**

[www.pancreasfoundation.org](http://www.pancreasfoundation.org)

*Nutrition Advice and Recipes*

[www.pancreasfoundation.org/patient-information/nutrition-advice-recipes/](http://www.pancreasfoundation.org/patient-information/nutrition-advice-recipes/)

### **Pancreatic Cancer Action Network**

*Pancreatic Enzymes*

[www.pancan.org/section-facing-pancreatic-cancer/learn-about-pan-cancer/diet-and-nutrition/pancreatic-enzymes/](http://www.pancan.org/section-facing-pancreatic-cancer/learn-about-pan-cancer/diet-and-nutrition/pancreatic-enzymes/)

## Be Open and Honest With Your Doctor

Although no one likes to talk about bowel movements, it's very important that you tell your doctor about all of your stomach and bowel problems at each visit. Don't be embarrassed—the more you can tell your doctor about your symptoms, the better he or she can help you manage your EPI.



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