

# What is Nutrition Therapy for Pancreatitis?

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## What is pancreatitis?

**Chronic** (ongoing) **pancreatitis** is inflammation of the pancreas that gets worse over time leading to permanent damage. The pancreas plays a key role in digesting nutrients. However, when the pancreas is repeatedly inflamed or irritated, this can affect how it normally digests, absorbs, and uses nutrients.

## What are my nutrition goals?

Following a well-balanced diet can:

- Prevent nutrient loss
- Assist with maintaining a healthy weight
- Optimize blood sugar levels (avoid both low and high blood sugar)
- Improve your general wellbeing.

In addition to meals, you may need to use oral supplements, vitamins, and enzymes to improve your nutrition.

### 1. Eat a well-rounded diet

This helps ensure that you are getting enough calories and nutrients. According to the US Dietary Guidelines, goals for adults should typically be:

- **Grains:** 5 to 6 servings (1 ounce) each day.
  - 1 ounce = 1 slice of bread, 1 cup breakfast cereal, or ½ cup cooked pasta or rice
- **Vegetables:** 2½ to 3 cups each day. Eat a variety of vegetables (especially dark-green, red, and orange vegetables), beans, and peas.
- **Fruits:** 2 cups each day.
- **Protein foods (meat, poultry, fish, and beans):** 5 to 6 ounces each day.

- 1 egg or ¼ cup beans counts as 1 ounce
- **Milk and dairy foods:** 3 servings each day
  - 1 serving = 1½ ounces of cheese, 1 cup milk, or 1 cup yogurt
- **Avoid all alcohol**

**2. Follow these tips to ensure that you are getting enough nutrients each day:**

- Eat small, frequent meals
- Do not skip meals
- Choose softer foods to help with discomfort
- Do not drink alcohol
- Talk to your doctor about possibly taking nutritional supplements
- Use a food log to record meal and fluid intake
- Talk to your doctor or registered dietitian with any concerns

**3. Get your nutrient levels checked for nutrient deficiency**

What is nutrient deficiency?

**Malabsorption** (the inability of the body to absorb vitamins and minerals) may lead to a shortage of vitamins and minerals (nutrient deficiency). We recommend you get your nutrient levels tested frequently. Some nutrients to look out for include:

- **Fat-soluble vitamins:** Fat-soluble vitamins, which include A, D, E and K, are stored in the fatty tissue and liver. These may be deficient (lacking) depending on how little fat is being absorbed.
- **Vitamin D and Calcium:** Vitamin D and calcium are crucial vitamins for bone health. Vitamin D helps with the absorption of calcium, and both may be at higher risk for deficiency.
  - Weight-bearing exercise, such as walking and dancing, will also help promote bone health!

- **Vitamin B12:** B12 is often found in animal products and may be poorly absorbed.

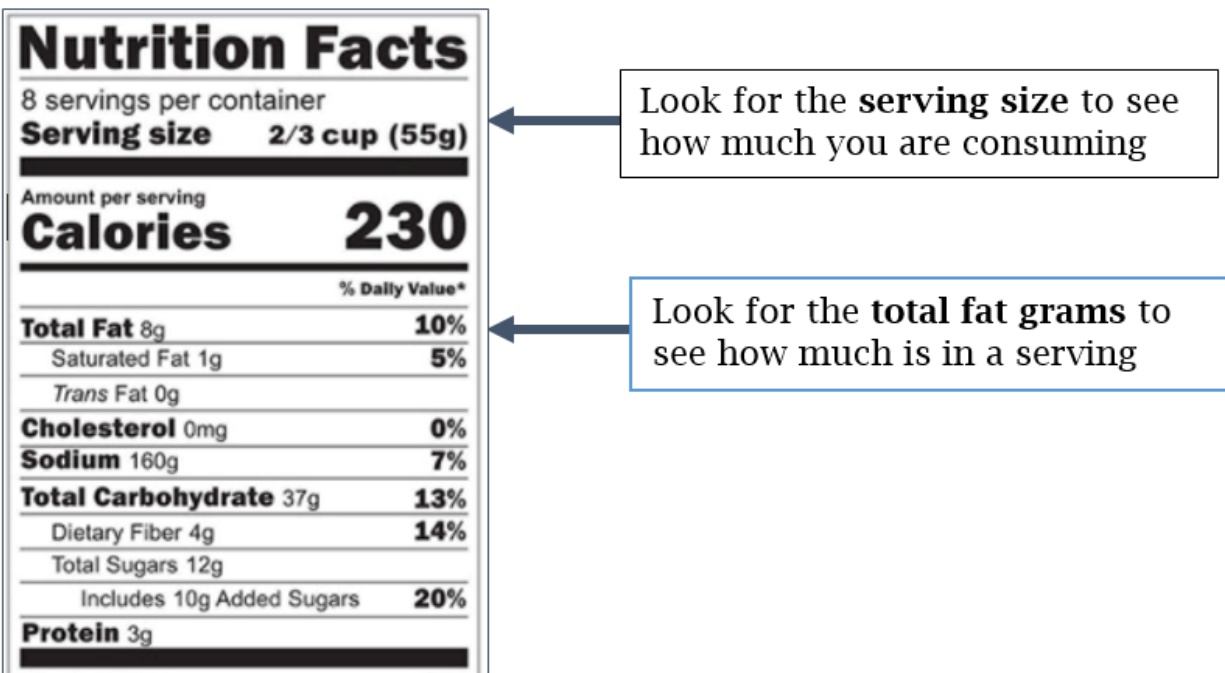
#### 4. Consume dietary fat throughout the day.

New dietary guidelines suggest that extreme fat restrictions are not helpful.

Due to a reduction in the proteins that help you digest and absorb fat (pancreatic enzyme secretions) you may have poor absorption of fat. If you are having symptoms of diarrhea or abdominal pain, avoid very high fat foods (for example: ribs, sausage, hot dogs, fried foods, donuts, pastries, biscuits). You can get enough fat without them and avoiding them may help with managing symptoms.

Aim to spread fat throughout the day at meals and snacks so your body can tolerate it. It may be helpful to check nutrition labels often and monitor for any symptoms that your body isn't tolerating the fat (belly pain, bloating, etc.) (See figure 1).

Figure 1

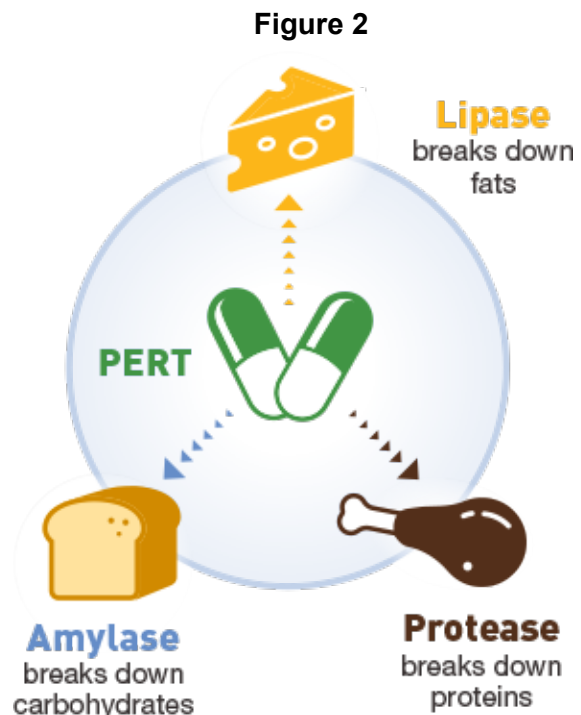


## What therapies are available?

### Pancreatic Enzyme Replacement Therapy (PERT):

If prescribed, pancreatic enzyme replacement therapy (PERT) can help your body break down food. PERT is taken before, during and after each meal and snack to help digest food (see figure 2).

Typically, PERT is taken in a dose that depends on the size of a meal or snack, so make sure to speak to your doctor or registered dietitian about how much to take and when.



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### Oral supplements:

Maintaining your weight is a key part of nutrition therapy for pancreatitis. If you notice any weight loss let your doctor or registered dietitian (RD) know. While food is always recommended first, a nutrition supplement may be appropriate if you experience a decrease in appetite or increase in symptoms.

**Sample 1-day menu:**

Breakfast	<ul style="list-style-type: none"> <li>• 6 ounces tomato juice</li> <li>• 4-inch oat bran bagel</li> <li>• 1 tablespoon cream cheese</li> </ul>	<ul style="list-style-type: none"> <li>• 1 egg</li> <li>• 1 cup skim milk</li> </ul> <p style="text-align: right;"><i>Meal fat content: 11g</i></p>
Lunch	<ul style="list-style-type: none"> <li>• 2 ounces turkey breast</li> <li>• 2 leaves lettuce</li> <li>• 2 slices tomato</li> <li>• 1 tablespoon mayonnaise</li> <li>• 1 teaspoon mustard</li> </ul>	<ul style="list-style-type: none"> <li>• 2 slices of wheat bread</li> <li>• 1 cup carrots</li> <li>• 1/2 cup pineapple</li> <li>• 1 cup skim</li> </ul> <p style="text-align: right;"><i>Meal fat content: 12g</i></p>
Snack	<ul style="list-style-type: none"> <li>• 1 cup blueberries</li> </ul>	<ul style="list-style-type: none"> <li>• 1 cup 2% milk</li> </ul> <p style="text-align: right;"><i>Meal fat content: 5g</i></p>
Dinner	<ul style="list-style-type: none"> <li>• 3 ounces tilapia</li> <li>• 2 slices polenta</li> <li>• 1/2 cup sliced zucchini</li> <li>• 1 whole wheat roll</li> </ul>	<ul style="list-style-type: none"> <li>• 1 teaspoon margarine</li> <li>• 1/2 cup 2% greek frozen yogurt</li> <li>• 1/4 cup sliced strawberries</li> <li>• Hot tea</li> </ul> <p style="text-align: right;"><i>Meal fat content: 9g</i></p>

Total fat content: 37 grams

**Sample vegetarian 1-day menu:**

Breakfast	<ul style="list-style-type: none"> <li>• 1 cup cooked oatmeal</li> <li>• 1-ounce almonds</li> </ul>	<ul style="list-style-type: none"> <li>• 1 cup blueberries</li> <li>• 1 cup plant-based milk of choice</li> </ul> <p style="text-align: right;"><i>Meal fat content: 20g</i></p>
Lunch	<ul style="list-style-type: none"> <li>• 1 cup kidney beans</li> <li>• 2 cups lettuce</li> <li>• 2 slices tomato</li> <li>• 1 cup carrots</li> </ul>	<ul style="list-style-type: none"> <li>• 1 tablespoon low-fat Italian dressing</li> <li>• 1 slice whole wheat bread</li> <li>• 1/2 cup pineapple</li> </ul> <p style="text-align: right;"><i>Meal fat content: 4g</i></p>
Snack	<ul style="list-style-type: none"> <li>• 1 apple</li> </ul>	<ul style="list-style-type: none"> <li>• 1 cup plant-based milk of choice</li> </ul> <p style="text-align: right;"><i>Meal fat content: 4g</i></p>
Dinner	<ul style="list-style-type: none"> <li>• ½ cup meatless chicken</li> <li>• 2 slices polenta</li> <li>• ½ cup tomato sauce</li> <li>• ½ cup mushrooms</li> <li>• ½ cup zucchini</li> </ul>	<ul style="list-style-type: none"> <li>• 1 whole wheat roll</li> <li>• 1 teaspoon margarine</li> <li>• ½ cup frozen yogurt</li> <li>• ¼ cup strawberries</li> </ul> <p style="text-align: right;"><i>Meal fat content: 8g</i></p>

Total fat content: 36 grams

**Sample vegan 1-day menu:**

Breakfast	<ul style="list-style-type: none"> <li>• 1 cup cooked oatmeal</li> <li>• 1-ounce almonds</li> </ul>	<ul style="list-style-type: none"> <li>• 1 apple</li> <li>• 1 cup plant-based milk of choice</li> </ul> <p><i>Meal fat content: 20g</i></p>
Lunch	<ul style="list-style-type: none"> <li>• 1 cup kidney beans</li> <li>• ½ cup corn</li> <li>• 2 cups lettuce</li> <li>• 2 slices tomato</li> </ul>	<ul style="list-style-type: none"> <li>• 1 cup carrots</li> <li>• 1 tablespoon low-fat Italian dressing</li> <li>• 1 cup plant-based milk of choice</li> </ul> <p><i>Meal fat content: 6g</i></p>
Snack	<ul style="list-style-type: none"> <li>• 1 orange</li> </ul>	<ul style="list-style-type: none"> <li>• 1-ounce pumpkin seeds</li> </ul> <p><i>Meal fat content: 15g</i></p>
Dinner	<ul style="list-style-type: none"> <li>• ¾ cup meatless meatballs</li> <li>• 2 slices polenta</li> <li>• ½ cup tomato sauce</li> <li>• ½ cup mushrooms</li> </ul>	<ul style="list-style-type: none"> <li>• ½ cup zucchini</li> <li>• 1 teaspoon olive oil</li> <li>• 1 whole wheat roll</li> <li>• 1 cup strawberries</li> </ul> <p><i>Meal fat content: 15g</i></p>

Total fat content: 56 grams

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