



Dietary and Nutritional Recommendations for Patients with Gastroparesis

Tips for overcoming nausea, vomiting, and stomach fullness

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Gastroparesis, or paralysis of the stomach, refers to a stomach that empties slowly. Gastroparesis is characterized by symptoms from the delayed emptying of food, namely: bloating, nausea, vomiting or feeling full after eating only a small amount of food. Gastroparesis can occur as a result of several conditions, especially in people with diabetes. However, in many individuals with gastroparesis, the cause of the disorder is not known. It is more common in women and can have a major impact on quality of life.

The general principles for treating symptomatic gastroparesis involve several strategies. First, attempts are made to correct fluid and nutritional deficiencies that may have occurred from chronic nausea and vomiting, and/or the inability to eat normally. Second, treatments are given for the unpleasant symptoms that accompany gastroparesis. Third, the underlying cause of gastroparesis, such as diabetes, thyroid disorders, etc., is treated if possible. The treatment of patients with gastroparesis generally relies on dietary modifications, medications that enhance gastric emptying, and medications that reduce nausea and vomiting.

A number of dietary recommendations have been developed based on the understanding of normal stomach emptying of different types of foods. These dietary recommendations are likely to be of greatest benefit to those with mild to moderate disease, but are also tried in patients with more severe gastroparesis to complement other medical treatments. It is recommended that anyone with gastroparesis, but especially those with other medical problems such as diabetes or kidney disease, seek dietary counseling with a dietician to help individualize nutrition therapy and maximize nutritional benefits.

Basic Dietary Guidelines for Patients with Gastroparesis:

- Small, frequent meals. Reducing the meal size reduces the distention of the stomach from the meal. By eating smaller meals, patients may not feel as full or bloated and the stomach may empty faster. With the reduction in meal size, increasing the number of meals to 4-6 per day is needed to maintain adequate nutritional intake.
- Avoid foods high in fat. Fat can delay emptying of the stomach. Eating less fat-containing foods will decrease the amount of time food stays in the stomach. However,

fat-containing liquids, such as milkshakes, may be tolerated and provide needed calories.

- A diet low in fiber is suggested. Fiber delays gastric emptying. In addition, fiber may bind together and cause a blockage of the stomach, called a bezoar in some patients. Examples of high fiber foods that should be avoided include oranges, berries, green beans, potato peels, apples, sauerkraut, and Brussels sprouts. Fiber supplements for treatment of constipation should also be discontinued if possible.
- Chew food well before swallowing. Patients should avoid foods that may not be easily chewed such as broccoli, corn, popcorn, nuts, and seeds. Solid food in the stomach does not empty well. Dental problems, such as missing or broken teeth, may lead to poorly chewed food; this may add to the problem of inadequate breakdown of food into smaller particles in the stomach for passage into the small intestine for absorption.
- Taking fluids throughout the meal and sitting upright or walking for 1-2 hours after meals may help in the emptying of the meal from the stomach.
- A daily multivitamin/mineral supplement can be taken if dietary intake is inadequate.

If these measures are ineffective, the patient may be advised to consume the bulk of their meals as semi-solids or liquids, such as puréed foods or soups. Stomach emptying of liquids is often normal in patients with gastroparesis. Calorie-containing drinks, such as Hawaiian Punch or Hi C, provide fluid and calories, hence are better than water alone. Some options while on a liquid diet include milk, instant breakfast, milkshakes, yogurt, puddings, custard, cereals, and smoothies. To meet the nutritional needs of patients, it may be necessary to supplement the diet with a commercially available liquid nutrient preparation that is low in fiber such as Ensure, Boost, or even baby foods. Blenderized foods prepared by the patient may also be used as a liquid nutrient source. Any food can be blenderized; solid foods will need to be thinned with some type of liquid, such as broth, milk, juice, water. Remember to clean the blender well after each use.

There are quite a few medications that can delay stomach emptying. Ask your doctor if any of the medications you are taking could be slowing down your stomach emptying.

If the gastroparesis is due to diabetes, an important goal is to achieve or maintain good glucose control. This is achieved more easily by frequent monitoring of blood sugar levels and adjustment of insulin. Keeping your blood sugar under control may help stomach emptying. Let your doctor know if your blood sugar runs > 200 on a regular basis.

Patients with kidney disease need to follow additional dietary advice. The dietary restrictions will depend on your kidney doctor's assessment. Adequate protein is needed for nourishment, but too much may increase a waste product called urea that your kidneys may not be able to get rid of. High sodium (salt) intake can increase blood pressure and fluid retention. Restriction of potassium varies depending on the stage of kidney disease. Generally, one should avoid high potassium foods such as bananas, oranges, kiwi, leafy greens, and broccoli. Kidneys may not be able to remove phosphorous from the blood. High phosphorous foods include dried beans, peas, nuts, and liver.

Patients with chronic symptoms of gastroparesis, despite these attempts at dietary intervention and medication, may develop dehydration and malnutrition. Occasionally, patients need an alternative method to obtain fluid and nutrition. This might involve delivering fluids and nutrients directly into the small intestine, bypassing the stomach, using a jejunostomy tube. In severe cases, intravenous fluids and nutrition may need to be provided.

For more in-depth diet information, go to:

- University of Virginia Health System Digestive Health Center web site at <http://www.healthsystem.virginia.edu/internet/digestive-health/nutrition/patientedu.cfm>.
- American Dietetic Association web site their web site at www.eatright.org or by telephone at 1-800-366-1655

Table 1: Dietary Recommendations for Gastroparesis

- Eat smaller, more frequent meals
- Eat less fatty foods
- Avoid fiber
- Avoid foods that cannot be chewed well

Table 2: Additional Dietary Recommendations for Gastroparesis

- Liquid nutrients are better tolerated over solid food. Good glucose control in patients with diabetes (aim for blood sugars < 180 mg/dl)
- Avoid medications that can delay stomach emptying such as:
 - Aluminum-containing antacids (Amphojel)
 - Narcotic pain medications (Percocet, Tylenol #3, Tylox, Oxycontin, and others)
 - Anticholinergic agents (Bentyl, Levsin, Elavil, and others)
 - Bulk-forming agents (Metamucil, Perdiem, Fibercon, and others)

Table 3: Foods that are encouraged

- Breads, cereals, crackers, ground or pureed meats
- Vegetables – cooked and, if necessary, blenderized/strained
- Fruits – cooked and, if necessary, blenderized/strained
- Juices, beverages, and milk products if tolerated

Table 4: High fiber foods that should be avoided

- Fruits – apples, berries, coconuts, figs, oranges, persimmons
- Vegetables – Brussels sprouts, green beans, green peas, lettuce, potato peels, sauerkraut
- Bran/whole grain cereals
- Nuts and seeds
- Legumes/dried beans – baked beans, lentils, soy beans

A sample diet for patients with gastroparesis

Sample meal plan for 6 small meals

Breakfast

- 1 cup cream of wheat cereal
- ½ cup skim milk
- ½ cup grape juice
- 1 scrambled egg

Snack

- 10 ounces instant breakfast with skim milk

Lunch

- ½ cup vegetable soup
- ½ turkey sandwich
- ½ cup applesauce
- ½ cup milk
- 1 Tbsp mayonnaise

Snack

- 10 ounces banana shake made with plain or vanilla yogurt, milk, and sugar

Dinner

- 2-3 ounces baked chicken or fish
- ½ cup mashed potatoes
- 1 tsp margarine
- ½ cup spinach
- ½ cup milk
- ½ cup fruit cocktail

Snack

- ½ cup pudding, custard, or gelatin

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