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# Understanding Diabetic Gastroparesis

Gastroparesis is when food moves through the stomach more slowly than normal. It's also called delayed gastric emptying.

## How to say it

GAS-troh-puh-REE-sis

## What causes diabetic gastroparesis?

The vagus nerve helps control how food moves through the digestive system. This nerve can be damaged from long-term (chronic) high blood sugar from diabetes that is not well treated. Then food moves more slowly. Or it stops moving. Gastroparesis can also be caused by injury to the nerves and smooth muscle cells that line the stomach wall. These work to push the food along for digestion.

## Symptoms of diabetic gastroparesis

Symptoms can include:

- Nausea
- Vomiting
- Feeling full after eating a small amount of food
- Belly pain or cramps
- Heartburn
- Belly bloating
- Weight loss
- Loss of appetite
- High or low blood sugar levels

## Diagnosing diabetic gastroparesis

Your healthcare provider will give you a physical exam and ask about your past health. You may have tests such as:

- **Blood tests.** These tests check your levels of different blood cells. They also measure your chemical and mineral (electrolyte) levels.
- **Upper GI (gastrointestinal) series.** This is also called a barium swallow. This test checks your food pipe (esophagus) and your stomach. It also looks at the first part of your small intestine (duodenum). The test includes swallowing a liquid that can be seen on X-rays. The liquid is then tracked through your stomach using X-rays.

- **Radioisotope gastric-emptying scan.** This test lets the provider see food in your stomach during the scan. They can see how quickly food leaves your stomach. Food marked with a radioisotope is swallowed and tracked by a scanner to find out how long it takes to get through the stomach.
  - **Gastric emptying breath test.** This test measures how fast a meal containing a certain nonradioactive form of carbon leaves your stomach. The carbon is absorbed in the upper GI tract. It's then exhaled in your breath.
  - **Gastric emptying of radiopaque markers.** This test lets the provider see how quickly small plastic markers that are mixed with a meal leave your stomach. The markers are seen on X-rays.
- **Gastric manometry.** This is also called antroduodenal manometry. This test checks the movement of muscles in your stomach and small intestine.
- **Upper endoscopy.** The healthcare provider uses a scope to look at the inside of your esophagus, stomach, and duodenum, while you are sedated. This test makes sure you don't have other conditions besides gastroparesis that could be causing your symptoms.
- **Wireless capsule study.** For this test, you swallow a small capsule that has a tiny camera. This test measures stomach emptying.
- **Scintigraphic gastric accommodation test.** This test also uses food marked with a radioisotope tracked by a scanner to measure your stomach contents before and after a meal. It checks how well your stomach relaxes after you eat.

## Treatment for diabetic gastroparesis

Your healthcare provider will create a care plan for you that may include:

- **Taking medicines.** You may be prescribed medicine to help with blood sugar levels. Or you may be given medicine to treat nausea and vomiting. You may also take medicines that act on the muscles in the digestive system. Your healthcare provider may prescribe a few medicines to see which ones work best.
- **Stopping some medicines.** Your provider may tell you to stop taking any medicines that slow digestion.
- **Changing your diet.** Making changes to your eating habits can help control the problem. (See the section below on changing your diet.)
- **Gastric neurotransmitter.** This device may help control nausea and vomiting. It's put into your body by surgery. It helps stimulate the stomach muscles.
- **Feeding by IV (parenteral nutrition).** This is for severe cases when a person can't take food by mouth. Instead, nutrients are put right into your veins. A tube is put into 1 of your chest veins during a surgery. A bag with liquid nutrients or medicine is joined to the tube several times daily.
- **Surgery.** In very severe cases, you may need surgery called a jejunostomy. A feeding tube is put through your belly into your small intestine. This tube lets nutrients go right into your small intestine instead of your stomach.

## Changing your diet

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These changes may help reduce the problem:

- Eat 6 smaller meals a day instead of 3 large meals.
- Have a few liquid meals a day instead of solid food. You may need to do this until your blood sugar levels are stable.
- Don't eat foods high in fat. This includes fried food, fatty meats, and high-fat dairy foods. These can slow your digestion.
- Don't eat foods high in insoluble fiber. This includes beans and many fruits and vegetables. These can be hard to digest.

Talk with your healthcare provider or a dietitian about an eating plan that is best for you.

## **Possible complications of diabetic gastroparesis**

Food that stays in the stomach for too long can cause problems. Food can ferment in the stomach. This can cause bacteria to grow. Undigested food can harden into a lump called a bezoar. This can cause nausea and vomiting. In some cases, it may block food from passing from the stomach to the small intestine. Gastroparesis can make it hard to manage blood sugar levels. It can also cause problems with vitamins and minerals being absorbed into the body. And it can make it hard to keep a healthy weight.

## **Living with diabetic gastroparesis**

For many people, gastroparesis is a lifelong condition. With diabetes, the main goal is to control your blood sugar levels. But if you don't have a good idea of when food will be leaving your stomach to go into your bloodstream, it may be hard to know how much insulin to give yourself and when. Some diabetes medicines taken by mouth may be affected by this health problem. Follow up with your healthcare provider as advised. You may need regular visits to manage your health.

## **When to call your healthcare provider**

Call your healthcare provider if you have any of the following:

- Severe belly pain
- Can't keep down food or liquids
- Weight loss
- Can't control your blood sugar (either too high or too low)
- Other symptoms as advised by your healthcare provider