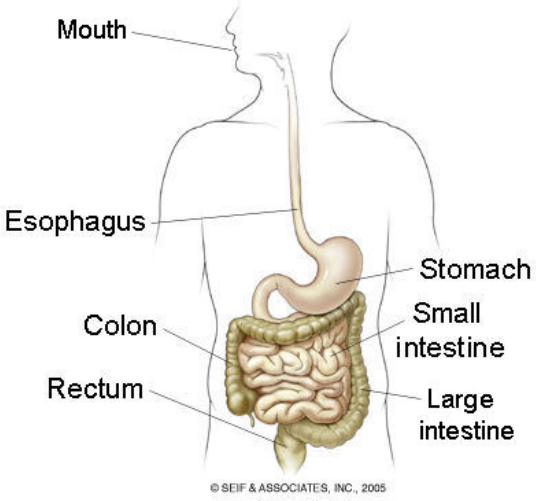
Diabetes and Gastroparesis

Gastroparesis is also called slowed stomach emptying (*delayed gastric emptying*). It is a condition in which the stomach takes too long to empty its contents. It often happens in people with diabetes.



CAUSES

Gastroparesis happens when nerves to the stomach are damaged or stop working. When the nerves are damaged, the muscles of the stomach and intestines do not work normally. Then, the movement of food is slowed or stopped. High blood glucose (*sugar*) causes changes in nerves and can damage the blood vessels that carry oxygen and nutrients to the nerves.

RISK FACTORS

- Diabetes.
- Post-viral syndromes.
- Eating disorders (*anorexia* or *bulimia*).
- Surgery on the stomach or vagus nerve.
- Gastroesophageal reflux disease (rarely).
- Smooth muscle disorders such as amyloidosis and scleroderma.
- Metabolic disorders, including hypothyroidism.
- Parkinson's disease.

SYMPTOMS

- Heartburn.
- Feeling sick to your stomach (*nausea*).
- Vomiting of undigested food.
- An early feeling of fullness when eating.
- Weight loss.
- Belly (*abdominal*) bloating.
- Erratic blood glucose levels.
- Lack of appetite.
- Gastroesophageal reflux.
- Spasms of the stomach wall.

COMPLICATIONS

- Bacterial overgrowth in stomach. Food stays in the stomach and can ferment and cause germs (*bacteria*) to grow.
- Weight loss. You have difficulty digesting and absorbing nutrients.
- Vomiting.
- Obstruction in the stomach. Undigested food can harden and cause nausea and vomiting.
- Blood glucose fluctuations caused by inconsistent food absorption.

DIAGNOSIS

The diagnosis of gastroparesis is confirmed through one or more of the following tests:

- Barium X-rays and scans. These tests look at how long it takes for food to move through the stomach.
- Gastric manometry. This test measures electrical and muscular activity in the stomach. A thin tube is passed down the throat into the stomach. The tube contains a wire that takes measurements of the stomach's electrical and muscular activity as it digests liquids and solid food.
- An endoscopy is a procedure done with a long, thin tube called an endoscope. It is passed through the mouth and gently guides it down the esophagus into the stomach. This tubes helps the caregiver look at the lining

of the stomach to check for any abnormalities.

- Ultrasound. This can rule out gallbladder disease or pancreatitis. This test will outline and define the shape of the gallbladder and pancreas.

TREATMENT

- The primary treatment is to identify the problem (i.e. diabetes) and to help control blood glucose levels. Treatments include:
  - Exercise.
  - Medications to control nausea and vomiting.
  - Medications to stimulate stomach muscles.
  - Changes in what and when you eat.
  - Having smaller meals more often.
  - Eating low fiber forms of high fiber foods (i.e. cooked vegetables instead of raw).
  - Eating low fat foods.
  - Liquids are easier to digest.
- In severe cases, feeding tubes and intravenous feeding may be needed.
- It is important to note that in most cases, treatment does not cure gastroparesis. It is usually a lasting (*chronic*) condition. Treatment helps you manage the condition so that you can be as healthy and comfortable as possible.

NEW TREATMENTS

- A gastric neurostimulator has been developed to assist people with gastroparesis. The battery-operated device is surgically implanted. It emits mild electrical pulses to help improve stomach emptying and to control nausea and vomiting.
- The use of botulinum toxin has been shown to improve stomach emptying by decreasing the prolonged contractions of the muscle between the stomach and the small intestine (*pyloric sphincter*). The benefits are temporary.

SEEK MEDICAL CARE IF:

- You are having problems keeping your blood glucose in goal range.
- You are having nausea, vomiting, bloating or feelings of fullness with eating.
- Your symptoms do not change with a change in diet.

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