The word gastroparesis comes from the Latin words gastro for stomach and paresis for weakness. So it means having a weak stomach, or more precisely, a stomach that has slow motility and doesn’t empty well. It can cause several different symptoms and can often be treated effectively.

**How the stomach works**
To understand what goes wrong in gastroparesis, it’s first important to learn how the stomach is supposed to work. The stomach has two main functions. First, it temporarily stores the food and fluids we eat. Second, it processes the food we eat by grinding it up into little particles and then squirting it into the small intestine where digestion and absorption can take place.

The grinding and the squirting of the food requires that waves of muscle contractions flow through the stomach from top to bottom. These waves are triggered by an electrical current that starts in an area of the stomach called the pacemaker. The waves occur about three times a minute in a normal stomach.

**What causes gastroparesis?**
Gastroparesis occurs when the stomach’s pacemaker slows down. The electrical waves that cause the muscle contractions occur less frequently. This makes the stomach less able to grind-up the food and slower to empty the food into the small intestine. In addition, some diseases cause the stomach muscles to be weak and not respond to a normally functioning pacemaker.

The most common causes for gastroparesis are:

1. Diabetes
2. Thyroid disease
3. Medications
4. Stomach surgery
5. Neurologic diseases such as Parkinson’s Disease
6. Autoimmune diseases like lupus
7. Diseases that may infiltrate the stomach like amyloidosis and scleroderma, neuropathy and Multiple Sclerosis
8. Viral infections like Norwalk and rotavirus (called idiopathic gastroparesis)

However, about 40% of the time no cause for the gastroparesis is found.

**Symptoms**

The most common symptoms of gastroparesis are bloating, belching, nausea, and feeling full after only a few bites of food. Sometimes there will be mild upper abdominal pain. Vomiting, regurgitation and heartburn can also occur.

**Diagnosis**

Once gastroparesis is suspected based on symptoms and history, the doctor will perform specific tests to make the diagnosis. An upper endoscopy is usually performed to insure that there is no blockage that is preventing the emptying of the stomach. Endoscopy involves passing a camera on the end of a long flexible tube into and beyond the stomach while the patient is sedated.

The most specific test to make the diagnosis is a gastric emptying study. In this test, the patient eats a meal that is labeled with a tracer that a special scanner can detect. The patient’s stomach is scanned periodically for about 4 hours after the meal. Normally, one-half of the solid portion of the meal should be emptied from the stomach within 90 minutes.

**Treatment**

If an underlying disease is found that is causing the gastroparesis, it needs to be treated effectively. For example, a patient’s diabetes may need tighter control or their thyroid medication may need to be adjusted.

Sometimes, effective control of gastroparesis can be achieved by changes in diet. Foods that are high in fat should be avoided since they cause a marked delay in stomach emptying. Fibrous foods tend to stay in the stomach longer and should be avoided (e.g. broccoli, cabbage). Fluids are emptied faster from the stomach so liquid supplements like Ensure or milkshakes can be used. Small, more frequent meals are better tolerated so changing the diet to 4-6 small meals a day can work well.
Medications
There are three medications available to help stimulate stomach emptying. They are taken approximately 30 minutes before meals:

1. Metoclopramide
2. Domperidone
3. Erythromycin

Each of these drugs have multiple side-effects and patients should discuss them with their doctor to determine which is best and safest for them.

Summary
Gastroparesis is a common medical problem that can cause disturbing symptoms. The diagnosis is made by endoscopy and special imaging studies. The disease can usually be treated effectively by controlling the underlying problem, changing the diet, or using medication.