Gastroparesis

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Gastroparesis is the condition in which the stomach moves poorly, and is delayed in its emptying of liquids and especially solids. In this surprisingly common condition, patients may experience abdominal discomfort, bloating, foul gas or bad breath, a feeling of early satiety (feeling full early in a meal), and even vomiting of old eaten food hours to days after a meal. Underrecognized, this condition will fail to improve when treated with standard anti-ulcer remedies. Appropriate diagnosis may lead to treatment with good symptomatic improvement.

What are some causes of gastroparesis?
Gastroparesis has many causes, including diabetes, thyroid disorders, abnormalities in the electrolytes (salts) in your bloodstream, recent viral infection, stomach or esophagus surgery, or following radiation therapy to chest or upper abdomen. Some rare diseases which effect the muscles of the gastrointestinal tract may lead to poor motion of the stomach as well.

The most common cause of gastroparesis is "idiopathic", indicating that a cause may not be identified.

How is gastroparesis diagnosed?
Your physician will recommend an upper endoscopy to check that you do not have a blockage of the outflow of food from your stomach by ulcer, scar, or cancer. If a blockage is noted during this procedure, it can be dilated open at the time and biopsies obtained.

If no blockage is seen, your gastroenterologist may see hints that gastroparesis exists: if there is still food in your stomach during the exam hours after your have eaten, if you have a large pool of gastric secretions, or if the stomach seems dilated or moves (peristalsis) slowly if at all. Unfortunately, these findings all just hint at the diagnosis of gastroparesis and are not considered "diagnostic".

What is a Gastric Empyting Study?
The definitive test for gastroparesis is the Gastric Empyting Study, which measures the time for your stomach to empty of solid food. The most common of these, called Nuclear Medicine Gastric Empyting Study, uses a small amount of radioactive tracer mixed into oatmeal, egg salad or beef stew.

After eating the radioactive food on an empty stomach, a monitor like a Geiger counter then can count the amount of radioactivity remaining in your stomach over time. The stomach generally empties quickly of liquids, and much more slowly of solids, generally taking from 20 to 50 minutes to empty depending on the amount of fat and fiber in the meal. The oatmeal, egg salad, or stew have been made in a standardized fashion and amount, so emptying time (called "T one-half") can be directly measured.

What if I have diabetes and gastroparesis?
Poor gastric emptying with diabetes is very common, occurring in 30 to 50 percent of diabetics either occasionally or chronically. It is generally seen in diabetes patients who have already developed other complications of their diabetes, such as numbness of the legs or arms (diabetic peripheral neuropathy).

It is essential to try to control poor gastric emptying in diabetes, as the irregular emptying of the stomach makes control of blood sugar difficult. Poor control of blood sugar further worsens the ability of the stomach to move.

What if I experienced "flu-like" symptoms before my symptoms of gastroparesis started?
Recently, it has been discovered that about 20 percent of people previously diagnosed with idiopathic gastroparesis had symptoms of diarrhea, nausea, vomiting, fevers, headache, fatigue or muscle aches shortly before the onset of the gastroparesis symptoms. It is believed that a viral illness has caused temporary poor function of the nerves to the gastrointestinal tract. Most people affected with post-viral gastroparesis will experience full recovery in 6 to 24 months.

Standard treatment for gastroparesis is indicated until the expected spontaneous improvement.

What is the treatment of gastroparesis?
The first concern is to identify treatable causes of gastroparesis, with laboratory to look for undiagnosed diabetes, thyroid disease, or salt imbalance. If gastroparesis of one of these causes is identified, appropriate treatment will lessen or eliminate the problem.

Treatment for all patients with gastroparesis is based on medications known as "prokinetics", or drugs which improve the movement of the gastrointestinal tract. Prokinetic drugs include Erythromycin (an antibiotic which often causes nausea as it increased the movement of the stomach, used in gastroparesis for this effect rather than its usual antimicrobial effect), Metoclopramide (known as Reglan, this drug sometimes cause irritability, depression, or rare uncontrollable facial tics), or Domperidone (a prokinetic not yet released in the US).

Updated 04/06

Prokinetic drugs are generally taken fifteen to thirty minutes before meals to allow them to enter into the blood stream and start the movement of the stomach before food enters it. Sometimes, the liquid version of the drug is prescribed, as with limited movement of the stomach the liquid form may more readily move through the stomach to the small intestine where it is absorbed.

Rarely, intravenous or subcutaneous injections of these drugs are necessary to get the stomach to empty.

Does diet play a role in treatment?
Dietary management is essential in the treatment of gastroparesis. Even with prokinetic medications the stomach empties liquids much more readily than solids.

Diets high in fiber or fat empty quite slowly, leading to the symptoms of abdominal discomfort, bloating, foul gas or bad breath, a feeling of early satiety (feeling full early in a meal), and even vomiting of old eaten food hours to days after a meal.

People with gastroparesis do well on a diet which is "low residue", or high in processed food and starch, low in fiber, uncooked vegetables or fruits. I like to call this the "Twinkie Diet", as it generally requires that you avoid foods that doctors routinely request that you eat for good health!

A few rare patients with gastroparesis will need to be maintained on a liquid diet or milkshake diet, and rarer still are patients that require a feeding tube to be placed to bypass the stomach altogether.

What are some possible complications of gastroparesis?
Side effects of gastroparesis include the usual symptoms, as well as poor sugar control, reflux and aspiration of ingested food, weight loss due to poor dietary intake, and bezoar formation.

A bezoar is a ball of plant fiber which is undigested, cannot get out of your stomach and simply continues to grow until removed endoscopically. A similar occurrence in the animal kingdom are the furballs your cat may at times regurgitation on your carpet (called "trichobezors").

What is the future of gastroparesis?
New prokinetic agents, some with longer duration of action, continue to be developed. At a few centers in the US, gastric pacemakers may be implanted to regulate the stomach, a pacemaker similar to those which control the rhythm of the heart. It is hoped that in the future these pacers will deliver the appropriate electrical rhythm to the stomach to allow normal emptying.

What foods should be avoided on a low residue diet?

Foods high in fiber or "roughage" generally recommended by physicians for your good gastrointestinal and cardiovascular health are to be avoided in this condition.

Fresh fruits and vegetables and unstrained fruit juices with pulp are difficult for a poorly moving stomach to empty, although cooked, canned or frozen fruits or vegetables are permitted. The canning or freezing process breaks down the cell wall and makes the product less fibrous.

Dried peas, beans, nuts, popcorn and raisins, as well as coconut will cause symptoms and should be eliminated.

Whole grain breads, crackers or muffins, graham crackers, and breads containing seeds, nuts or bran should be avoided.

Tough meat with gristle and peanut butter may cause symptoms.

Foods which are well tolerated include pastas, refined breads, low fiber fruits such as bananas, and canned or baked fruits such as pineapple, plums, cherries, applesauce or baked apples (without skins), peaches, apricots, and mandarin oranges. Vegetables include all cooked or canned vegetables as well as low fiber vegetables like beets, cauliflower, asparagus, and iceberg lettuce. Fruits and vegetables should be limited to three half cup servings of each per day as tolerated.

At times it seems difficult to eat a balanced, flavorful diet with this condition with full compliment of vitamins needed for good health. If you find this to be the case, please ask your doctor to refer you to a registered dietician for a consultation. Your dietician can help you make good dietary choices to maintain your health and to achieve variety in your diet.

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Updated 04/06