Gastroparesis

What is Gastroparesis?
Gastroparesis refers to a delay in emptying of stomach contents into the small intestine. This can be caused by a change in the ability of the nerves of the stomach to receive information or a change in the nerves that send information to the stomach telling it to contract or empty. Another cause includes the stomach muscles not being able to contract. This decreased motility can be limited to the stomach or can affect other areas of the gastrointestinal tract.

What causes Gastroparesis?
Gastroparesis can occur spontaneously, or as a result of:
- Thyroid abnormalities
- Diabetes Mellitus
- Infection
- Gastro-intestinal surgery
- Neurological diseases
- Pregnancy
- Constipation
- Motion sickness
- Medications that have side-effects of delayed stomach emptying
Other causes include: Alcohol, tobacco, marijuana, Total Parenteral Nutrition (TPN), certain muscle disorders, eating disorders (anorexia nervosa, or bulimia nervosa).

What are the Symptoms?
Symptoms of gastroparesis include nausea, vomiting, early satiety, weight loss, upper abdominal bloating, heartburn and epigastric pain after eating.

How do you know if you have gastroparesis?
The evaluation for gastroparesis includes:
- Blood tests that look at thyroid function, tests that evaluate for diabetes (blood sugar, hemoglobin A1C) kidney function, electrolytes, and blood tests that look at nutritional status including a blood count, and comprehensive metabolic profile.

Radiological Tests include:
- Gastric Emptying Study. This is a test performed in the nuclear medicine department at the hospital and involves eating eggs or oatmeal that are labeled with a tiny amount of radioactive material that can be seen by the scanner. It evaluates how long it takes the stomach to empty semi-solid material into the small intestine. The time found is then compared to the normal emptying rates.
• **EGD.** This is a procedure in which we endoscopically examine your esophagus, stomach, and duodenum for any abnormalities or issues that may be contributing to your symptoms. Biopsies may be taken during the procedure if felt to be necessary. This is performed in an endoscopy center at Minnesota Gastroenterology and does typically require sedation.

• **An Upper GI x-ray.** This involves drinking barium that coats the stomach, to evaluate the lining and structure. It can also show if there is something blocking the stomach from emptying.

**How is gastroparesis treated?**

• **Dietary changes.** Eating smaller, more frequent meals is encouraged, as opposed to the 3 meals a day type of diet. A low fat diet is encouraged, as meals higher in dietary fat may cause delay of stomach emptying. A diet low in dietary fiber has also been shown to decrease the symptoms of gastroparesis. Liquids empty more easily from the stomach, so the use of supplements like Boost or Ensure is encouraged.

• **Medications.** Anti-nausea and prokinetic medications short-term treatment options used for management of gastroparesis. Anti-emetics (anti-nausea) medications include Zofran, Compazine, Phenergan and Tigan. These are available in pill form, SoluTab, IV and suppositories. Prokinetics promote motility of the stomach.

• **Feeding Tubes are also used in the treatment of gastroparesis.** A tube is usually placed through the abdominal wall into the stomach with a separate port feeding the small bowel as well. These tubes are usually placed by a radiologist or a surgeon.

• **Gastric electrical stimulation (Enterra® therapy) is a newer therapy that involves the placement of a generator beneath the skin of the abdomen.** Electrodes (coated wires with sensors) are then placed with one end in the muscle of the stomach and the other into the generator. The Enterra generator is similar in size and function to a cardiac pacemaker.

**Are there any complications to gastroparesis?**
The main complications of gastroparesis involve alteration in nutrition which can lead to weight loss and malnutrition. Discomfort is a major problem for some people. Inability to eat normally may cause emotional and social distress.

**What kind of follow up will I need?**
Once an appropriate treatment plan is made for you, it is typical to follow up in 1-3 months to determine your response to treatment. If you are feeling well, follow up can be every 6-12 months. If you are symptomatic, follow up can be as often as you need, usually every 1-3 months.
Websites:
www.mngastro.com
http://digestive.niddk.nih.gov/ddiseases/pubs/gastroparesis/

Books:
Eating for gastroparesis: Guidelines, Tips, & Recipes. By Crystal Zaborowski-Saltrelli, CHC
Living (Well!) with Gastroparesis: Answers, Advice, Tips & Recipes for a Happier, Healthier Life