



GERD

(Gastroesophageal Reflux Disease)

What is GERD?

Gastroesophageal reflux disease (**GERD**) is a disorder caused by gastric acid flowing from the stomach into the esophagus.

What are the symptoms of GERD?

The most common symptoms of **GERD** in infants and small children are failure to thrive (poor weight gain) and post-prandial emesis (vomiting after meals).

Common symptoms in older children and adolescents include chronic cough, laryngitis (hoarse voice), frequent throat clearing, "heartburn", frequent belching and halitosis (bad breath).

How is GERD usually treated?

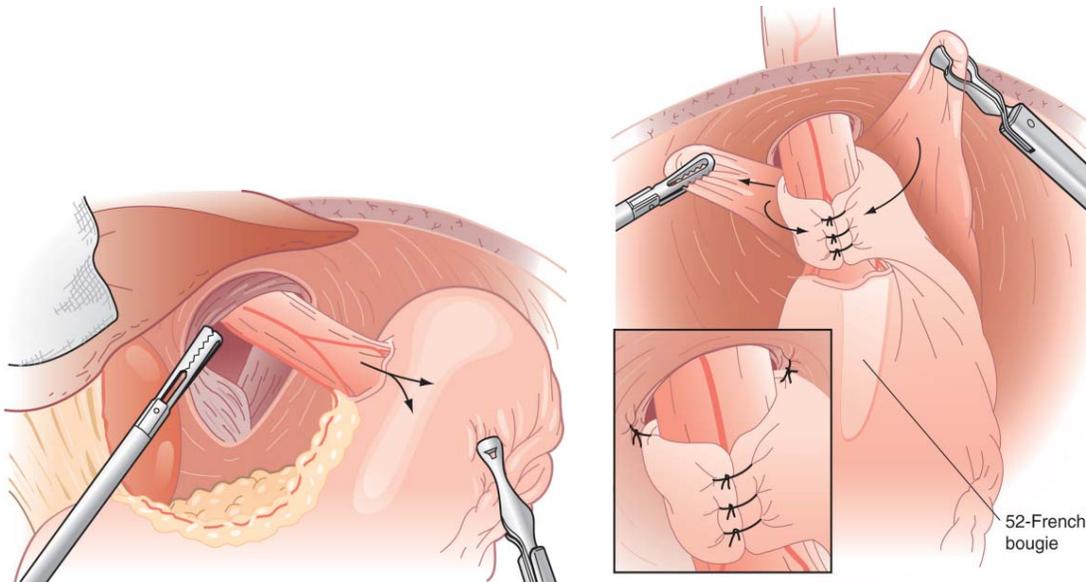
In infants, treatment can include thickening feeds, keeping the babies head elevated during meals, more frequent smaller volume feeds and avoidance of laying the baby down flat or sleeping immediately after meals. Medical management may include acid blocking medication like **Zantac** or **Prevacid**.

In adolescents, treatment may include avoidance of foods that cause "heartburn", weight loss in obese patients and medical therapy.

Surgery is reserved for patients with complications of GERD like strictures, ulcers, Barrett's esophagus, failure to thrive and failure of non-operative therapy with significant symptoms despite optimal non-operative management.

What is a Nissen Fundoplication?

During Fundoplication surgery, the surgeon improves the barrier to acid reflux from the stomach into the esophagus by wrapping the gastric fundus (upper part of the stomach) around the lower esophagus. This procedure may be done as an open procedure or laparoscopically.



How is the laparoscopic technique performed?

A laparoscopic Nissen Fundoplication is an alternative to the open technique (which involves a large incision). Laparoscopy is the more technologically advanced option which allows surgery through a few very small incisions to accommodate a small scope (camera) and very thin instruments.

What is a **G-tube**?

A **G-tube** (gastrostomy tube) is a tube from the stomach to the abdominal wall which can be used to feed or give medications directly into the stomach. Advantages of a gastrostomy tube include the ability to improve weight gain by giving larger volumes of feeds and more frequent feeds sometimes including continuous feeds at night.

Several types of **G-tubes** exist including balloon buttons (Mic-key or AMT) and non-balloon buttons which are short and flat to the abdominal wall and PEG or bolus tubes which have a long external component. **Gastrostomy tubes** can easily be exchanged after 6-8 weeks of time from surgery.



Why is laparoscopic surgery better?

Laparoscopy has many advantages over traditional open surgery. Less scarring, better cosmesis, less pain, quicker recovery, shorter hospital stay and quicker return to normal activity are all advantages of the laparoscopic approach.

How long will my child be in the hospital? What can we expect after surgery? When can they resume normal activities?

Most children are in the hospital about three days following surgery. Clear liquids are typically started on the first post-operative day. The diet is slowly advanced to pureed/soft foods prior to discharge. No solid foods can be consumed for one month. Bread, potato chips, hotdogs, chicken, and other large solids can become "stuck" in the wrap if introduced too soon after surgery. Once solids are introduced they should be cut up well and chewed thoroughly. Normal exercise and activity can typically be resumed by two weeks after surgery.

What are the complications of surgery?

Intra-operative complications are very rare (less than 1% of cases) and may include bleeding, wound infection, reaction to anesthesia, injury to the liver, stomach, or esophagus. On a rare occasion, the laparoscopic approach may be converted to open surgery if there is a significant complication requiring better exposure.

Post-operative complications may include dysphagia (difficult swallowing) and gas-bloat. Post-operative feeding issues typically resolve within a month and rarely require additional surgical intervention.

What are the success rates for this surgery?

Success rates are excellent following laparoscopic Nissen Fundoplication, in excess of 90% improvement in GERD symptoms.

Why should patients come to MUSC?

MUSC provides an excellent combination of specialists trained to take care of children. Our team includes four board certified Pediatric Surgeons, Pediatric anesthesia, and a Children's Hospital with pediatric nursing, child life specialists, PT and OT. We also feature a team of mid-level practitioners with expertise in post-operative care of pediatric surgery patients including the management of gastrostomy tubes who can be reached day or night.

Who should patients contact for more information?

Please contact the Division of Pediatric Surgery for help making an appointment: **(843) 792-3853**