



**GERD AFFECTS PEOPLE IN DIFFERENT WAYS. IT IS IMPORTANT TO SPEAK WITH YOUR PHYSICIAN ABOUT YOUR SYMPTOMS TO DETERMINE IF THEY MAY BE CAUSED BY GERD.**

### WHAT IS GERD?

Gastroesophageal reflux disease (GERD), also referred to as reflux, is a chronic digestive disease in which acid and bile flow back from the stomach into the esophagus, creating pain and often causing damage to the lining of the esophagus. GERD usually has a life-long negative impact on an individual's quality of life.

### WHAT CAUSES GERD?

GERD is caused by a weak lower esophageal sphincter (LES). Normally the LES acts like a one-way valve, allowing food and liquid to pass through to the stomach, but preventing stomach contents from flowing back into the esophagus. (See Figure 1.)

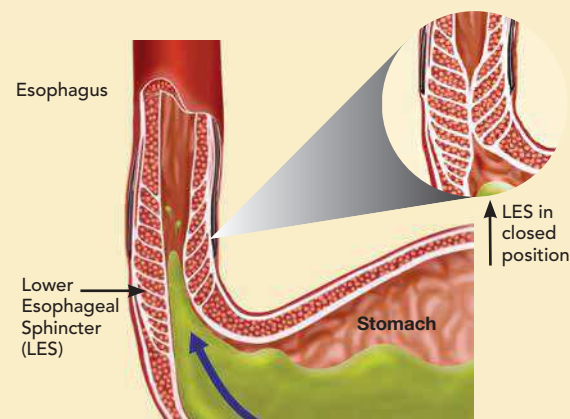


Figure 1: In people with GERD, the lower esophageal sphincter is weak, allowing acid and bile to flow back from the stomach into the esophagus.

AN ESTIMATED **15%** OF PEOPLE WHO HAVE CHRONIC REFLUX ALSO HAVE **BARRETT'S ESOPHAGUS**

### WHAT ARE THE SYMPTOMS OF GERD?

The most common symptoms of GERD is heartburn. However, GERD can produce a wide variety of symptoms including those listed below.

- *Dental erosion and bad breath*
- *Change in voice*
- *Cough*
- *Hoarseness*
- *Sore throat*
- *Asthma*
- *Shortness of breath*
- *Heartburn*
- *Dysphagia (difficulty swallowing)*
- *Chest pain*
- *Regurgitation*



### RISKS OF GERD?

In addition to producing a wide range of symptoms, GERD can lead to potentially serious complications including:

- *Esophagitis (Inflammation that can damage the tissue of the esophagus)*
- *Stricture (Narrowing of the esophagus)*
- *Barrett's esophagus (Pre-cancerous changes to the tissue lining the esophagus)*
- *Esophageal cancer*

### SYMPTOM MANAGEMENT

**LIFESTYLE CHANGES** - In some cases changing diet, losing weight, limiting smoking and alcohol consumption, altering eating and sleeping patterns may help address symptoms of GERD.

### TREATMENT OPTIONS

**DRUG THERAPY** - GERD medications are designed to reduce acid production in the stomach. While these medications may reduce acid and help heal irritation to the esophagus, they do not address the cause of GERD, the weak lower esophageal sphincter (LES), and do not prevent reflux.

*The United States Food and Drug Administration (FDA) has issued a series of statements on possible side effects of long-term use of Proton Pump Inhibitors (PPI), a popular class of drug for treating GERD. (FDA.gov)*

**SURGERY** - There are minimally invasive surgical procedures available to treat GERD. These procedures are designed to correct the cause of GERD, the weak LES, and restore the body's barrier to reflux.

### LINX PROCEDURE

#### WHO NEEDS IT:

Patients diagnosed with gastroesophageal reflux disease (GERD) will experience symptoms such as heartburn or difficulty swallowing. Once diagnosed with GERD, patients will need to manage the disease for a lifetime and may notice an increase in the severity of their symptoms. The LINX® System is used to treat GERD.

#### WHAT IS IT:

The LINX® System is a small, flexible ring of magnetic, titanium beads placed around the existing weak esophageal sphincter. The beads pull together to inhibit reflux by helping

to close the esophageal sphincter and restore the body's natural reflux barrier. For eating/ swallowing, belching or vomiting, the beads are forced to expand and separate to allow passage.

### PROCEDURE DETAILS:

The LINX® System is placed just above the stomach around the esophagus using laparoscopy, which is a minimally invasive technique commonly used in various procedures. During the procedure, patients are placed under general anesthesia and the surgeon uses a measuring device that precisely determines the appropriate size of the LINX® System. The system is then placed around the esophageal sphincter and is essentially tied together to create a ring using suture tails. The entire procedure typically takes less than an hour and patients are discharged either the same or next day and can resume a normal diet.

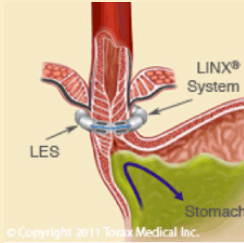


Figure 1: The LINX System is designed to help the LES resist opening to gastric pressures.

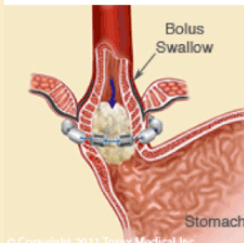


Figure 2: The LINX System is designed to expand to allow for normal swallowing.

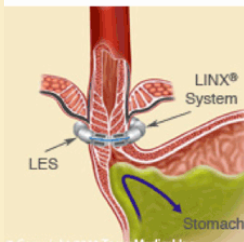


Figure 3: Magnetic attraction of the device is designed to close the LES immediately after swallowing

To learn more about the LINX procedure call our office 801-869-7145, we are happy to answer any questions and discuss other long term options available to treat GERD.

The  
LINX  
System



## NISSEN SURGICAL PROCEDURE

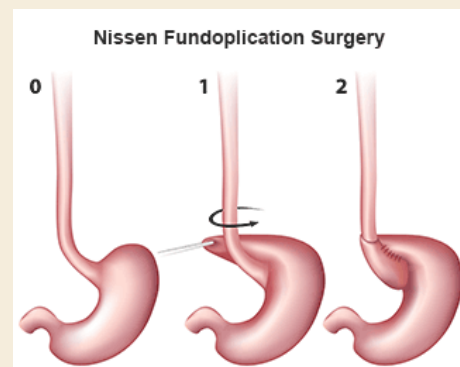
### WHAT IS THE PURPOSE OF THE NISSEN SURGICAL PROCEDURE?

The purpose of the Nissen procedure is to strengthen the valve between the esophagus and the stomach, which stops acid from backing up into the esophagus. This procedure can provide long-term relief to symptoms of GERD, also known as gastroesophageal reflux disease, and small hiatal hernias.

### WHAT HAPPENS IN THE SURGERY?

During the Nissen surgical procedure, the upper curve of the stomach, the fundus, is sewn around the esophagus. This can be achieved through one of two surgery methods: open surgery or laparoscopic method. Open surgery requires a large incision, which may lead to a longer recovery period than the laparoscopic method.

To learn more about Nissen Surgical Procedure and other options available to treat GERD, call our office 801-869-7145. We are happy to answer any questions. Immediate consultations are available.



ABOUT **40%** OF GERD SUFFERERS CONTINUE TO HAVE SYMPTOMS WHILE TAKING MEDICATIONS FOR GERD.

### IS IT TIME TO CHANGE MY GERD TREATMENT?

If you are currently treating your GERD with medication and answer "yes" to any of the following questions, talk with your physician about alternative treatment options.

- *Are you dependent on medication to manage your GERD symptoms?*
- *Do you continue to suffer GERD symptoms while on medication?*
- *Is your GERD affecting your quality of life? (Examples: Poor sleep, inability to tolerate certain foods, inability to participate in daily activities)*
- *Are you concerned about the long-term use of drugs to treat your GERD?*
- *Are you concerned about the long-term risks of serious complications from your GERD?*

CONTACT YOUR  
PHYSICIAN IF YOU  
ARE CONCERNED  
ABOUT YOUR GERD  
OR THINK IT IS  
GETTING WORSE.

**Important Reminder:** This information is intended only to provide general information and not as a definitive basis for diagnosis or treatment in any particular case. It is very important that you consult a doctor about your specific condition, contradictions, and possible complications.

1. National Digestive Diseases Information Clearinghouse (NDDIC). <http://digestive.niddk.nih.gov/ddiseases/pubs/gerd/#symptoms>.
2. [www.ASGE.org](http://www.ASGE.org)
3. Mayo Clinic GERD <http://www.mayoclinic.org/diseases-conditions/gerd/basics/symptoms/con-20025201>.
4. GERD Patient Study: Patients and Their Medications (AGA Institute)

### PROVIDED AS A SERVICE BY:

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