

# Study shows effectiveness of magnetic device for treatment of reflux disease

25 February 2013, by Jackie Carr



Santiago Horgan, MD, surgeon, UC San Diego Health System.

A study published February 21st in the *New England Journal of Medicine (NEJM)* provides clinical evidence of the safety and effectiveness of a new magnetic medical device to treat gastroesophageal reflux disease (GERD). Santiago Horgan, MD, professor of surgery at the University of California, San Diego School of Medicine and study co-author, was the first surgeon in the United States to implant the FDA-approved device.

"What we found is that the LINX magnetic device can solve GERD's underlying problem, a weak sphincter," said Horgan, chief of minimally invasive surgery, UC San Diego Health System. "The device corrects an anatomical defect that allows acids to move up the throat. For my patients this has been an effective way to permanently treat this painful condition, improve their quality of life, and end the need for over-the-counter medications."

The LINX system is composed of a series of titanium beads, each with a magnetic core, that are connected to form a ring shape. It is implanted at the lower esophageal sphincter (LES), a circular band of muscle that closes the last few centimeters of the esophagus and prevents the backward flow

of stomach contents.

As reported in the study, after sphincter augmentation with the LINX System, the majority of patients were able to substantially reduce or resolve their reflux symptoms, while eliminating use of their reflux medications such as [proton pump inhibitors](#). Severe regurgitation was eliminated in 100 percent of patients, and nearly all patients (93 percent) reported a significant decrease in the need for medication. More than 9 in 10 patients (94 percent) reported satisfaction with their overall condition after having the LINX System, compared to 13 percent before treatment while taking medication.

Horgan said the device is an alternative to Nissen fundoplication which involves irreversibly wrapping the stomach around the esophagus. The LINX System allows surgeons to leave the stomach intact and support the weak sphincter with a small device that can be removed.

More than 20 percent of the U.S. population experiences the painful burning symptoms of GERD. For these 20 million Americans, the first line of defense is medication. GERD can cause both pain and injury to the esophageal lining and may lead to a precancerous condition called Barrett's esophagus. Symptoms of GERD include heartburn and regurgitation, often associated with the inability to sleep and dietary constraints.

The LINX system was studied in a controlled, prospective, multicenter trial involving 14 U.S. and European medical centers as part of the FDA approval process. The [patients](#) in the study reported suffering from reflux symptoms for a median of 10 years and taking [reflux](#) medications for a median of five years.

Provided by University of California - San Diego

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