URMC offers new implantable heartburn 'ring'

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The University of Rochester Medical Center (URMC) is one of just 13 U.S. surgery sites chosen to offer the LINX Reflux Management System, a new implantable magnetic "ring" that promises relief to the estimated 25 million American adults who suffer daily heartburn. The device won FDA-approval in late March.

Chronic heartburn – technically titled gastroesophogeal reflux disease, or GERD – occurs when the stomach's acidic juices backflow into the esophagus, rousing an uncomfortable burning sensation just below the breast bone. Though a muscular ring, or sphincter, usually tightens to clamp off this backsplash, this natural "plumbing" is faulty in some people: The seal is weak, or the sphincter relaxes when it shouldn't.

The LINX device – a nickel-sized loop of magnetic beads – can be inserted laparoscopically (through tiny incisions) in less than an hour. The beads separate slightly to allow food and drink to pass down through the esophagus, then compress back together, reinforcing weak esophageal muscles and limiting acidic backwash from the stomach. As one of 15 specialized clinical trial sites across the U.S. and Europe, URMC has been implanting the device in study patients since 2009.

"While GERD is rarely life-threatening, its pain can derail patients' daily routines, and in select cases, frequent reflux can cause serious damage to the skin-like surface of the esophagus – a condition called Barrett's esophagus, which carries a low-risk for esophageal cancer," said Jeffrey H. Peters, M.D., Seymour I. Schwartz Professor and chair of the

Department of Surgery, who led the device's clinical trial at the URMC site. "As the incidence of GERD rises – possibly tied to the mounting international obesity epidemic – efforts to manage the condition have become increasingly important."

While numerous over-the-counter antacids and prescription drugs have taken aim at alleviating the symptoms, neutralizing the acids, Peters says 20 to 30 percent of heartburn sufferers are dissatisfied with medicine alone.

"This device tackles the root of the problem, working to augment the natural sphincter and restore the barrier between the two organs," he said. "In the most recent study, 92 percent of participants were free of needing daily heartburn medication two years after implant. What's more, the device has shown no signs of problems even four or five years out."

While 1 in 10 Americans may experience heartburn at least once a month , this occasional discomfort often can be managed through simple lifestyle changes, such as quitting smoking, avoiding eating too close to bedtime, wearing looser fitting clothing, exercising portion control, and steering clear of greasy, spicy or acidic foods.

"When we conducted the trial, about one-third of study applicants were eligible for the device," Peters said. "They had already attempted these lifestyle adjustments and still needed a more powerful intervention."

Peters and Thomas Watson, M.D., chief of Thoracic Surgery at the University of Rochester Medical Center, anticipate installing as many as 30 to 40 new devices in the first year, drawing patients from across New York, Ohio, Massachusetts, and Vermont. The next-nearest device implantation site is the University of Pittsburgh.

Patients interested in being screened for the device can self-refer (call 585-275-2725) or be recommended by their primary care provider or GI specialist. Patients will be asked to complete an initial screening, followed by pH, motility, and other GI function testing, before being declared eligible candidates. Current procedures require patients to be admitted to the hospital for a day or two, but in the coming years, Peters anticipates offering the implant as an outpatient procedure.

Provided by University of Rochester Medical Center

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