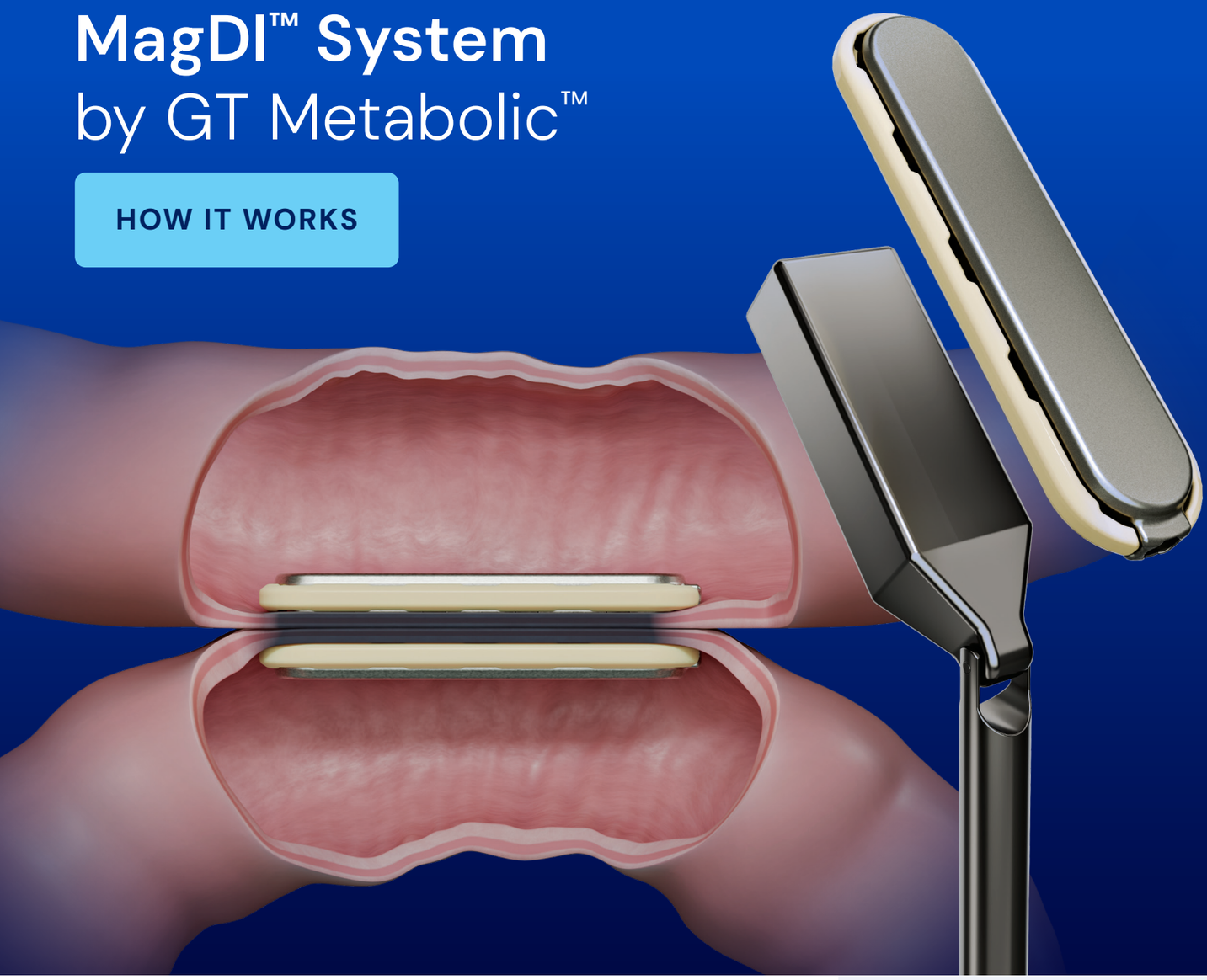
GT Metabolic™

Magnetic compression anastomosis with **MagDI™ System** by GT Metabolic™

HOW IT WORKS



What is side-to-side duodeno-ileal magnetic compression anastomosis?

Magnetic compression anastomosis offers an innovative, minimally invasive solution for creating anastomoses in the gastrointestinal tract without traditional surgical cuts, sutures, or staples.[1-3]

Using polar attraction, specially designed magnetic devices are positioned and compress tissue to achieve anastomosis gently, creating a strong, natural connection that allows the body to heal on its own.[1-5]

MagDI™ System by GT Metabolic™: a suture-free, staple-free solution

The MagDI™ System (pronounced mag-dee-eye) was cleared for use in magnetic compression anastomosis by the U.S. Food and Drug Administration (FDA) in 2024.[1] The system uses magnets to achieve anastomosis without incisions, sutures, or staples at the site of anastomosis. It is designed to leave behind no foreign material to impede the natural tissue healing process.[1-4]

The outcomes achieved using the MagDI™ System technology in bariatric procedures are consistent with outcomes achieved using existing devices and may offer a reduced risk of complications.[1-4]

SCAN THE QR CODE TO WATCH THE MAGDI™ SYSTEM AT WORK

MagDI™ System by GT Metabolic™
A gentle, minimally invasive surgery tool

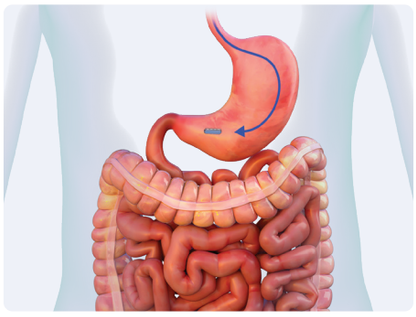
Steps for magnetic compression anastomosis with MagDI™ System

NOTE: This is an example of a procedure used in clinical trials.
Individual experiences may vary based on the patient needs and conditions.

STEP 1

The patient swallows the first magnet with water approximately 2 hours before the procedure. This magnet can also be placed via a scope.

STEP 2

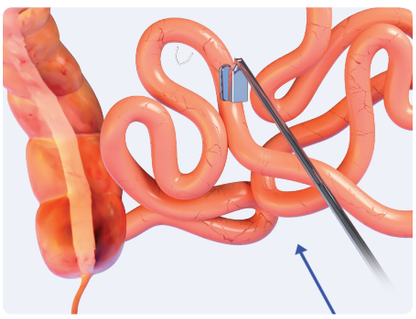


The magnet travels into the stomach and the duodenum and reaches the ligament of Treitz in about two hours. The magnet's position is confirmed with x-ray.

STEP 3

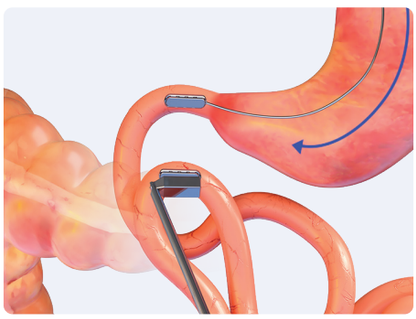
Once the patient is under anesthesia in the OR, a marker is placed in the ileum 250cm from the ileocecal valve.

STEP 4



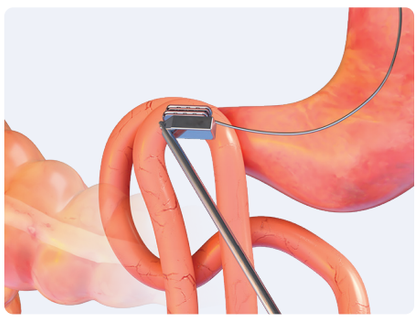
The laparoscopic positioning device (LPD) is used to capture the magnet and direct it distally through the jejunal lumen to the marked position in the ileum.

STEP 5



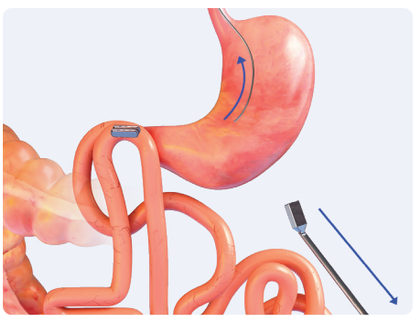
At the same time, the second (proximal) magnet is transported by a flexible endoscopic catheter into the antrum and then brought into the duodenum ~2cm after the pylorus. This is the intended magnet fusion site.

STEP 6



The first (distal) magnet in the ileum is elevated over the transverse colon and brought together with the second magnet in the post-pyloric duodenum.

STEP 7



The second (proximal) magnet is released to self-align with the first (distal) magnet through the intestinal walls. The endoscope and the LPD are withdrawn. Petersen's defect is closed.

STEP 8

In several days, the two magnets are fully fused after compressing and sloughing the tissue between them. The magnets detach several weeks later from the duodeno-ileal site and are expressed naturally.[1-4]

STEP 9

Food flows through the duodenal lumen, and also through the patent anastomosis into the ileal lumen. The anastomosis is extremely durable after 3-4 weeks.[1-3]

1. U.S. FDA. Clearance for Magnetic Compression Anastomosis System (MagDI System). 510(k) No. K242086. October 24, 2024.
2. Gagner M, Almutlaq L, Cadiere G-B, et al. Side-to-side magnetic duodeno-ileostomy in adults with severe obesity with or without type 2 diabetes: Early outcomes with prior or concurrent sleeve gastrectomy. Surg Obes Relat Dis. Published online October 2023. doi:10.1016/j.soard.2023.10.018.
3. Gagner M, Abuladze D, Koiava L, et al. First-in-human side-to-side magnetic compression duodeno-ileostomy with the Magnet Anastomosis System. Obes Surg. 2023;33(8):2282-2292. doi:10.1007/s11695-023-06708-x.
4. Gagner M, Cadiere GB, Sanchez-Pernaute A, et al. Side-to-side magnet anastomosis system duodeno-ileostomy with sleeve gastrectomy: Early multi-center results. Surg Endosc. 2023;37(8):6452-6463. doi:10.1007/s00464-023-10134-6.
5. Jamshidi R, Stephenson JT, Clay JG, Pichakron KO, Harrison MR. Magnamosis: magnetic compression anastomosis with comparison to suture and staple techniques. J Pediatr Surg. 2009;44(2):222-228. doi:10.1016/j.jpedsurg.2008.10.044.