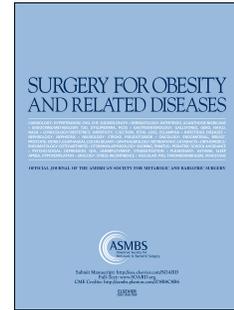


# Accepted Manuscript

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(Avoiding Pitfalls)

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PII: S1550-7289(19)30292-8

DOI: <https://doi.org/10.1016/j.soard.2019.06.017>

Reference: SOARD 3806

To appear in: *Surgery for Obesity and Related Diseases*

Received Date: 4 May 2019

Revised Date: 12 June 2019

Accepted Date: 15 June 2019

Please cite this article as: Jorge JM, Golas A, Gonzalvo JP, Robotic Assisted Conversion of Nissen Fundoplication to Roux-en-Y Gastric Bypass (Avoiding Pitfalls), *Surgery for Obesity and Related Diseases* (2019), doi: <https://doi.org/10.1016/j.soard.2019.06.017>.

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Robotic Assisted Conversion of Nissen Fundoplication to Roux-en-Y Gastric Bypass (Avoiding Pitfalls)

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**Abstract:**

Laparoscopic anti-reflux surgery (LARS) utilizing fundoplication plays a major role in the treatment of gastroesophageal reflux disease (GERD). It is important to consider that long term control of reflux in the patient with obesity has been shown to be worse (failure up to four times more likely) than in normal weight patients following Nissen fundoplication. Recurrence of symptoms after LARS may benefit from medical management in some cases, while in others revisional surgery should be considered. Concomitantly, Roux-en-Y gastric bypass has an excellent track record of alleviating GERD in de novo obese patients. For individuals with obesity with recurrent or persistent reflux symptoms despite previous LARS, conversion to a gastric bypass versus redo LARS should be considered.

Conversion of Nissen fundoplication to Roux-en-Y gastric bypass can be technically challenging due to factors present for any re-operation - presence of scar tissue, altered tissue planes, and often times unclear anatomy. Meticulous hiatus and wrap dissection, repair of hiatal hernia if present, complete unwrapping of the fundoplication and clarification of gastric redundancy prior to pouch creation, and preservation of the left gastric artery are keys to improving outcomes and reducing morbidity.

Particularly, takedown of the fundoplication can be aided with landmark identification such as prior sutures. Ensuring full mobilization of the wrap from the lower esophagus, stomach, and hiatus prior to gastric pouch creation is paramount. The posterior fundic wrap can often unknowingly be left in situ, leading to thicker tissue to staple across and a larger than intended gastric pouch. This area in particular is where most leaks and stapling misadventures occur.

Robotic assistance in this operation provides excellent visualization and surgical dexterity in a re-operative setting. We present a video demonstrating robotic assisted conversion of Nissen fundoplication to Roux-en-Y-gastric bypass, and specifically emphasize technical features of this operation to avoid peri-operative complications.

**Key words:** anti-reflux surgery, Nissen fundoplication, Roux-en-Y gastric bypass, robotic assisted, revisional surgery

## Key Technical Points

- ▶ Exposure of proximal stomach and hiatus
- ▶ Repair hiatal hernia if present
- ▶ Preserve left gastric artery



## Key Technical Points

- ▶ **Takedown of the fundoplication**
  - Use landmarks such as sutures to guide dissection
  - Thoroughly mobilize wrap from lower esophagus, stomach, and hiatus
  
- ▶ **Tease out posterior fundic wrap prior to creating gastric pouch**
  - Most leaks and stapling misadventures happen here
  - Dissect further
  - Be prepared to resect
  - Use thicker load stapler

