



**INSTITUTE FOR CLINICAL SIMULATION AND PATIENT SAFETY**  
**Surgical Skills Course**

**INTERMEDIATE LAPAROSCOPIC SKILLS**

**Laparoscopic Nissen Fundoplication**

**I. OBJECTIVES**

By the end of this session the residents should be able to:

- 1) Understand the overall indications for Laparoscopic Nissen Fundoplication.
- 2) The use of laparoscopic instrumentation in Laparoscopic Nissen Fundoplication.
- 3) Recognize the establishment of safe peritoneal access.
- 4) Recognize correct laparoscopic tissue handling.
- 5) Recognize laparoscopic equipment used in this procedure.
- 6) Recognize anatomy affected by this laparoscopic procedure.
- 7) Demonstrate comprehension of this procedure by the completion of the procedure in the *ex vivo* model.

**II. ASSUMPTIONS**

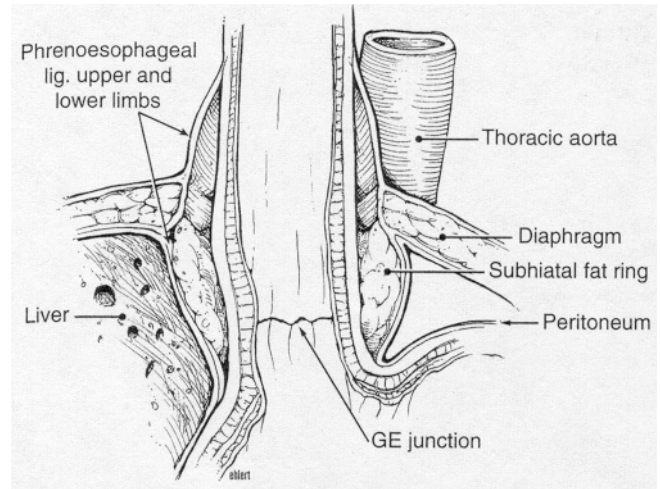
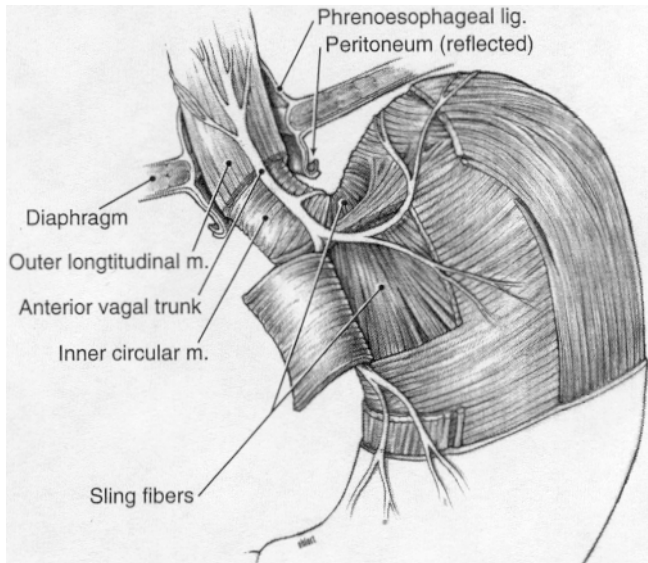
Completion of Laparoscopic Knot Tying module.

**III. SUGGESTED READING**

Review the handout on Laparoscopic Nissen Fundoplication and/or the SAGES CD ROM Volume 2.

Bowrey DJ and Peters JH. Laparoscopic Esophageal Surgery. *Surgical Clinics of North America*, 80(4):1213-1242, 2000.

#### IV. ANATOMICAL CONSIDERATION



#### V. DESCRIPTION OF LABORATORY MODULE

After a brief overview of Laparoscopic Nissen Fundoplication, residents will perform procedure on an *ex-vivo* porcine stomach (with intact esophagus, spleen and omentum) in the training box.

#### VI. DESCRIPTION OF TECHNIQUE/PROCEDURE

- 1) Clear off the phrenoesophageal membrane.
- 2) Divide the short gastric vessels with ultrasound dissector to mobilize the fundus.
- 3) Pull the mobilized fundus behind the esophagus, in front of the repaired hiatus.
- 4) Wrap the fundus around the esophagus and secure the wrap with one to four interrupted sutures.
- 5) Remove the trocars under laparoscopic visualization.

#### VII. EQUIPMENT NEEDED

- Laparoscopic ligaclip applier
- Assortment of laparoscopic instruments
- Laparoscopic tower with camera, monitor, light source and laparoscope
- Laparoscopic training box containing *ex-vivo* porcine stomach
- Cautery unit and Ultrasonic dissector
- Appropriate sutures and suture bolsters, Endostitch, Endo-GIA

#### VIII. REFERENCES

Bowrey DJ and Peters JH. Laparoscopic Esophageal Surgery. *Surgical Clinics of North America*, 80(4):1213-1242, 2000.