

Endo X Trainer™

Kit Contents

- Upper GI Tray
- Lower GI Tray
- Esophagus glass adaptor
- Colon glass adaptor
- Case

Procedural Kit Contents

- Disposable tissue mesh
- Plastic bag ties
- Super glue
- Disposable scalpel
- Water soluble lubricant
- Round black 'O' rings
- Vicryl suture
- Silicone tubing
- Spray bottle
- Forceps
- Wire cutter
- Syringe with blunt needle
- Syringe with needle
- Double stick tape or foam
- Assortment of solid pieces for submucosal polyp simulation

Accessories

- Clamp for suturing
- Pliers-type stapler
- Scissors
- Tote case with wheels

Organ Tissue

- Upper GI with liver
- Lower GI

See back panel for more information on tissue



Pricing and Order information

For complete order information download an order form from the **Endo X Trainer™** product page at www.medicalinnovations.com

Animal Tissue

Pig colons and stomachs with livers are available from Medical Innovations directly. Tissue is shipped frozen overnight.

The organs are packaged individually and are cleaned and prepared. Additional preparation may be necessary depending upon what procedures are simulated.

Organs are obtained from a source that harvests the organs from the food chain. Organs are obtained from animals that weigh between 32 to 45kg (155 to 220lbs) to ensure the best human organ replication possible and to avoid problems sometimes associated with smaller organ tissue specimens.

Organs can last several hours at room temperature. For longer tissue life, it is recommended that the organs are sprayed every 20 minutes using a spray bottle with water or a solution of water and ammonia for odor control. Keep the tissue covered with a damp cloth when not in use and during use if possible.

Organs can sometimes be stored overnight if refrigerated depending upon factors including the length of time unfrozen and length of time stored at room temperature.

Medical Innovations International Inc.
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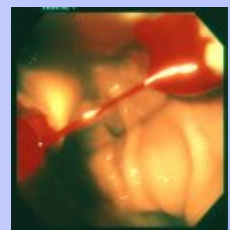
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Economical Tray Tables that provide portable Endoscopic Training opportunities. The Trays utilize ex-vivo animal organs that can be obtained directly from Medical Innovations.

Train several procedures including:

- ERCP
- Hemostasis
- Polyps
- Mucosectomy
- Other procedures
- Product Development

Stomach with liver



**Simulated
bleeding artery**



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Initial Set-up Use double stick tape on the four feet of each tray for added adhesion to the table or stand that you will be setting the tray on.

Upper GI Stomach

After rinsing the stomach inside and out in a sink, tie off the duodenum to enable the organ to be



inflated with the endoscope. Tie off using a suture or a stapler.

To attach the esophagus to the glass adapter,

First, size up the necessary length and cut off excess esophagus using the scalpel. Then insert the forceps and stretch open the end of the esophagus. Using your index finger, roll the esophagus back on to your index finger.

Roll the end of the esophagus from your finger on to the sanded end of the glass adapter. Using a plastic bag tie, secure esophagus to the glass tube adapter, insert the adapter into the cut-out on the tray. Secure the glass adapter to the tray using the black 'O' rings and attach to the respective posts. Twist the 'O' rings for more tension if necessary.



After setting up the procedures, use sutures or a pliers-like stapler to close the stomach incision to enable the endoscope to inflate the stomach. Stretch mesh over the guide posts and over the stomach as illustrated by the photo on the front page of this brochure. If necessary, suture the stomach to posts.



Use a water soluble lubricant on the scope when inserting the scope into the glass adapter.

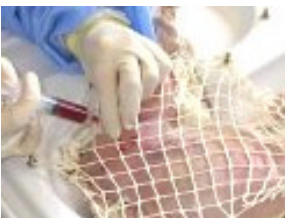
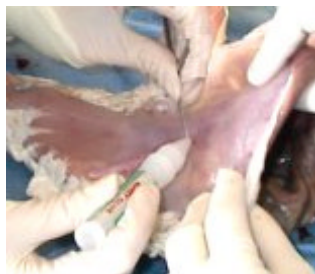
Bleeding Artery This procedure requires 10 cm piece of silicon tubing, a blunt syringe needle and super



glue. To set-up the stomach tissue with a simulated bleeding artery, using the pointed edge of the scalpel to make an incision from the exterior of the stomach. Puncture through to the interior

stomach lining where the tip of the scalpel can be seen from the interior.

The interior incision should be approx. 3 mm. Insert the silicon tube from the outside of the stomach far enough to where the tube is seated level with the interior stomach wall. Using superglue, thoroughly glue the exterior tissue to the tube as illustrated.



Mix up a solution of artificial blood. A recipe can be found on the medicalinnovations.com website under the **Endo X Trainer™** product page.

Take a syringe with a blunt needle, fill the syringe with the artificial blood, insert the blunt needle into the end of the silicone tube. Use a suture to tie and secure the tubing to the blunt needle.

ERCP can be performed by placing beans or stones into the biliary ducts.



Polyps can be simulated by using a scalpel to make an incision in the interior of the stomach. The incision should separate the tissue layers without perforating the exterior of the stomach wall. Insert a bean or other object and suture the incision closed.



Setting up the lower GI colon tray is similar to setting up the upper tray. Rinse the tissue inside and out. Insert the colon into the

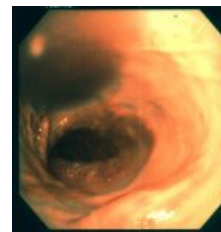
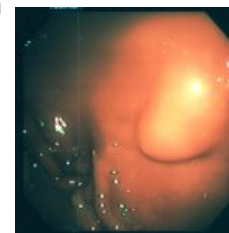
glass adapter, secure the tissue to the adapter using a plastic bag tie. Secure the adapter to the tray with the metal bracket.



To simulate polyps in the lower GI tract, make the incision on the exterior of the colon tissue. The area closer to the anus is preferable. Without perforating the tissue to the interior, separate the mucosa with a scalpel and insert an object of your choice. Close the incision with super glue.



To simulate a tumorous membrane in the colon: from the exterior of the colon tissue, inject a solution of fake blood



with a syringe into the mucosa layer of the colon tissue. The tissue closer to the anus works best. The result will be an identifiable discoloration as illustrated by the upper left corner of the image to the left.