

Colonoscopy (Lower GI Endoscopy) Simulator Typell

LM-107

Instruction Manual

Thank you for purchasing the Colonoscopy(Lower GI Endoscopy) Simulator Typell. Please read this instruction manual carefully to ensure correct use of the product, and store it in a safe place for easy access.

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Handling and Safety Precautions

These precautions should be strictly observed to ensure safe, long-term use of the product.

The following precautions should be especially adhered to:

○ Regarding the LM-107 Colonoscopy(Lower GI Endoscopy) Simulator Typell:

1. This product is made with special silicone rubber to simulate the texture of human skin, and excessive force may damage the products. So we recommend that it be handled as carefully as actual biological material.
2. Before using this product, be sure to apply a generous amount of endoscope lubricant to the inside of it. For details, refer to "3-1: How to apply lubricant" on page 6. An insufficient amount of lubricant may cause the endoscope to get stuck inside of the model, which could possibly break it.
3. Do not place objects on the main unit, as doing so may alter its shape.
4. Do not use thinner, benzine or other organic solvents on this product. Doing so may cause its color to fade or deform its shape.
5. Do not use oil-based inks, pencils, chalks, or paints on this product as they may cause permanent staining.
6. When transporting this product in its storage case, make sure the metal latches are closed. Also, if the storage case is tilted or experiences heavy shock, the case or model may break as a result.

Optional Items (sold separately)

○ Regarding the "LM-103A Simulated Polyp (for polypectomy)":

1. Please take care to follow the directions below so as to avoid mold growth or degeneration of the Simulated Polyp.

1-1. Please avoid storing the Simulated Polyp (for polypectomy) at a location with direct sunlight or a high temperature and always store in a refrigerator (between 2 and 10°C, do not freeze). If it is stored at a temperature of over 30°C, it may change in shape or degrade, rendering it unusable.

1-2. Please use the Simulated Polyp as early as possible after it has been unsealed. KOKEN is not responsible for quality of Simulated Polyps that have already been unsealed.

1-3. When taking out the Simulated Polyp, please use clean tweezers etc.

1-4. If a Simulated Polyp has been taken out of the container, please do not put it back in the container.

1-5. Do not leave a Simulated Polyp (for polypectomy) out of the container for a long period of time. The surface will become dry and hard, and it will not be possible to use it any longer.

1-6. Always store in the storage liquid. Storing it in other liquids will cause degeneration of the polyp. Be careful not to spill the storage liquid or throw it away before using all the Simulated Polyps (for polypectomy).

2. When resecting a Simulated Polyp (for polypectomy), always use a disposable electrode.

3. Be sure that no storage liquid gets in your eyes or mouth.



Handling and Safety Precautions

These precautions should be strictly observed to ensure safe, long-term use of the product.

Caring for the model after use

1. After using this product, thoroughly flush out the lubricant with cold or hot water.
2. To clean the storage case, wipe with gauze or similar material moistened with water or a watered-down, mild detergent.
* Do NOT use thinner, benzene, or other solvents to clean the storage case.
3. Keeping this product in direct sunlight or exposed to UV light for a long period of time may cause it to deform or degrade. When not in use, keep it in the storage case in a flat area away from direct sunlight or UV light.

1. The contents of this instruction manual are subject to change without notice.
2. This instruction manual may not be reproduced in part or in its entirety without permission.
3. Please contact the manufacturer in the event that any errors or omissions are found in the contents of this instruction manual.
4. This product should be used only as described in this instruction manual. In particular, the product should not be used in any way that contravenes the precautions noted in the instruction manual.

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1. Outline and Features

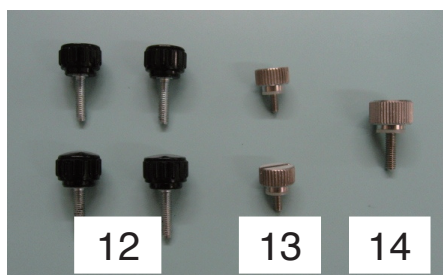
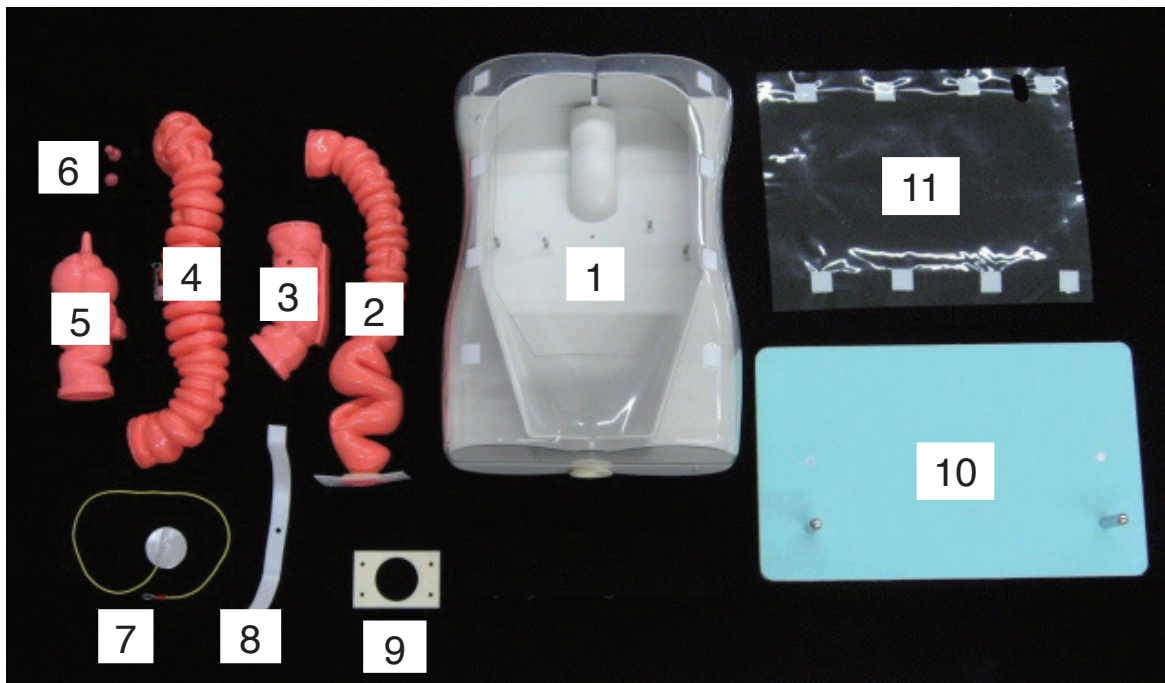
Outline

This training model is used to confirm methods of insertion and orientation for a colonoscope. Attaching optional parts also enables treatment-related training such as polyp incision and hemostasis, as well as small intestine insertion training using a balloon endoscope.

Features

1. This product is made with special silicone rubber for a realistic feel and appearance during observation. Inner content also closely resembles actual biological material.
2. Simulated polyps (for observation) can be attached to the ascending colon and descending colon for observational purposes.
3. Laterally spreading tumors (LST) are replicated in the ascending colon.
4. Attaching the optional "Simulated Polyps (for polypectomies)" enables various types of endoscopic treatment-related training as well, such as snare polypectomies, and hemostasis using a clip.
* Simulated polyps can be attached to ascending and descending colons.
5. Attaching the optional "Small Intestine" enables training such as insertion methods for double or single balloon enteroscopies, and shortened operations (folding techniques).

2. Components and Configuration



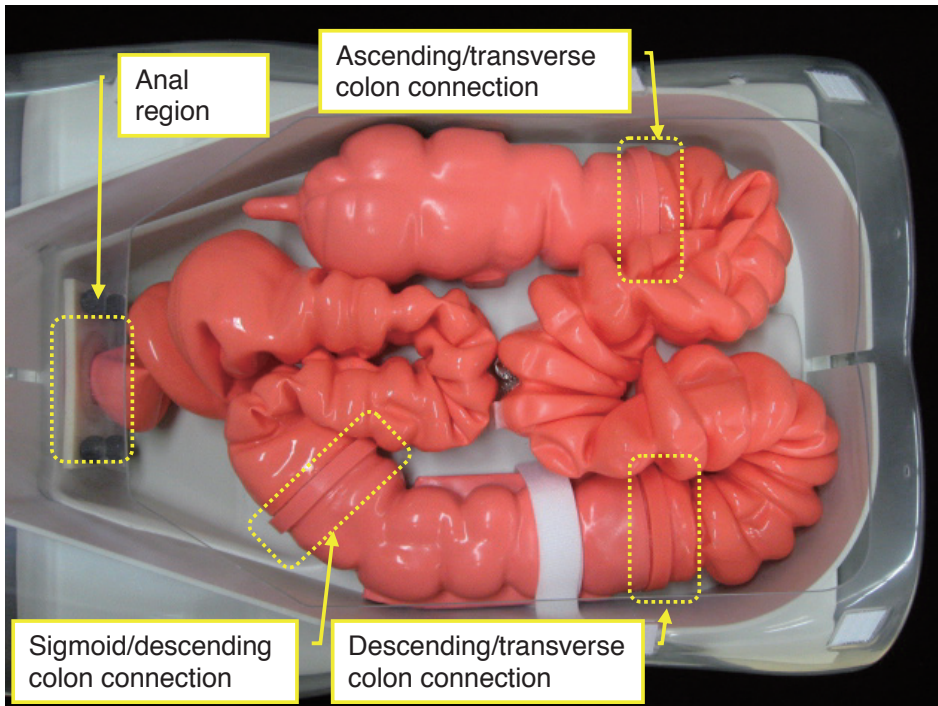
	Name
1	Main unit
2	Rectum/sigmoid colon part
3	Descending colon part
4	Transverse colon part
5	Ascending colon part
6	Simulated polyps (for observation):
7	Conduction cable
8	Polyp attachment band
9	Flange plate
10	Holding table
11	Simulated peritoneal membrane sheet
12	Screws for flange plate
13	Screws for transparent cover
14	Screw for transverse colon
15	Storage case

3. Handling the Model

- * Before using this product, be sure to apply a generous amount of endoscope lubricant to the inside of it. An insufficient amount of lubricant will increase resistance between the scope and intestine, making insertion more difficult.
- * Use a lubricant specifically designed for endoscopes.

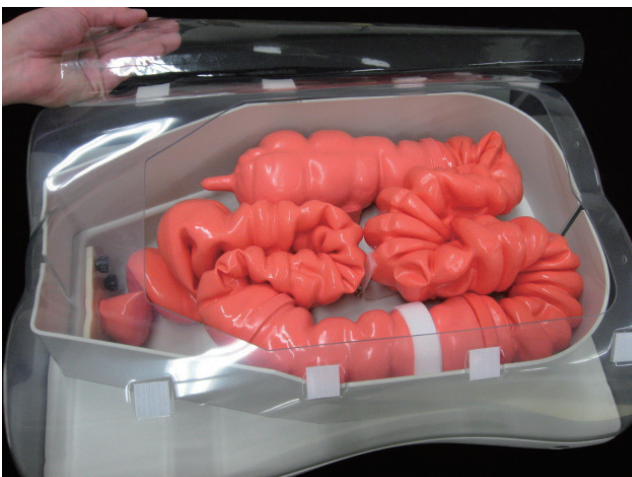
3-1 How to apply lubricant

Lubricant should be applied to the following four openings.

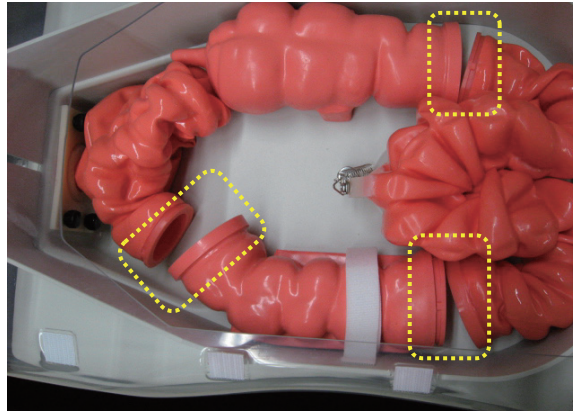
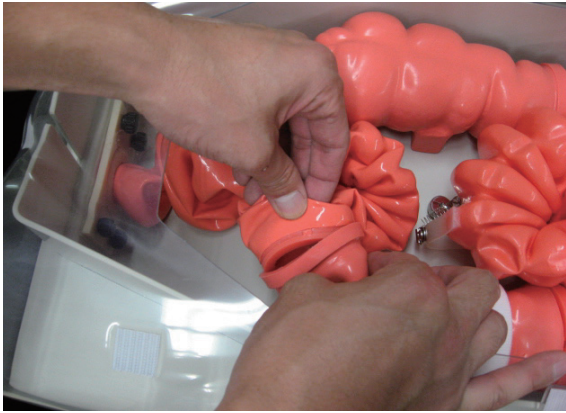


○ Applying lubricant

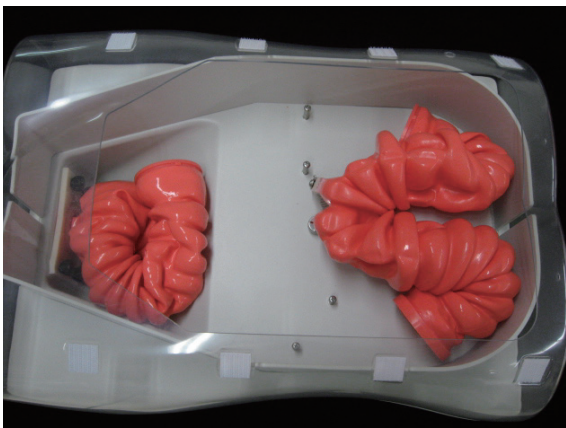
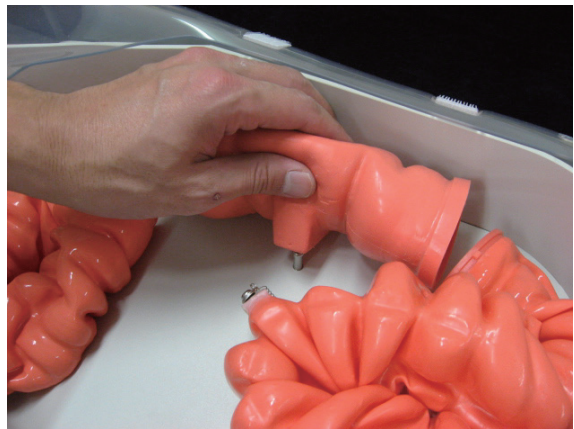
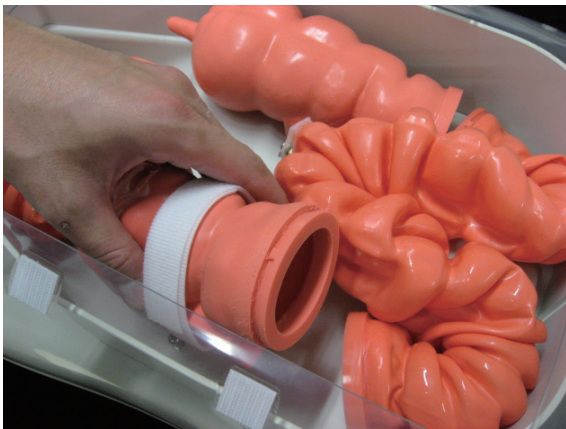
1. Remove the simulated peritoneal membrane sheet.



2. Detach colon connectors from these three points.

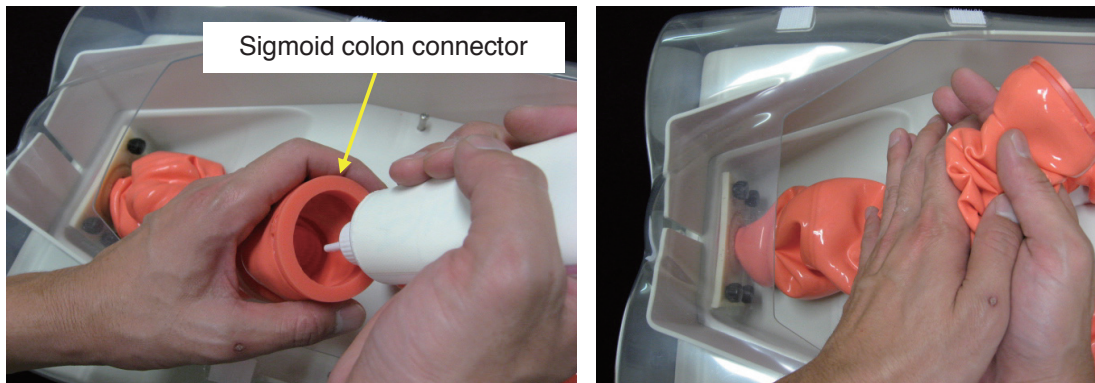


3. Pull the ascending and descending colons upward to remove them from the main unit.



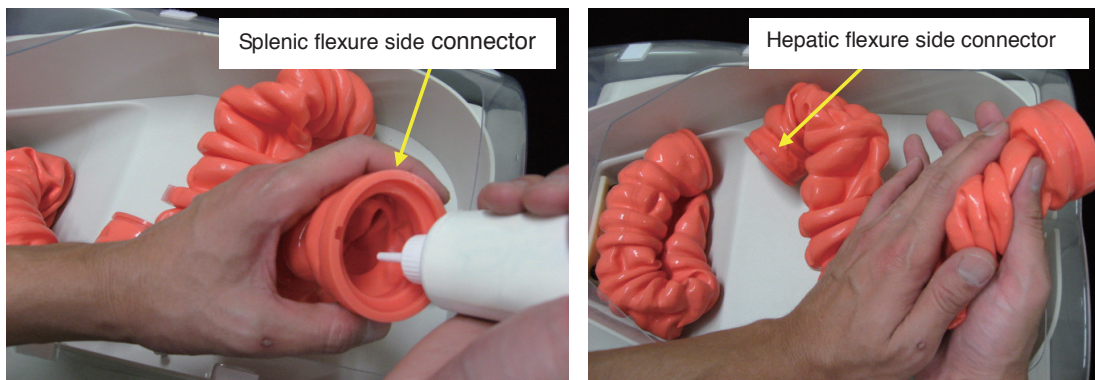
4. Apply lubricant to the rectum/sigmoid colon.

Insert lubricant from the anal region as well as the sigmoid colon connector opening. After inserting a generous amount, squish the intestine together so that the lubricant spreads all the way through it.



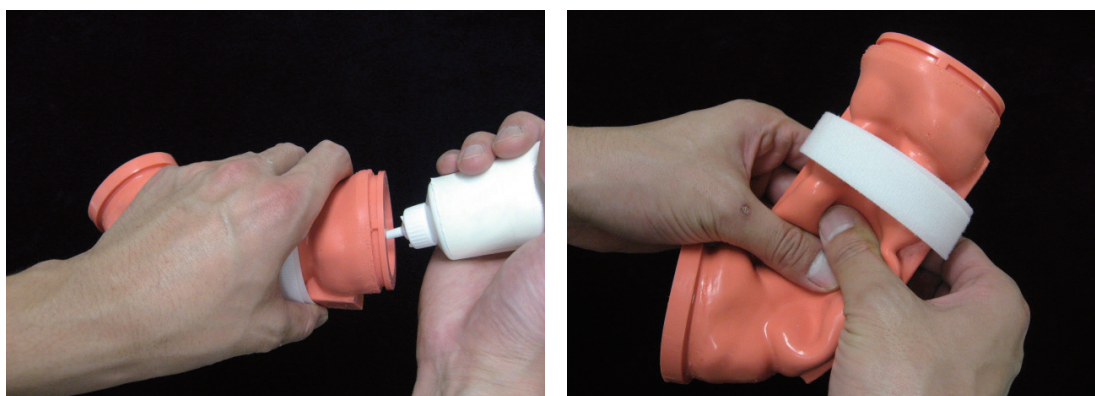
5. Apply lubricant to the transverse colon.

Insert lubricant from the splenic and hepatic flexure connector sides. After inserting a generous amount, squish the intestine together so that the lubricant spreads all the way through it.



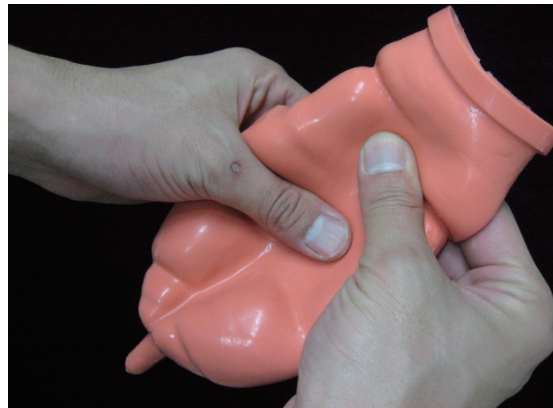
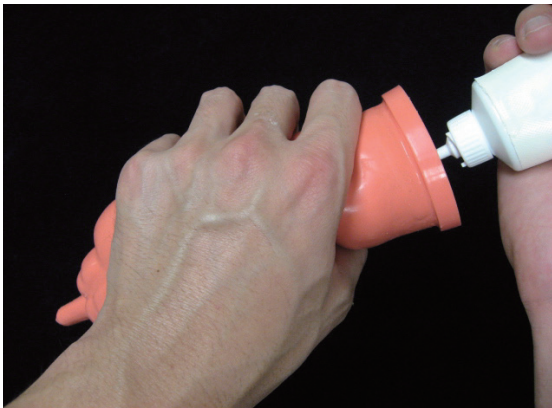
6. Apply lubricant to the descending colon.

Squeeze lubricant into the intestine. After inserting a generous amount, squish the intestine together so that the lubricant spreads all the way through it.



7. Apply lubricant to the ascending colon.

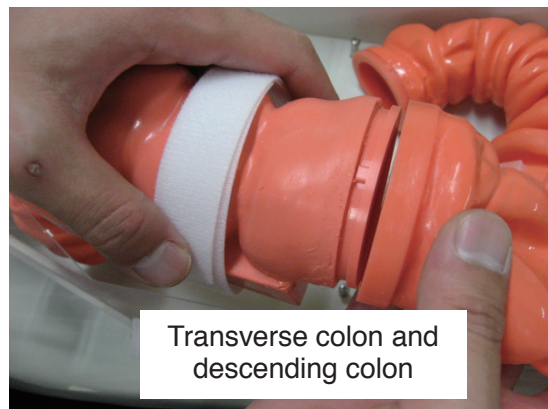
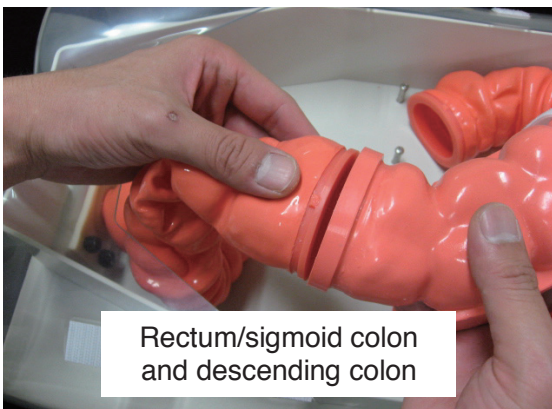
Squeeze lubricant into the intestine. After inserting a generous amount, squish the intestine together so that the lubricant spreads all the way through it.



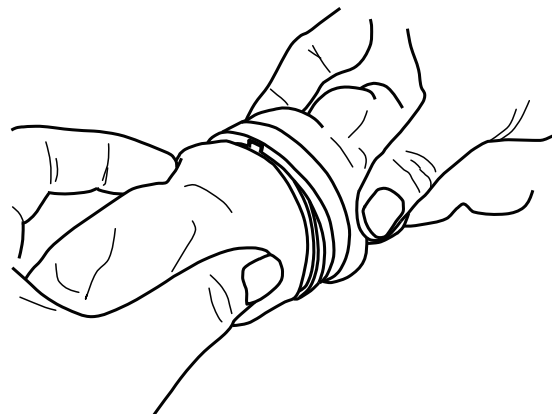
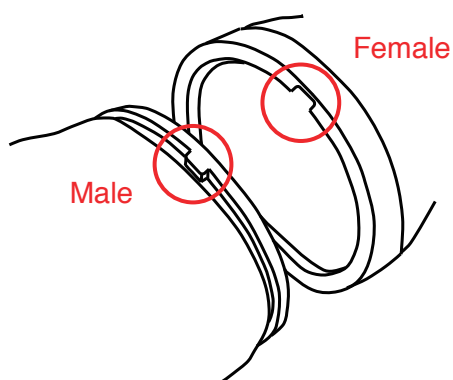
3-2 How to assemble the intestine

○ Assembling the lubricated intestine

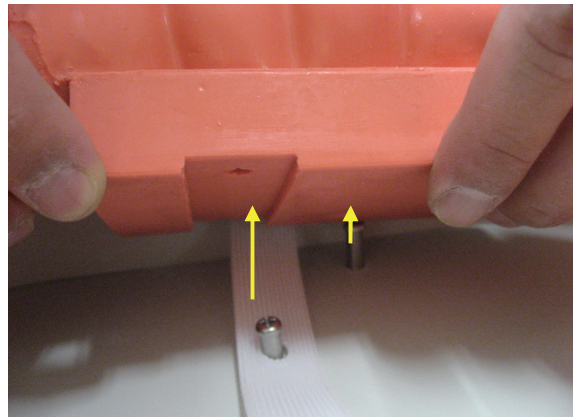
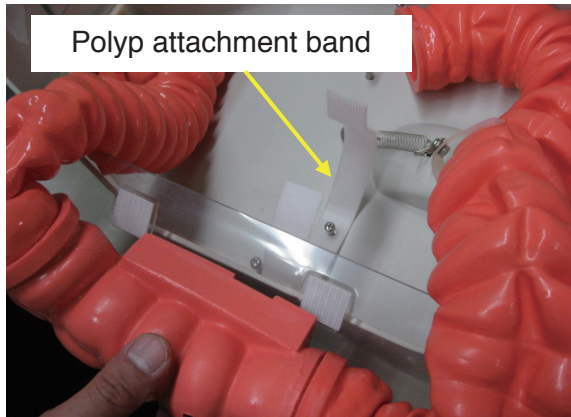
1. Reconnect the disassembled descending colon to the rectum/sigmoid colon and transverse colon.



* Make sure to align notch marks on each connector.



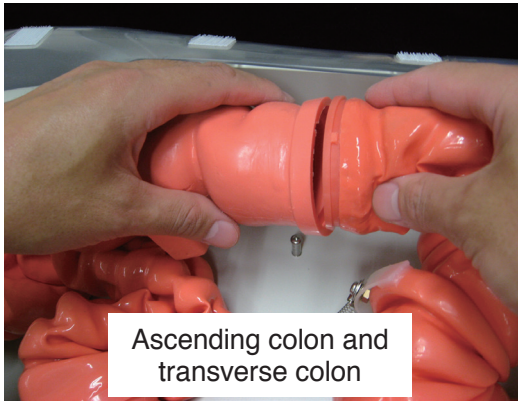
2. Connect the polyp attachment band to the pin on the upper right section of the main unit, then push holes in the descending colon's seat into the pins to attach the descending colon to the main unit.



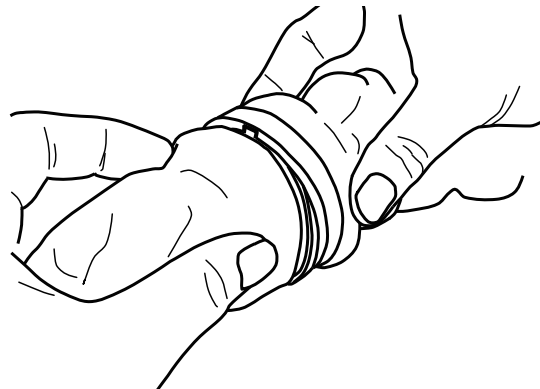
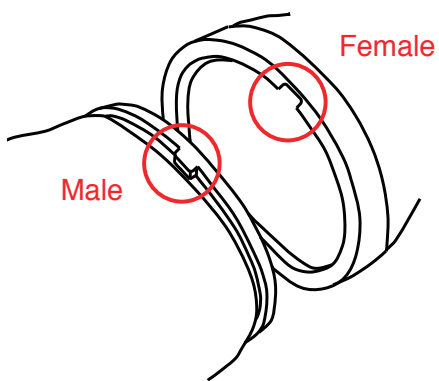
3. Align with the polyp attachment band,



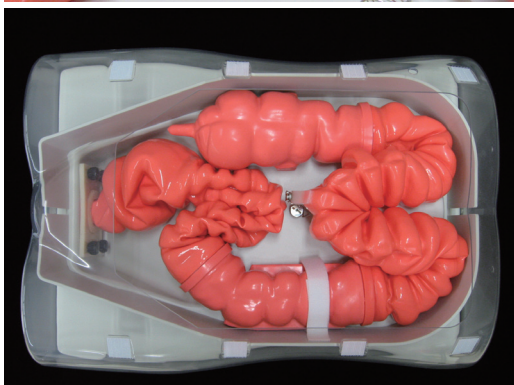
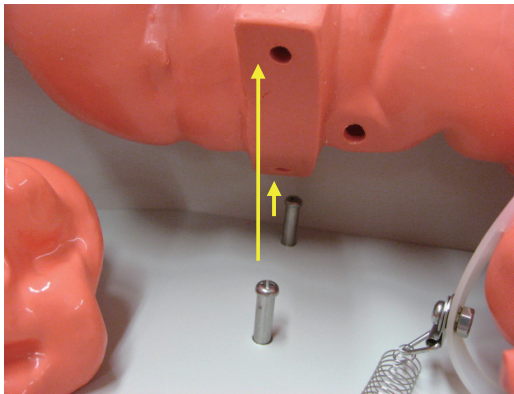
4. Reconnect the disassembled ascending colon to the transverse colon.



* Make sure to align notch marks on each connector.



5. As shown below, push holes in the ascending colon's seat into the pins to attach the ascending colon to the main unit.



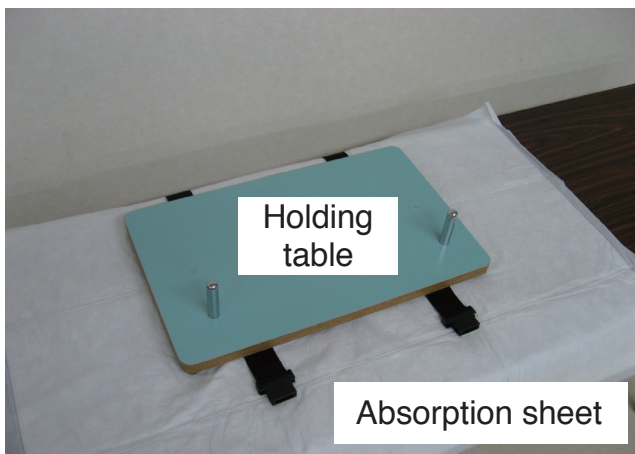
6. Attach the simulated peritoneal membrane sheet to the main unit.



○ **Securing the model to the table**

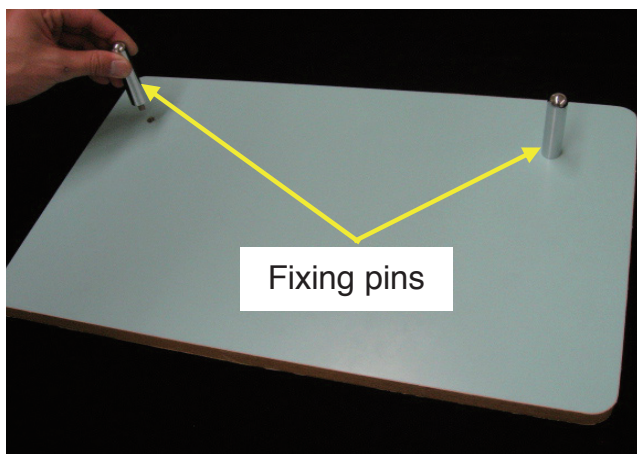
Before using this model, fasten the holding board to a table with belts.

We also recommend placing an absorption sheet under the model to keep the table clean.



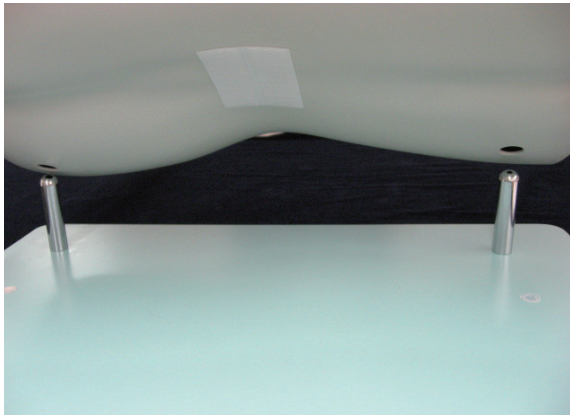
How to attach fixing pins

Attach two fixing pins to the holding table to hold the model in place.



How to attach the model to the holding table (dorsal position)

1. Align holes on the bottom of the main unit with the holding table's fixing pins.



2. Run the belts under the table, then fasten their buckles and tighten them down.



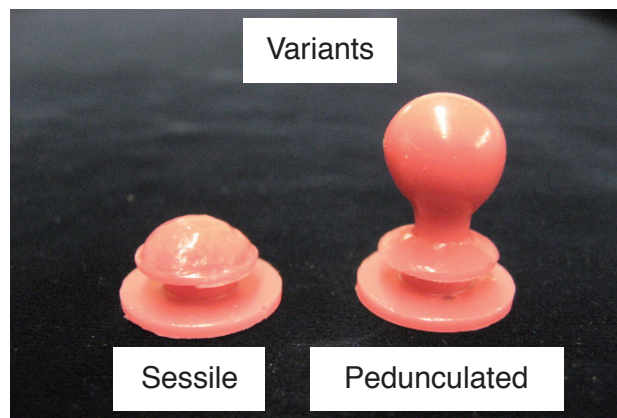
How to attach the model to the holding table (lateral position)

1. Align holes on the side of the main unit with the holding table's fixing pins.



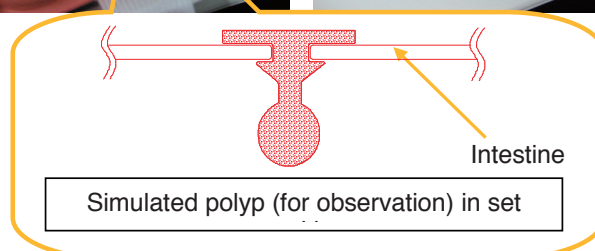
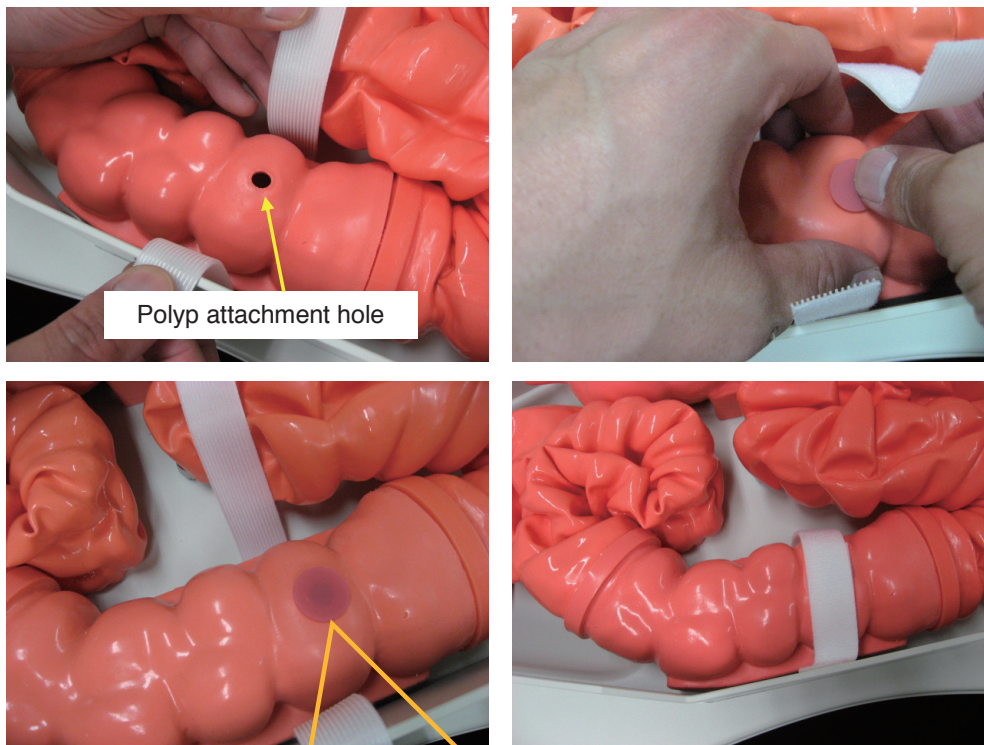
3-3 How to attach simulated polyps (for observation)

Select from the simulated polyps (for observation) below and attach them to the designated areas on the ascending colon and descending colon.



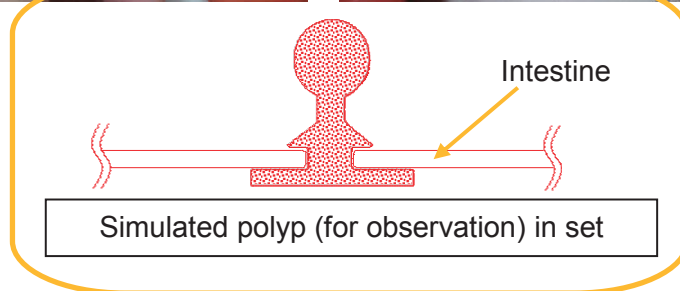
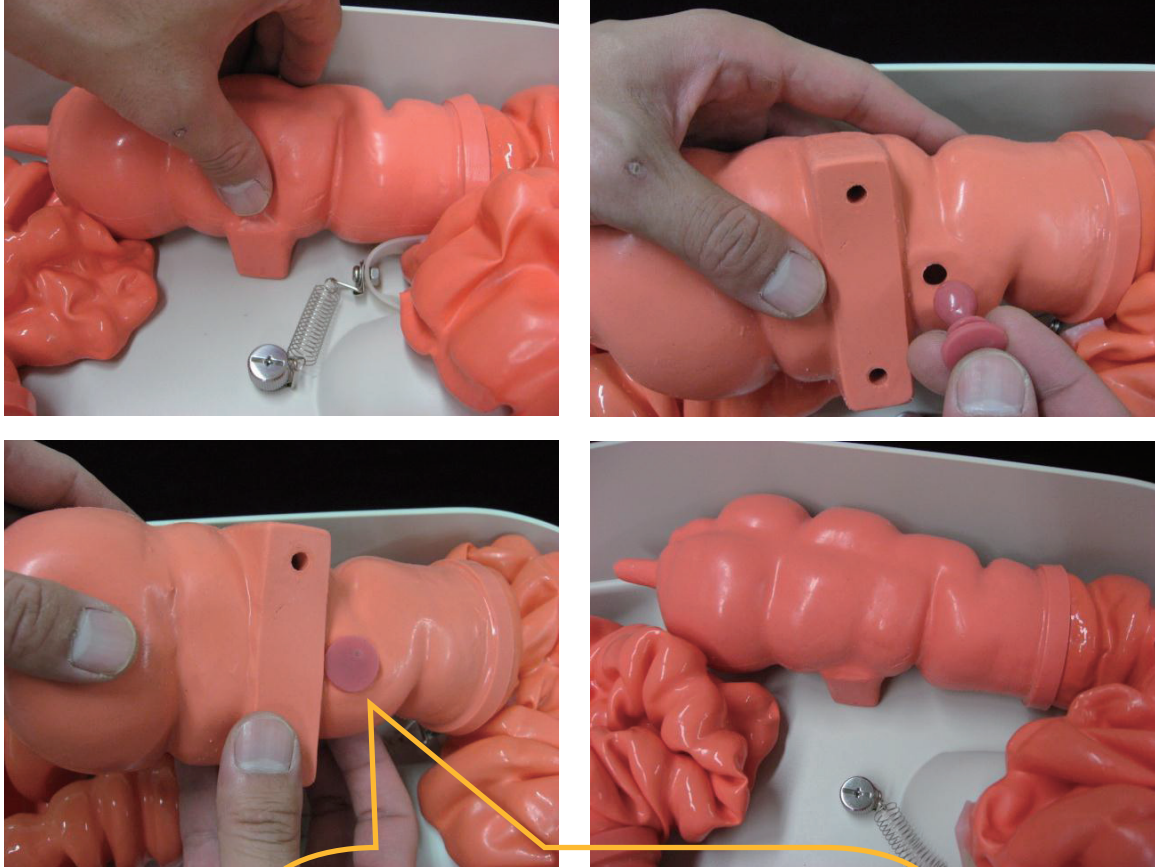
○ Attaching a polyp to the descending colon

1. Remove the polyp attachment band from the descending colon, then insert the selected simulated polyp (for observation) into the polyp attachment hole. Next, re-attach the polyp attachment band to cover the polyp flange.



○ Attaching a simulated polyp to the ascending colon

1. Remove the ascending colon from the main unit, insert the selected polyp (for observation) into the polyp attachment hole, and re-attach the ascending colon to the main unit.



3-4 How to attach an optional LM-103A Simulated Polyp (for polypectomy)

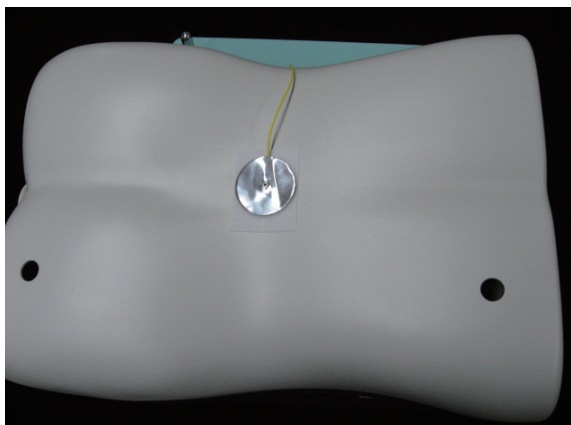
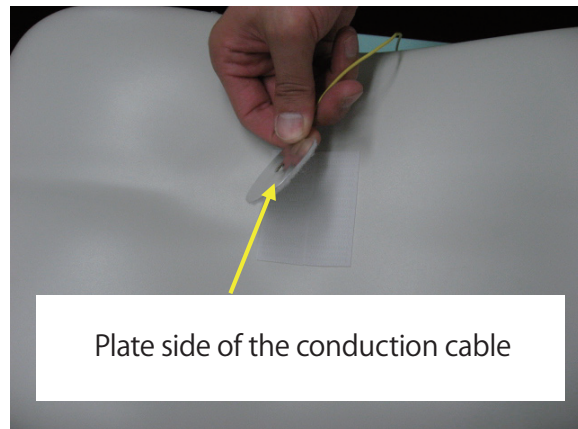
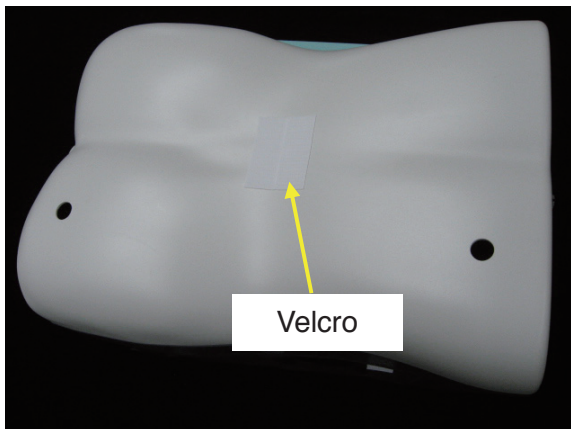
[Caution]

Be sure to disconnect the conduction cable from the model when not using (attaching) any simulated polyp (for polypectomies) in order to avoid any electrical hazards.

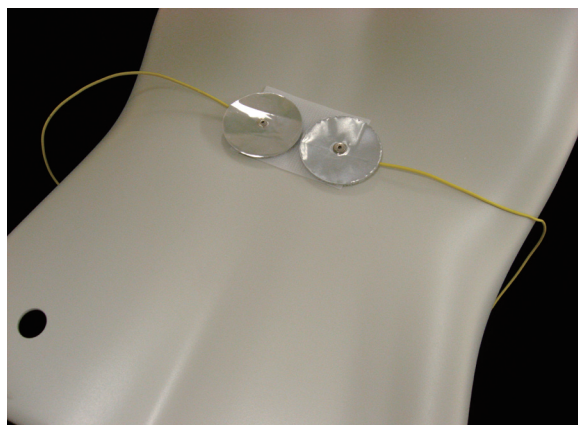
○ Attaching the return electrode

1. Use the Velcro on the back of the main unit to attach the conduction cable with the plate side facing the main unit. When using simulated polyps (for polypectomies) in both the ascending and descending colons, you should attach the two plates side-by-side to the Velcro on the back of the main unit as shown in the lower right illustration below.

* Note that only one conduction cable is included with this product. Extra conduction cables are available as optional accessories if needed for the use of simulated polyps (for polypectomies) in both the ascending and descending colons.



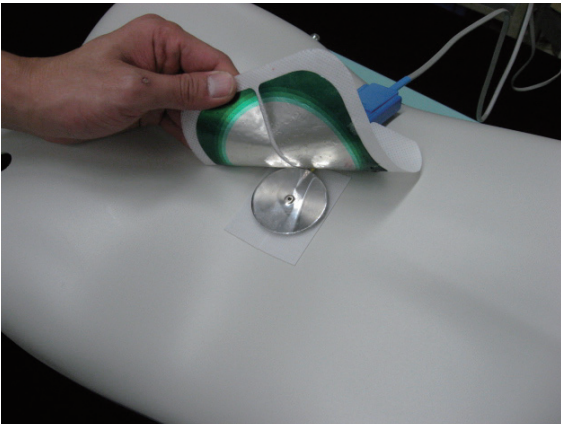
Using one conduction cable



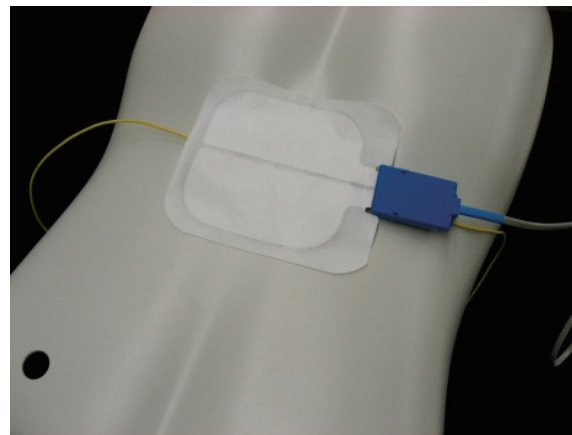
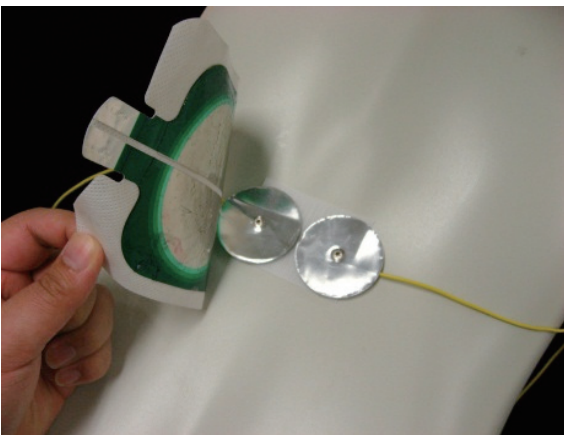
Using two conduction cables

2. Attach a return electrode which you might have to cover the plate of the conduction cable.
When using simulated polyps (for polypectomies) in both the ascending and descending colons, you should attach the return electrode so that it is in contact with the two plates as shown in the lower illustrations below.

*** When using a dual-type return electrode, attach it so both surfaces are in contact with the plate.**



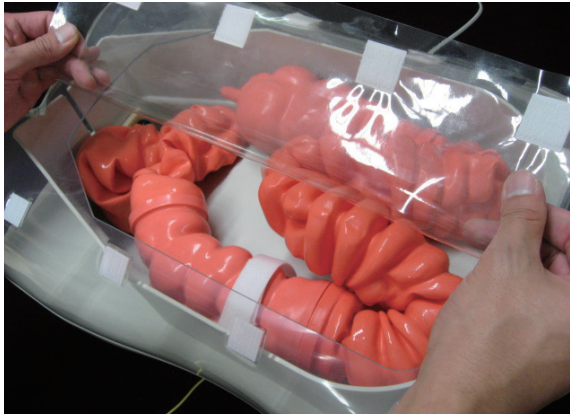
Using one conduction cable



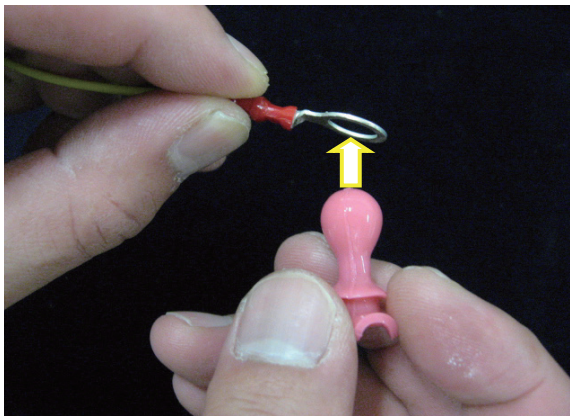
Using two conduction cables

○ Attaching a simulated polyp (for polypectomies) to the descending colon

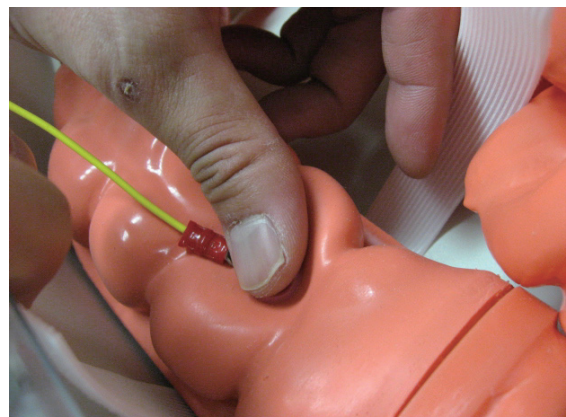
1. Remove the simulated peritoneal membrane sheet, then remove the polyp attachment band from the descending colon.



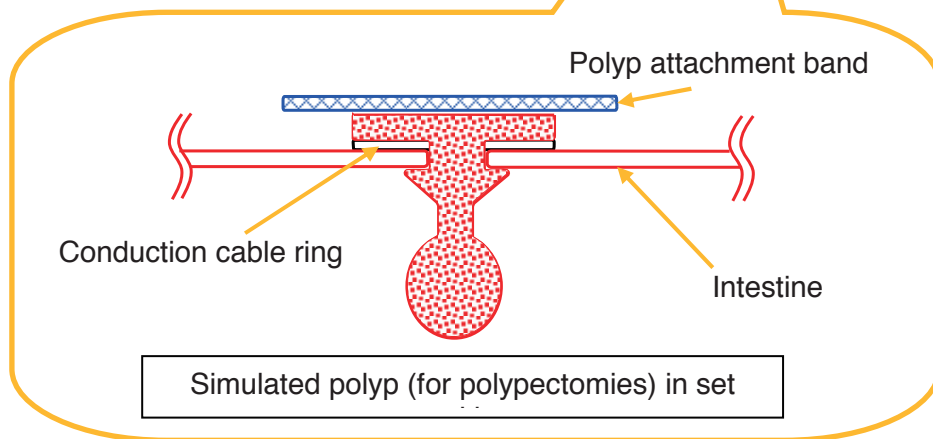
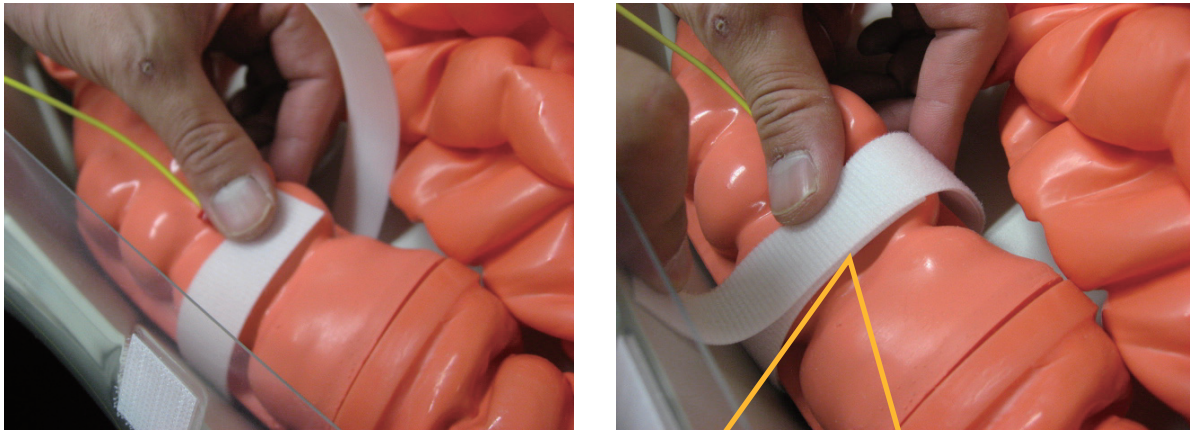
2. Insert a simulated polyp (for polypectomies) into the conduction cable's metal ring.



3. Insert the simulated polyp (for polypectomies) into the descending colon's polyp attachment hole.



4. Re-attach the polyp attachment band to cover the flange.

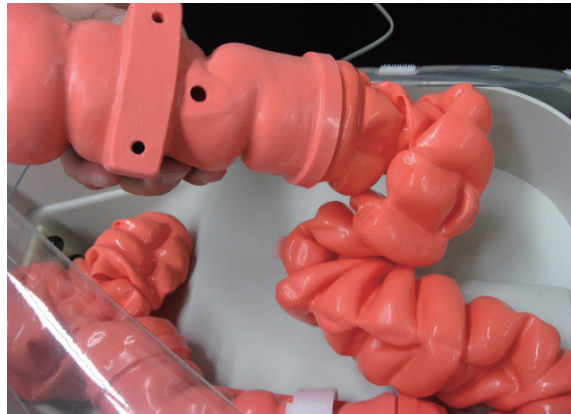


5. Position the conduction cable between the Velcro and re-attach the simulated peritoneal membrane sheet.

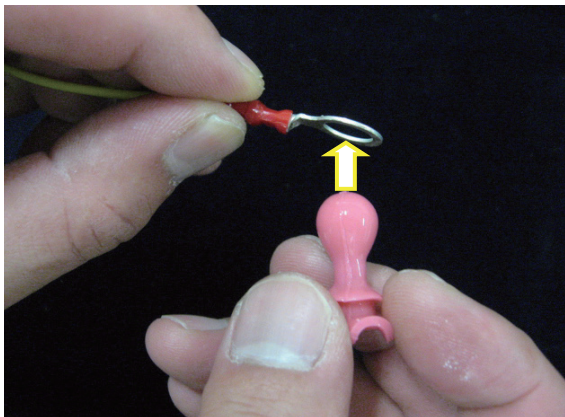


○ Attaching a simulated polyp (for polypectomies) to the ascending colon

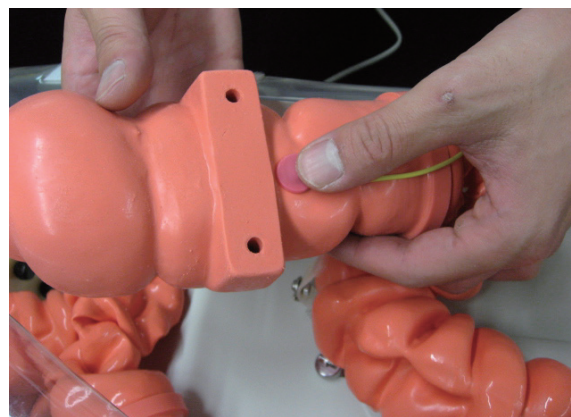
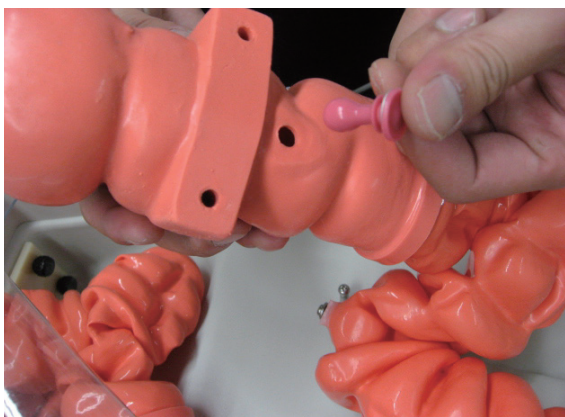
1. Remove the simulated peritoneal membrane sheet, and remove the ascending colon from the main unit with the transverse colon still attached to it.



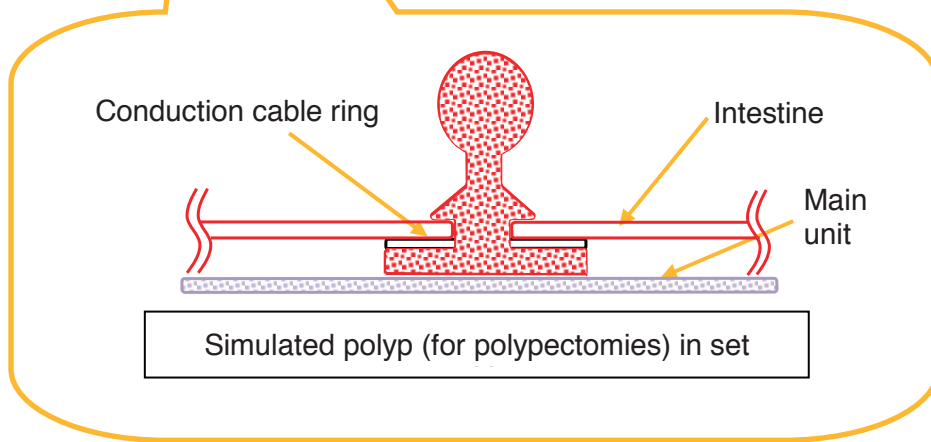
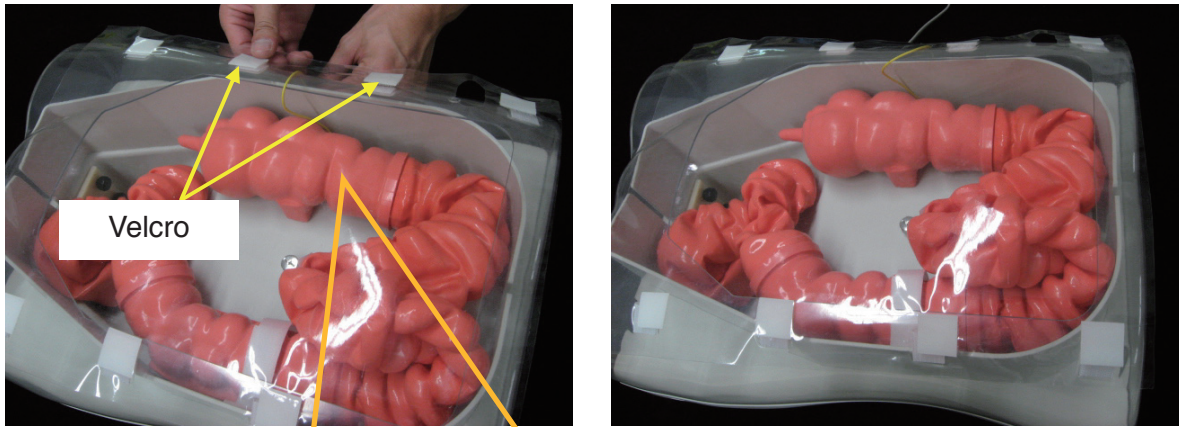
2. Insert a simulated polyp (for polypectomies) into the conduction cable's metal ring.



3. Insert the simulated polyp (for polypectomies) into the ascending colon's polyp attachment hole, then re-attach the ascending colon to the main unit.



4. Position the conduction cable between the Velcro and re-attach the peritoneum sheet.



3-5 Caring for the product after use

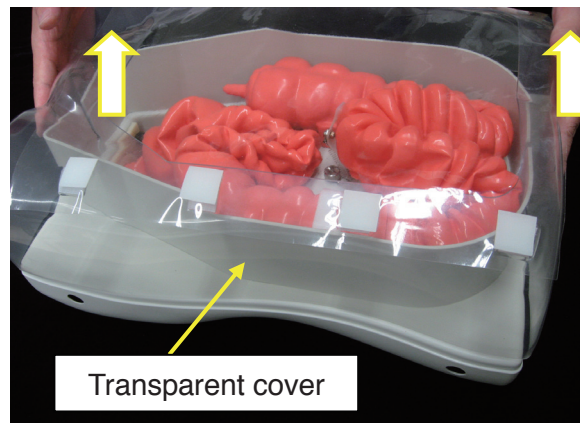
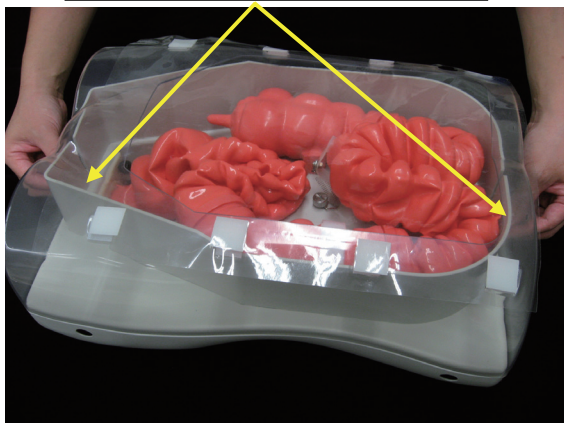
Make sure to wash the Type II Colonoscopy Training Model after use as described below.

** When washing the model in a rubbing motion, make sure not to use your fingernails. Doing so may crack the model, causing damage.*

1. Remove the transparent cover's screws, then remove the cover itself.

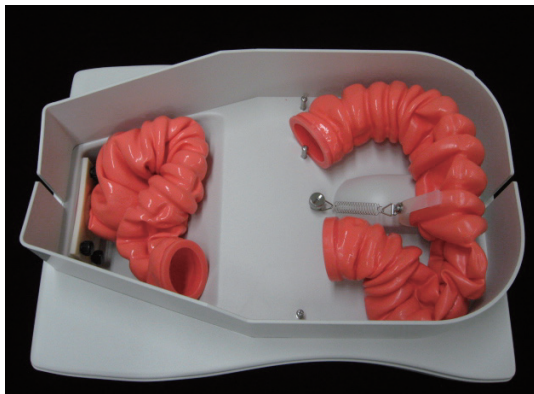


Transparent cover screws

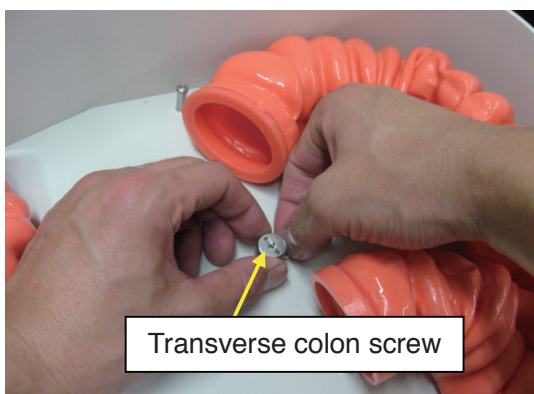


Transparent cover

2. Remove the ascending colon and descending colon from the main unit.



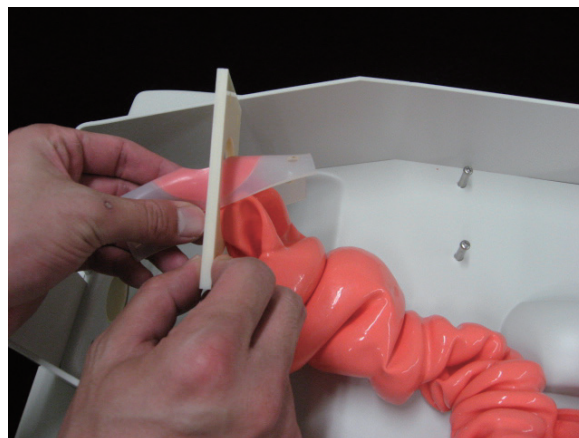
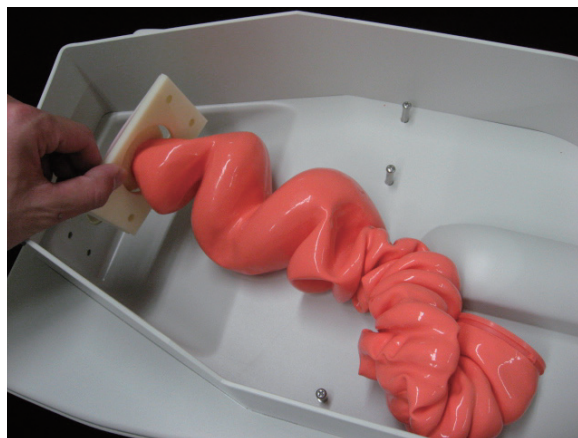
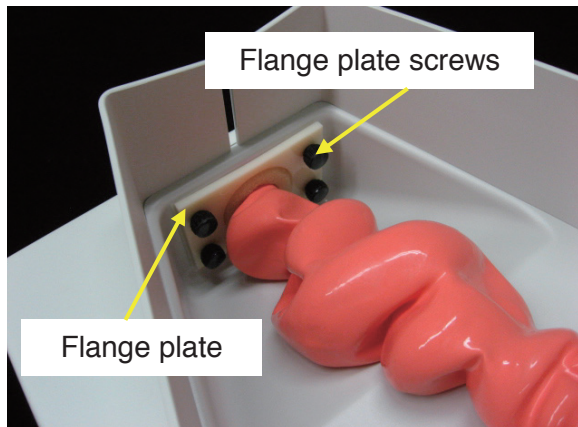
3. Remove the transverse colon's screw, then remove the transverse colon from the main unit.



Transverse colon screw

4. Remove the flange plate screws, then remove the rectum/sigmoid colon and flange plate from the main unit.

Remove the flange plate from the rectum/sigmoid colon.



5. Use hot or cold water to rinse the lubricant out of each colon piece and all other parts removed. Wipe any remaining moisture from the parts, then place them in an area away from direct sunlight to dry completely.



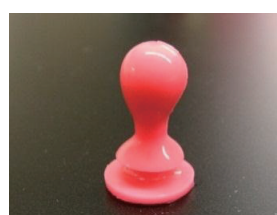
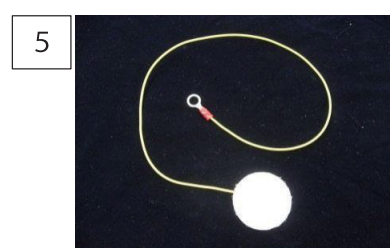
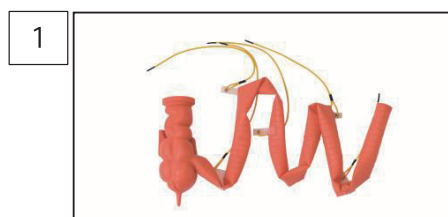
4. Specifications

	Length	Width	Height	Weight
Main model unit	Approx. 33 cm	Approx. 46 cm	Approx. 21 cm	Approx. 2.9 kg
Holding board	Approx. 27 cm	Approx. 44 cm	Approx. 9 cm	Approx. 1.4 kg
Case	Approx. 40 cm	Approx. 53 cm	Approx. 35 cm	Approx. 5 kg

Total weight: Approx. 10 kg * Accessories included

5. Optional items (sold separately)

Product name	Product No.
1 Small intestine for Colonoscopy (semi-difficult type)	LM-107A
2 Small intestine for Colonoscopy (easy type)	LM-107B
3 Ascending Colon for Colonoscopy	LM-107C
4 Descending Colon for Colonoscopy	LM-107D
5 Conduction cable	LM-107E
6 Simulated Polyp (for polypectomy): 5 count	LM-103A



※ Pedunculated only.

※ Refrigeration is required for this product (store between 2 and 10 deg. C, do not freeze).