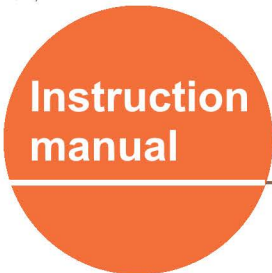


Caution:
Don't mark on the phantom with pen or leave printed materials on its surface.
Ink marks on the phantom will be irremovable.

Ultrasound-Guided Tube Feeding Phantom

● Product supervision:
Hirosaki University Hospital, General Medical Department,
Dr. Kobayashi Tadashi



Contents

- General Information p.1
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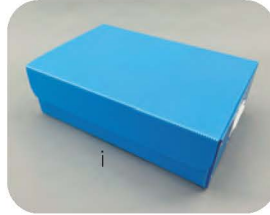
● Features

- Confirm tube placement while moving the tube using ultrasound
- Practice using ultrasound by confirming various landmarks, such as the trachea, esophagus, thyroid, sternum and clavicles
- Change whether the tube reaches the esophagus or the trachea to learn the difference
- Check the position of the catheter
- Use your own ultrasound device to train any time

General Information

Set includes

Make sure that all components are in place before you start.



- | | | | | | | | | |
|---|-----------------------|---|---|--------------------|---|---|--------------|---|
| a | ultrasound neck block | 1 | c | nasogastric tube | 1 | i | storage case | 1 |
| b | body | 1 | d | syringe | 1 | | | |
| | | | e | talcum powder | 1 | | | |
| | | | f | surplug | 1 | | | |
| | | | g | instruction manual | 1 | | | |
| | | | h | urethan block | 1 | | | |

⚠ Caution

● Handle with care

This phantom is made from a special composition of resin. Please handle with care as to not damage it.

● Do not leave printed documents

Do not leave printed documents on the phantom. Ink stains will be irremovable.

● Do not write on the phantom

Any ink on the phantom will be absorbed and become irremovable.

● Cleaning and Care

Please clean the phantom completely every time after finishing the training. Any remaining gel may deteriorate the phantom.

Never wipe the phantom or with thinner or organic solvent.

● Color changes may occur

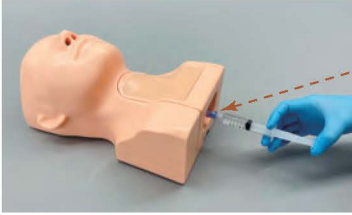
This phantom may change color over time. This does however not impact the performance.

● Correct storage conditions

Keep the phantom at room temperature, away from heat, moisture and direct sunlight.

1 Setup

- ① Place the simulator on a level surface.
- ② Insert water into the esophagus.



Insert **17ml** of water through the filling port using the included syringe.

※ Close opening with plug
esophagus plug

※ Please use the included plug.



Place the head on the included **urethane block** and let the air escape from the esophagus.

※ Any air remaining in the model will influence the ultrasound image.

2 Imaging

- ① Apply ultrasound gel.



Apply **ultrasound gel** directly to the phantom.

- ② Scan the phantom.



Scan the phantom.

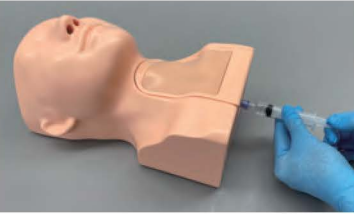
※ Please use a **linear probe** for scanning.

※ Adjust the settings of your ultrasound device to receive the best results.

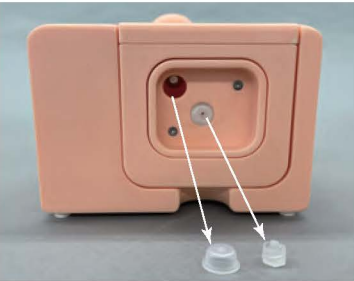
3 Cleanup



- ① Remove the gel
Remove the remaining ultrasound gel using wet wipes.
 - ※ If the surface feels sticky, touch up with the included talcum powder.
 - ※ **Dried leftover ultrasound gel might lead to corrosion of the phantom material or influence the ultrasound image.**



- ② Drain the water
Use the syringe to drain the water from the phantom.



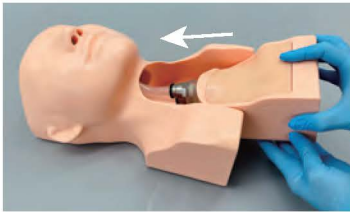
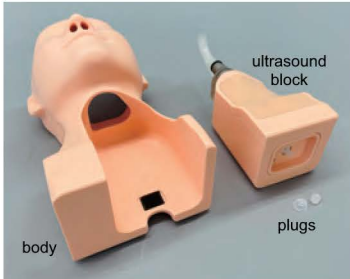
- ③ Remove the plug and drain the excess water.
 - ※ If water is left inside the phantom, it might start to mold.
 - ※ Please be careful not to lose the plugs.

TIP: Flushing with alcohol after use helps keeping the model clean



- ④ Put the phantom back into the storage case
 - ※ Please put back only after it's dry.
 - ※ Including a drying agent in the box helps countering mold.

Setting up the cube



① Prepare the body, ultrasound block and plugs.

② Close the tracheal opening.

⇒ see image on the right

※ The esophagus plug is used to fill with water.

⇒ see p.2



tracheal plug

② Insert the ultrasound block into the body.

※ Secure the body and block with the velcro tape.

③ Insert the tubes into the nose.

※ Both left and right nostril can be used

Exchanging the esophagus/trachea tubes



④ Switch the left and right tubes.

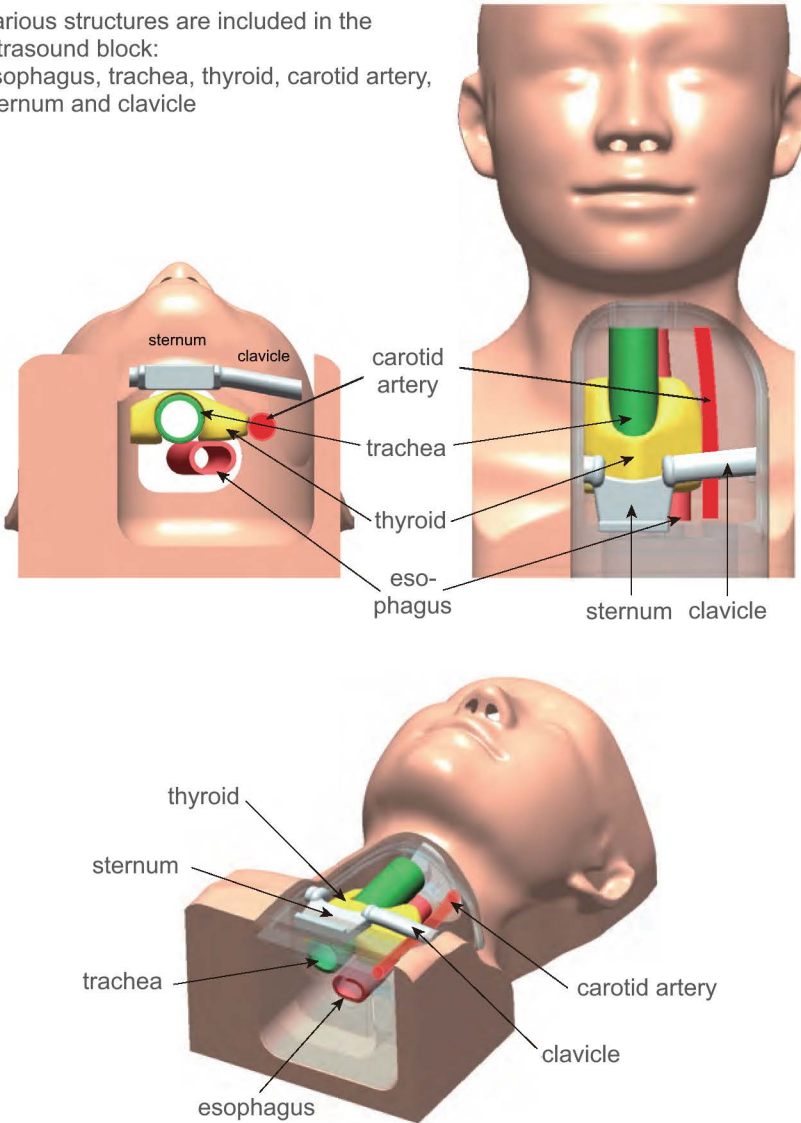
※ Either tube can be attached left or right.

※ Please insert deeply.

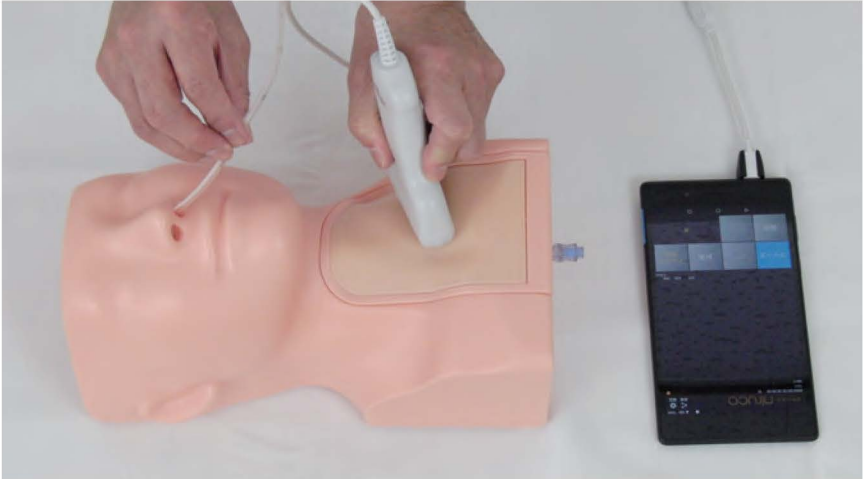
Block
upper connector:
trachea
lower connector:
esophagus

Structure of the phantom

Various structures are included in the ultrasound block:
esophagus, trachea, thyroid, carotid artery,
sternum and clavicle



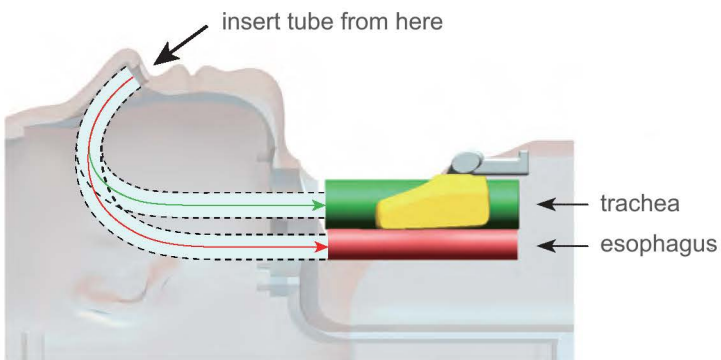
2 How to use



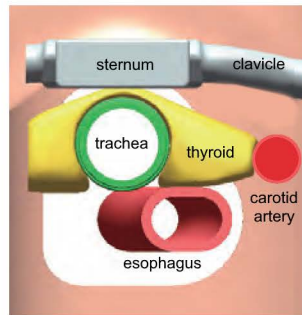
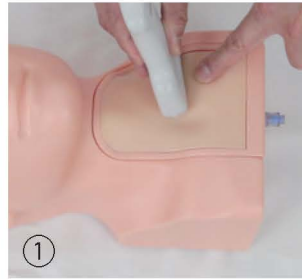
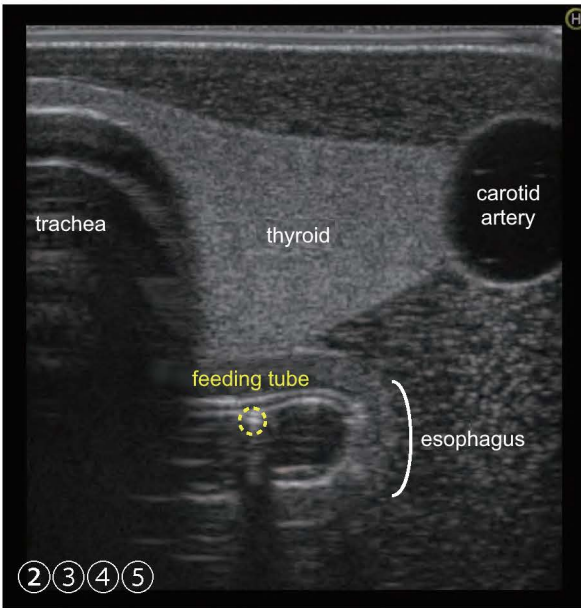
When inserting the feeding tube into the nostril, it reaches the trachea/esophagus

※ When you feel a resistance while inserting the tube, check if the tip has reached the inner parts.

Cross-section of the phantom



3 How to use



- ① Check the location of the clavicle.
- ② Check the location of the thyroid.
- ③ Check the esophagus behind the thyroid.
- ④ Insert the feeding tube.
- ⑤ Confirm the insertion of the feeding tube to the esophagus.

※ The tube will not be visible if it has entered the trachea

※ Try moving the tube carefully if you find it hard to confirm the tube placement.

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