

# Abdominal Examination Trainer

Product No: 60000



*For more skills training products visit*  
**limbsandthings.com**

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# ABDOMINAL EXAMINATION TRAINER

**60000**

An anatomically accurate adult male torso, used to teach and practise the palpation, auscultation and percussion elements of abdominal or gastrointestinal (GI) examination.

Ideal for OSCE preparation and assessment.

## Skills

- Familiarity with the abdominal regions and underlying anatomy
- Practice in abdominal palpation, auscultation and percussion
- Ability to differentiate normal from abnormal pathology
- Identification of ascites, specifically shifting dullness and fluid thrill
- Identification of gaseous distension and bowel obstruction
- Ballottement of kidneys
- Professional-to-patient communication

## Features

- Interchangeable organs and pathologies of varying sizes can be quickly and easily inserted into the abdomen
- Trainer or Simulated Patient can vary respiratory movement of liver and spleen by the turn of a wheel
- Integral amplifier and surface mounted MP3 player allow training in auscultation of normal and high-pitched or obstructed bowel sounds, renal and aortic bruits - in variable locations
- Volume of bowel sounds can be adjusted and MP3 player allows for additional sounds to be loaded
- Distension set allows for the following:
  - Realistic checking for ascites using percussion, shifting dullness or fluid thrill technique
  - Simulation of bowel obstruction on percussion and auscultation
- Pulse bulb allows simulation of normal and aneurysmal aortic pulse

## Package supplied

<b>60005</b>	Abdominal Examination Base Unit	<b>60012</b>	Abdominal Examination Kidney (x2)
<b>60006</b>	Abdominal Examination Skin	<b>60013</b>	Abdominal Examination Bladder
<b>60007</b>	Abdominal Fluid Bag	<b>60014</b>	Abdominal Examination Pathologies (Set of 6)
<b>60008</b>	Abdominal Examination Organ Locator	<b>60015</b>	Abdominal Examination Aortas (Set of 2)
<b>60009</b>	Abdominal Wall	<b>60016</b>	Abdominal Examination – Distension Set
<b>60010</b>	Abdominal Examination Livers (Set of 3)	<b>60052</b>	Power Pack
<b>60011</b>	Abdominal Examination Spleens (Set of 2)	•	Carry case

# IMPORTANT SAFETY INSTRUCTIONS



Caution please refer for further information to the user manual



This product is designed for indoor use only



Caution



Only used at altitudes not exceeding 2000m



Only used in non-tropical climate regions

## Read the safety instructions carefully before using your Abdominal Examination Trainer

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Only use attachments/accessories specified by the manufacturer.
9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
10. Keep the product away from obvious sources of moisture. Make sure the product is disconnected before cleaning.
11. Never use the product outdoors in wet conditions, as this may pose a shock hazard or damage the product.
12. This product is intended for use with standard type AA Alkaline or similar non rechargeable batteries (High quality batteries such as Duracell or Energizer are recommended). Using non recommended lithium batteries or rechargeable batteries may cause hazards.
13. Do not use headphones with the product, it is only designed for use with the speaker supplied.
14. Do not disassemble the product or attempt to repair a faulty unit, please return the product to Limbs & Things for assessment and repair.
15. Clean the product with a damp soft cloth or sponge, using only warm water with mild detergent.
16. Clean all the electrical parts and near electrical parts only with Dry cloth.
17. Do not use flammable solvents near this product.
18. Do not allow young children to use this product.
19. Never force any connector into the ports. Make sure your connectors are the identical shape and size before you connect.
20. Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
21. Do not expose the product to flames or use near naked flame sources.

### Do not use the Abdominal Examination Trainer if:

- The Torso is not assembled correctly
- The skins, foams or organs are torn or not properly fitted
- Internal or external cables, tubes or connectors are damaged
- There is fluid leakage in or on to the product
- There are unusual sounds indicating air leakage or mechanical damage
- There are signs of electrical malfunction, such as an unresponsive or an unusual smell and or smoke

## Environment

In cold conditions, wait until the simulator has reached room temperature before starting up the product.

## Storage and Transportation

The trainer and its accessories are heavy when packed in their carrying cases. Always ensure that the products are properly packed and secured during transportation and storage in order to prevent personal injury or damage to the product.

Care should be taken to keep the Abdominal Examination Fluid Bag and Abdominal Examination Ascites Bag away from sharp or heavy objects that could cause a puncture.

## Disposal Instructions

Do not disassemble, crush, short-circuit or incinerate the batteries as it may cause fire, injury, burns or other hazards.

Do not dispose of this product with unsorted waste. Improper disposal may be harmful to the environment and human health. Please refer to your local waste authority for information on return and collection systems in your area.



This symbol on the product(s) and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge.

Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

## For professional users in the European Union

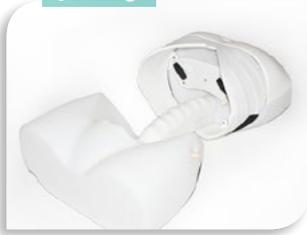
If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.

## For disposal in countries outside of the European Union

This symbol is only valid in the European Union (EU). If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

# COMPONENTS

60005



Base Unit

60006



Abdominal Examination Skin

60007



Abdominal Fluid Bag

60008



Abdominal Examination Organ Locator

60009



Abdominal Wall

60010



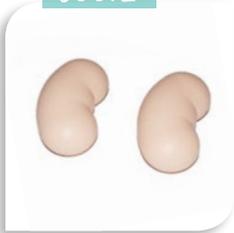
Abdominal Examination Livers (Set of 3)

60011



Abdominal Examination Splens (Set of 2)

60012



Abdominal Examination Kidneys (x2)

60013



Abdominal Examination Bladder

60014



Abdominal Examination Pathologies (Set of 6)

60015



Abdominal Examination Aortas (Set of 2)

60016



Abdominal Examination Distension Set

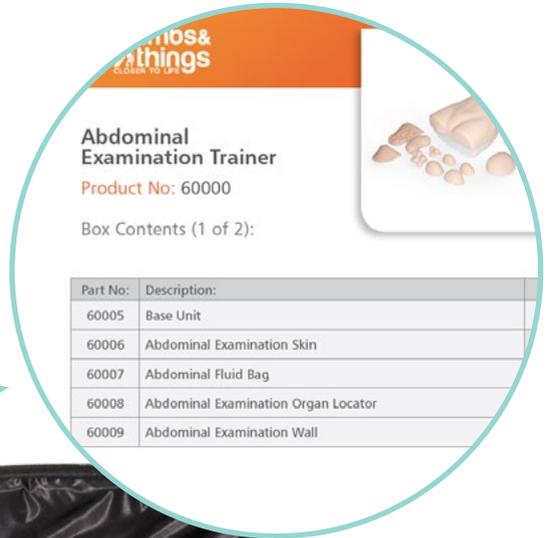
60052



Power Pack

# PACKAGE SUPPLIED

Carry case 1 of 2



**Abdominal Examination Trainer**  
Product No: 60000

Box Contents (1 of 2):

Part No:	Description:
60005	Base Unit
60006	Abdominal Examination Skin
60007	Abdominal Fluid Bag
60008	Abdominal Examination Organ Locator
60009	Abdominal Examination Wall



 To safely lift the base unit out of the case, securely grip the underside of the base unit on both side and carefully lift out of the case. Please **DO NOT** use the Breathing Mechanism handle.

# PACKAGE SUPPLIED

Carry case 2 of 2

**Abdominal Examination Trainer**  
Product No: 60000

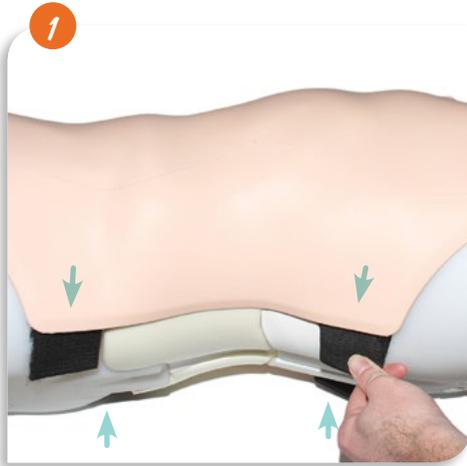
Box Contents (2 of 2):

Part No:	Description:	Pack
60010	Abdominal Examination Livers (set of 3)	<input type="checkbox"/>
60011	Abdominal Examination Spleens (set of 2)	<input type="checkbox"/>
60012	Abdominal Examination Kidneys (set of 2)	<input type="checkbox"/>
60013	Abdominal Examination Bladder	<input type="checkbox"/>
60014	Abdominal Examination Pathologies (set of 6)	<input type="checkbox"/>
60015	Abdominal Examination Aortas (set of 2)	<input type="checkbox"/>
60016	Abdominal Examination Distension Set	<input type="checkbox"/>
60046	Abdominal Examination Small Pump	<input type="checkbox"/>
60051	Abdominal Examination Speaker	<input type="checkbox"/>



# ADDING/REMOVING ABDOMINAL SKIN

## Removing Abdominal Skin

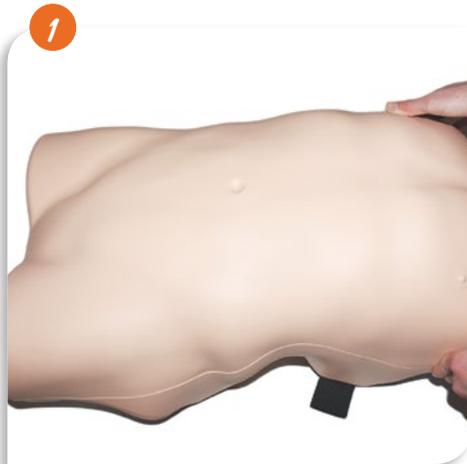


Tilt the model on to its side to reveal the Velcro straps (2 on either side of the model). **Please ensure to pull the velcro straps and NOT the skin**



Gently pull the Velcro strap away from the model to release the Abdominal Skin. Repeat process on both sides of the model

## Adding Abdominal Skin



Once the relevant modules have been inserted, place the Abdominal Skin over the model ensuring that the umbilicus is central



Tilt the model on to its side and attach the Velcro straps (on either side of the Abdominal Skin) to the Velcro strips attached to the model

## ADDING/REMOVING ABDOMINAL SKIN



Ensure that the skin is secure



The model is now ready to use

# PLACEMENT OF ORGANS AND PATHOLOGIES

All of the organs provided are enlarged representations

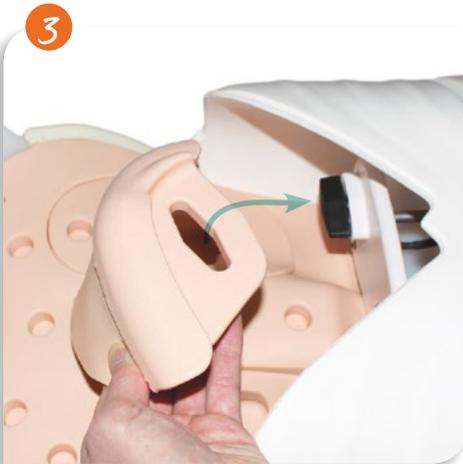
## Liver



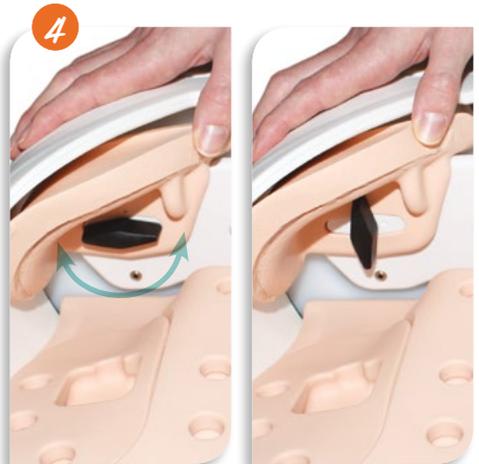
For placing the different organs/pathologies ensure that the Abdominal Examination Organ Locator is displayed as a starting point



Select a Liver from the Set of 3 (Slightly Enlarged, Smooth Enlarged, Irregular Enlarged)



Line up the hole on the top of the Liver module with the black turn knob located on the top right of the model



The Liver is now in the correct position. Turn the black turn knob to secure the Liver in place

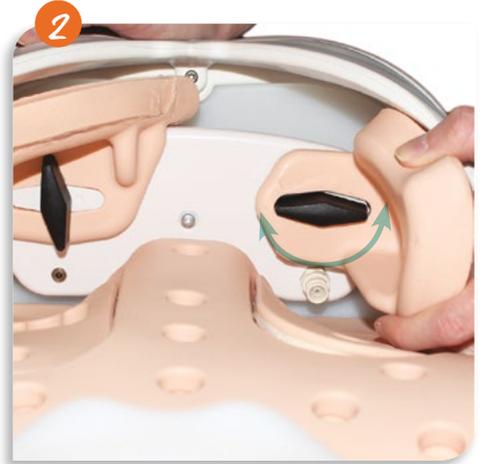
# PLACEMENT OF ORGANS AND PATHOLOGIES

All of the organs provided are enlarged representations

## Spleen



1 Select a spleen from the set of 2 (enlarged and slightly enlarged)



2 Line up the hole on the top of the Spleen module with the black turn knob located on the top left of the model



3 Turn the black turn knob to secure the Spleen in place

# PLACEMENT OF ORGANS AND PATHOLOGIES

All of the organs provided are enlarged representations

## *Kidney*



Remove the Kidney Locator (1 on each side of the model) from the Abdominal Examination Organ Locator



A port for the kidney can now be seen



Place the kidney into the kidney port



The Kidney is now in place. The process can be repeated on the opposite side of the model

# PLACEMENT OF ORGANS AND PATHOLOGIES

All of the organs provided are enlarged representations

## Bladder



Select the Abdominal Examination Bladder and line up the 2 pegs on the back of the Bladder with the 2 holes above the bottom speaker port on the Organ Locator



Fit the bladder in place



Ensure the bladder pegs have fitted securely into the holes on the Abdominal Examination Organ Locator



The bladder is now in place

# PLACEMENT OF ORGANS AND PATHOLOGIES

All of the organs provided are enlarged representations

## Aorta

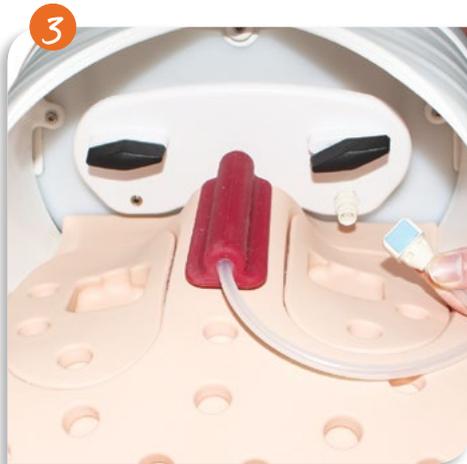
(Same process for both Normal and Aneurysmal)



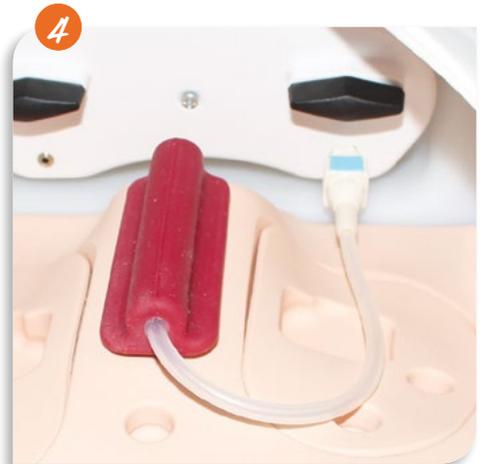
Line up the 2 pegs on the back of the Aorta with the 2 holes at the highest point of the Organ Locator. Ensure that the air tube is pointing in the direction of the pelvis



Fit the Aorta, pressing down firmly to secure in place. Ensure the Aorta pegs have fitted securely into the holes on the Abdominal Examination Organ Locator



Attach the connector on the end of the Aorta tube to the connector on the top left of the model



The Aorta is now in place

# PLACEMENT OF ORGANS AND PATHOLOGIES

All of the organs provided are enlarged representations

## Aorta

*(Same process for both Normal and Aneurysmal)*



Once the Aorta is in place, connect the hand pump to the connector at the top of the model



The hand pump is now ready to use



Squeeze the hand pump to inflate the Aorta during training. The trainee should feel the Aorta pulsating while they palpate the model

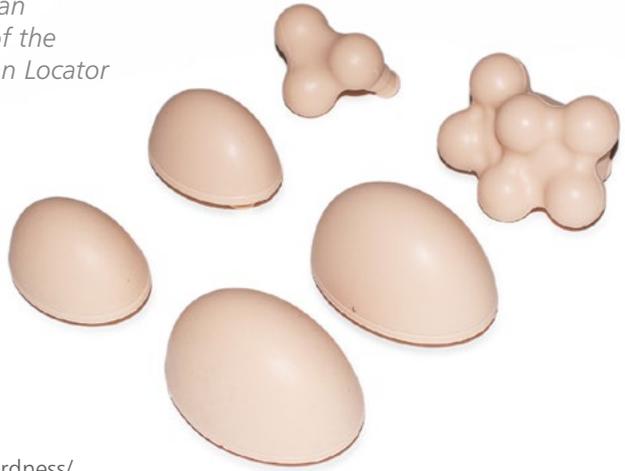


When using the hand pump, ensure that the circular air lock has been tightened so that air is flowing freely from the hand pump into the aorta. Turn clockwise to tighten

# PLACEMENT OF ORGANS AND PATHOLOGIES

## Pathologies

*Various pathologies/masses can be placed in different areas of the Abdominal Examination Organ Locator*



While some pathologies may look identical, there is actually hard and soft variations.

To differentiate, compare the hardness/softness of identical looking pathologies before fitting.



Each pathology/mass has 2 pegs on the bottom which can be lined up with the holes on the Organ Locator



Fit the pathology/mass, pressing down firmly to secure in place. Ensure the pathology pegs have fitted securely into the holes on the Abdominal Examination Organ Locator

# INSTALLING & CHANGING BATTERIES



Remove the battery cover plate located at the top of model



Install batteries (the model uses 4 x AA)

Pull ribbon to remove batteries  
Replace batteries and fold ribbon back over the batteries



- When the batteries are low, the red light (to the left of the MP3 screen) will light up
- [MEDIA ERROR] - If this message displays, it means 'change the batteries'

*WE STRONGLY RECOMMEND HIGH QUALITY BATTERIES (E.g. Duracell/Energizer)*

*REMOVE BATTERIES WHEN THE MODEL IS NOT IN USE*

## USING MAINS POWER



The model is also provided with a mains power lead



Attach the mains power lead to the power connector located at the top of the model (underneath the MP3 Player). Plug into power source

# SPEAKER AND MP3 PLAYER

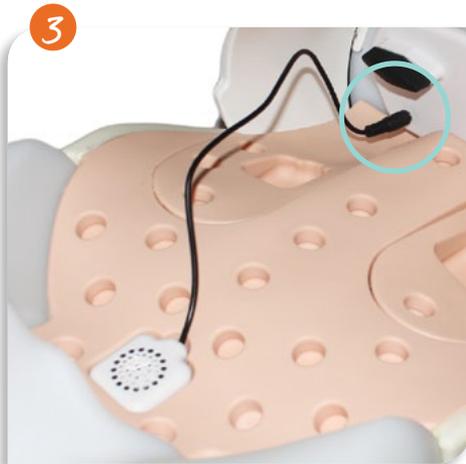
## Speaker



There are 3 speaker ports located on the Abdominal Examination Organ Locator



Place the speaker into the chosen speaker port



Connect the black wire from the speaker into the port located on the top right of the model

**!** Please note this port is specifically designed for the speaker provided.  
DO NOT plug headphones into this port.



Add chosen organs/pathologies (explained pages 7-13) and replace the skin on the model

# SPEAKER AND MP3 PLAYER

## MP3 Player

The MP3 Player is located at the thorax end of the model



Press the Power button (hold for a couple of seconds) and the display will light up. It will show all available Abdominal Sounds



Press the Mode button and ensure it is set to Normal



Press the arrows to scroll through the different available sounds



Select the chosen sound and press the play button

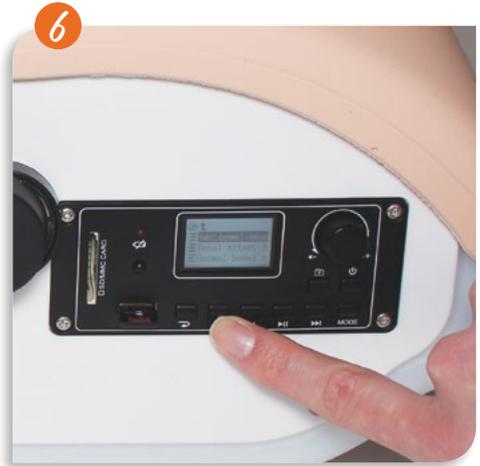
## SPEAKER AND MP3 PLAYER

### MP3 Player

The MP3 Player is located at the thorax end of the model



Rotate the volume control to turn volume up and down



To stop the abdominal sounds playing, press the stop button



More sounds can be added by the user by loading them on to the provided USB, or by loading on to a soundcard (not provided)

### TO ADD OR DELETE FILES FROM THE MP3 PLAYER

- Remove the memory stick and insert it into your computer
- Open the folder on the memory stick. Files can be copied into and deleted out of this folder
- If you add a sound file make sure it is in MP3 format and reads .mp3 at the end

Ensure that the MP3 player is switched off after each use. To do this, press the Power button (hold for a couple of seconds).

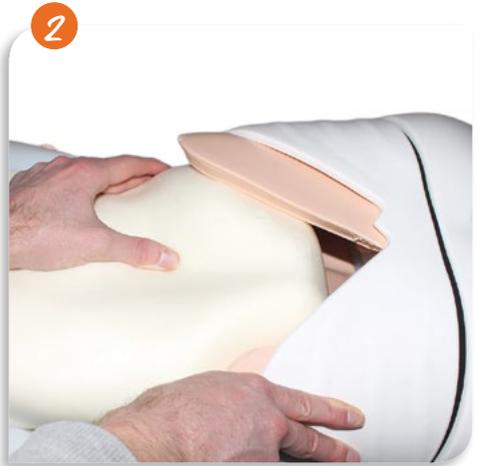


If the MP3 player stops working during use, this may be due to a slight power surge. To remedy this, remove one of the batteries or unplug the USB to turn the MP3 player off, then replace and restart. If there is still no sound, please contact a member of our Customer Services Team.

## INSERTING THE ABDOMINAL WALL



Once the model has been set up with the relevant organs and or pathologies/masses, the Abdominal Wall needs to be inserted



Slide the Abdominal Wall underneath the lung and spleen (if fitted) and align into position



The Abdominal Wall is now in place



*Please note the Abdominal Wall Foam will naturally darken if exposed to UV light.*

# ATTACHING THE ABDOMINAL FLUID BAG

Once the Abdominal Wall is in place,  
the Abdominal Fluid Bag can be fitted over the top



Place the Abdominal Fluid Bag over the model with the two peg holes located at the bottom and the single peg hole located at the top



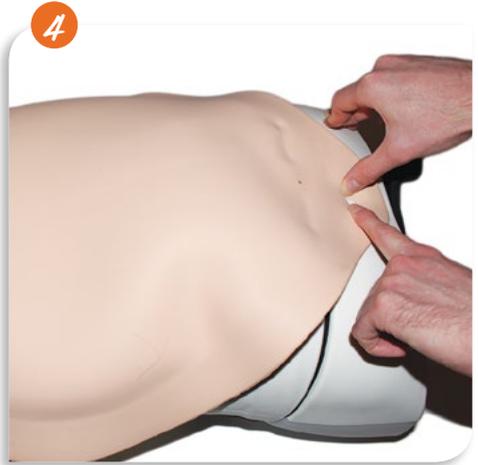
Secure the Abdominal Fluid Bag by attaching the peg holes (on either side of the Abdominal Fluid Bag) to the pegs on the model (located on either side of the model)

**!** Care should be taken to keep the Abdominal Fluid Bag away from sharp objects that could cause a puncture. We recommend you store it in the carry case provided when not in use, and avoid placing anything heavy on top. In the unlikely event that the Bag should leak, please be sure to clean up any excess fluid using paper towels or a cloth. The fluid is a slip hazard if it comes in contact with a hard floor, so if this does happen, please close the area off and clean and dry the floor thoroughly before allowing anyone to walk across the surface.

## ATTACHING THE ABDOMINAL FLUID BAG



The Abdominal Fluid Bag now needs to be secured to the top of the model. Locate the peg hole at the top of the Abdominal Fluid Bag and align with the peg at the top of the model



Attach the peg hole at the top of the Abdominal Fluid Bag to the peg at the top of the model. Ensure that the bag is pulled down to engage and fix securely



Attach the Abdominal Skin to the model



Secure the skin by attaching the Velcro straps on the Abdominal Skin to the Velcro located on either side of the model

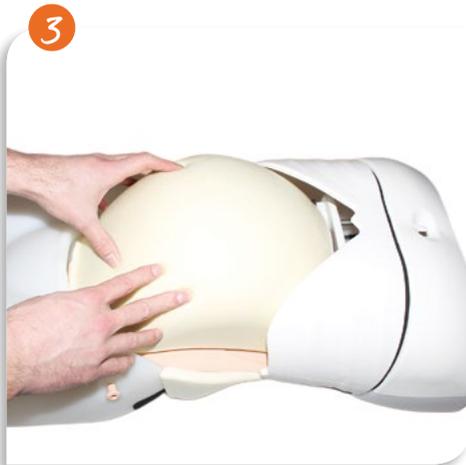
## ASCITES SET UP



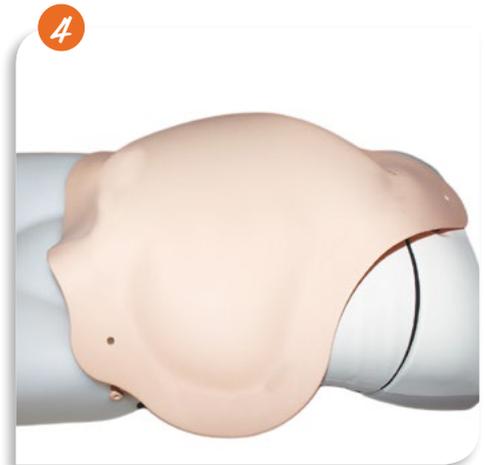
For ascites set up ensure that the Abdominal Examination Organ Locator is displayed as a starting point



Select the Distension Foam Insert

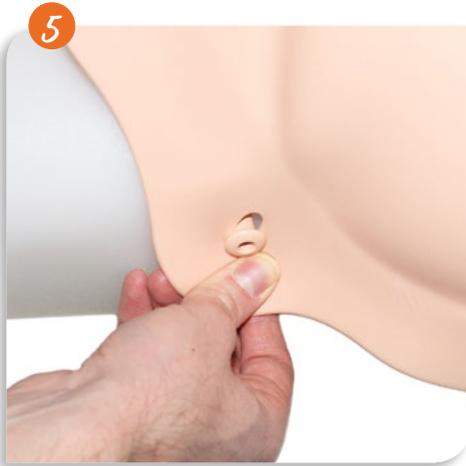


Place the Distension Foam Insert on top of the Abdominal Examination Organ Locator



Put the Ascites Bag on top of the Distension Foam Insert

## ASCITES SET UP



Secure the Ascites Bag by attaching the peg holes (on either side of the Ascites Bag) to the pegs on the model (located on either side of the model)



The Ascites Bag now needs to be secured to the top of the model. Locate the peg hole at the top of the Ascites Bag and align with the peg at the top of the model



Attach the peg hole at the top of the Ascites Bag to the peg at the top of the model, and pull down to secure



The Ascites Bag is now in place

## ASCITES SET UP



Attach the Abdominal Skin to the model



Secure the skin by attaching the Velcro straps on the Abdominal Skin to the Velcro located on either side of the model



The model is now ready to be used



*Care should be taken to keep the Ascites Bag away from sharp objects that could cause a puncture. We recommend you store it in the carry case provided when not in use, and avoid placing anything heavy on top. In the unlikely event that the Bag should leak, please be sure to clean up any excess fluid using paper towels or a cloth. The fluid is a slip hazard if it comes in contact with a hard floor, so if this does happen, please close the area off and clean and dry the floor thoroughly before allowing anyone to walk across the surface.*

# GASEOUS DISTENSION



For gaseous distention set up ensure that the Abdominal Examination Organ Locator is displayed as a starting point



Attach the blue connector of the Gaseous Distension Bag to the connector located on the top left of the model



Select the Distension Foam Insert



Place the Distension Foam Insert on top of the Abdominal Examination Organ Locator

## GASEOUS DISTENSION



*Ensure that the air inlet tube is on the underside of the Gaseous Distension Bag and under the Distension Foam. This will prevent kinks in the air inlet tube.*

Place the Gaseous Distension Bag over the Distension Foam Insert. Secure the Gaseous Distension Bag by attaching the peg holes (on either side of the Gaseous Distension Bag) to the pegs on the model (located on either side of the model). Locate the peg hole at the top of the Gaseous Distension Bag and align with the peg at the top of the model



Attach the Abdominal Skin



Secure the skin by attaching the Velcro straps on the Abdominal Skin to the Velcro located on either side of the model

## GASEOUS DISTENSION



Attach the blue connector from the pump to the connector at the top (outer) of the model



Once connected inflate the Gaseous Distension Bag with the pump. **6-8 pumps** (in and out as 1 pump) using the pump provided is recommended



Disconnect the pump from the model after inflating or the Gaseous Distension Bag will deflate itself

**!** Please **DO NOT** inflate/deflate the Gaseous Distension Bag without the skin on as this will put tension on the holes on the tabs of the bag.

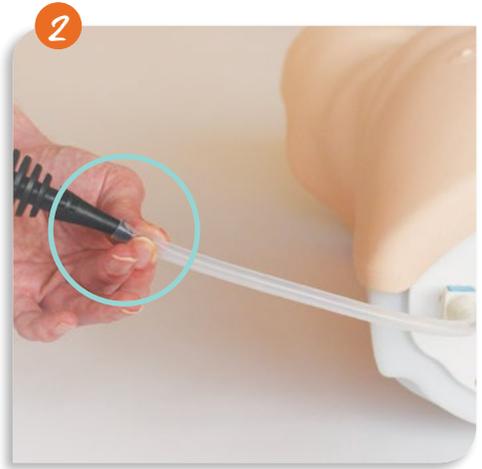
Please note the Distension Foam insert will naturally darken if exposed to UV light.

# GASEOUS DISTENSION

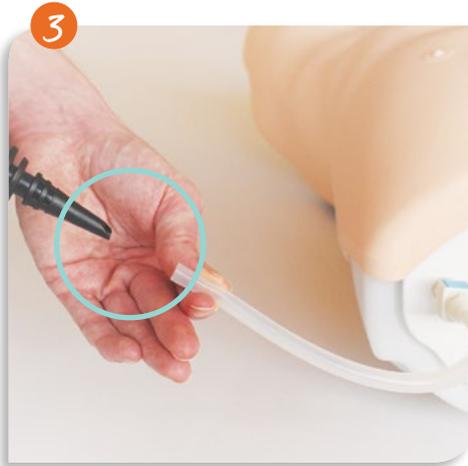
## EMPTYING THE GASEOUS DISTENSION BAG



1 Attach the blue connector from the pump to the connector at the top (outer) of the model



2 Disconnect the top part of the pump from the tube that attaches to the model



3 Remove top part of the pump from the tube. The Gaseous Distension Bag will begin to deflate



4 To remove all air from the Gaseous Distension Bag, press down on the abdominal skin until all air has been released

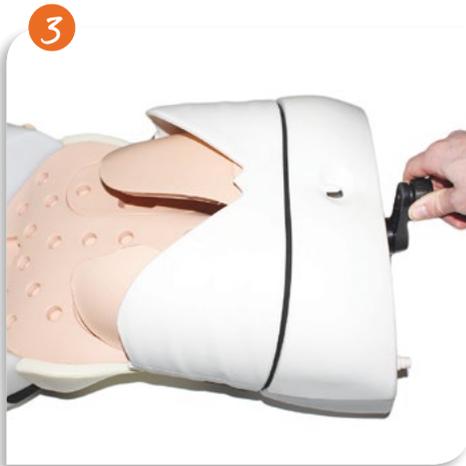
## USING THE BREATHING MECHANISM



Breathing or respiratory movement of the liver and spleen can be simulated on the model using the lever located at the top of the model



Rotate the lever in either direction



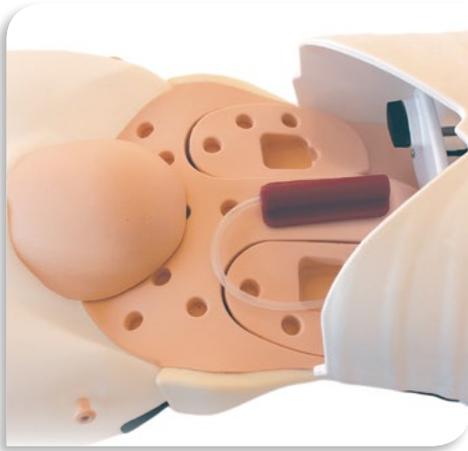
When the lever is pointed upwards, the model simulates the patient breathing out (exhaling)



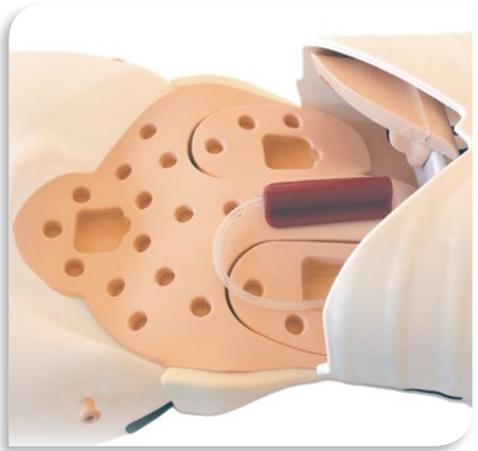
When the lever is rotated to a downward position, the model simulates the patient breathing in (inhaling). The lever can be rotated 360 degrees to simulate continuous breathing

## EXAMPLES OF SET UP FOR SCENARIOS

*A number of patient scenarios can be set up on the Abdominal Examination Trainer. A few examples can be seen below:*



ACUTE URINARY RETENTION  
(NORMAL AORTA)



SLIGHTLY  
ENLARGED LIVER



OVARIAN CYST



ENLARGED KIDNEY

## EXAMPLES OF SET UP FOR SCENARIOS

*A number of patient scenarios can be set up on the Abdominal Examination Trainer. A few examples can be seen below:*



CARCINOMA ON MASS  
IN LEFT ILIAC FOSSA



CARCINOMA WITH LIVER  
METASTASIS



LYMPHOMA



AORTIC ANEURYSM

# A good starting point...

Take a look at our  
Abdominal Examination Trainer video



Visit the website or YouTube channel

[limbsandthings.com](http://limbsandthings.com)

[youtube.com/limbsandthings](https://youtube.com/limbsandthings)