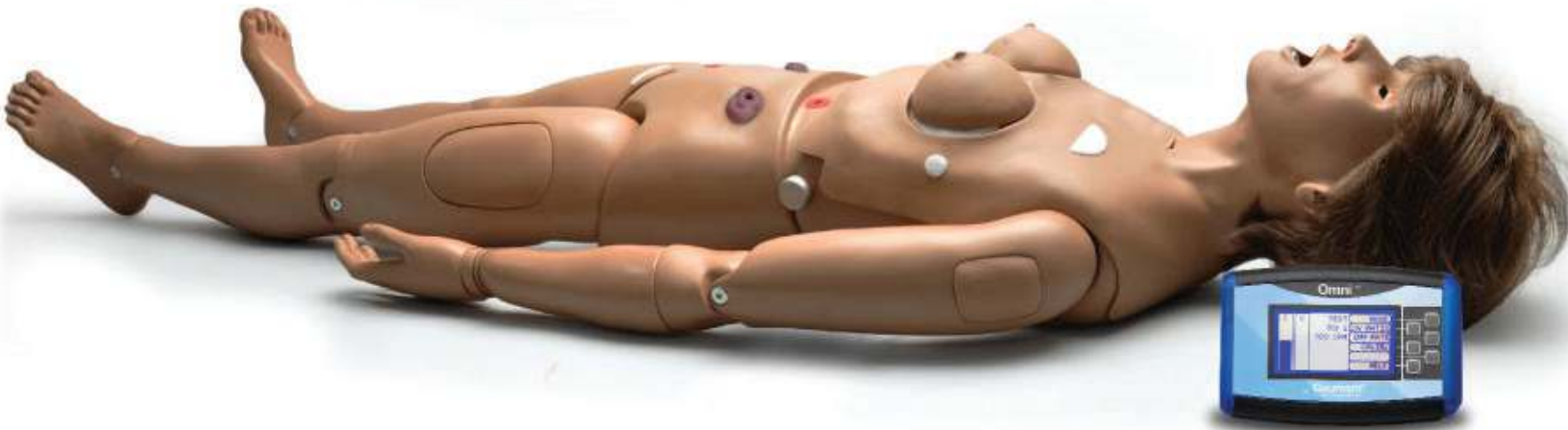




S303

CODE BLUE[®] MULTIPURPOSE SIMULATOR WITH INTUBATABLE AIRWAY

USER GUIDE



The Code Blue[®] Multipurpose Simulator is an interactive educational system developed to assist a certified instructor. It is not a substitute for a comprehensive understanding of the subject matter and not intended for clinical decision making.

User Guide 17.8.1
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1. INTRODUCTION

1.1 SPECIFICATIONS

- 60 lbs
- 43x20x16

Code Blue® S303 Multipurpose Care and CPR life support simulator provides the perfect combination between nursing care and BLS / ALS features all in one manikin

1.2 TERMINOLOGY

Facilitator: The person conducting the simulation; an instructor or lab staff member

Provider: A person participating in the simulation as a healthcare provider

Fill Kit: Syringe and tubes used to fill urinary and hemorrhage reservoir

1.3 CARE AND MAINTENANCE

The lubricant and other accessories provided are for use with the accompanying patient simulator only. The lubricant and other accessories are not suitable for human use or medical treatment/diagnosis and should never be used for such purposes.

CAUTION: Damage caused by misuse may void the manufacturer's warranty. Failure to comply with the following guidelines could result in damage to the equipment.

General

- Do not wrap this or any other Gaumard product in newsprint.
- Marks made with ballpoint pens, ink or marker cannot be removed.
- Replacement parts are available from Gaumard or from your distributor.
- Only use simulated blood provided by Gaumard. Other simulated blood containing sugars and other additive may cause blockage of the fluid system.

Operating Conditions

- Operating the simulator outside these ranges may affect performance:
- Operating temperature: 50°- 95° F (10°- 35° C).
- Humidity: 5%-95% (non-condensing).

Cautions

- Treat the simulator with the same precautions used with a real patient.

- Do not attempt to intubate without lubricating the airway adjunct with mineral oil lubricant. Failure to lubricate the device will make intubation very difficult and is likely to result in damage to the simulator.
- Mouth to mouth resuscitation without a barrier device is not recommended as it may contaminate the airway.
- Do not use povidone iodine on the simulator.

CAUTION: The tubing simulating veins is made of latex which may cause allergic reactions. Users allergic or sensitive to latex should avoid direct contact with the tubing. Seek medical attention if an allergic reaction occurs.

Storage

- Store the simulator in a cool, dry place. Extended storage should be between 32 - 85° F (0 - 29° C). Storage above 85° F (29°C) will cause the simulator to soften and slowly warp.
- Humidity: 40%-60% (non-condensing)
- Do not stack or store heavy materials on top of the box.
- Please store and ship in the case provided.

Cleaning

- Remove all traces of lubricant at the end of each simulation session.
- Remove the fluid using the fill kit provided.
- Drain all the fluid from the dispensing bag and IV Arm by unclamping the drainage tube and pumping the squeeze bulb attached to the dispensing bag.
- Flush the fluid reservoirs and venous system with a 30:70 mix of isopropyl alcohol to water after each day of simulation then suction all fluid out. You may also fill the dispensing bag with this mixture.
- The simulator is “splash-proof” but not water proof. Do not submerge in water.
- The simulator should be cleaned with a cloth dampened with diluted liquid dishwashing soap. Do not clean with harsh abrasives.
- Dry thoroughly after every cleaning.

Stoma Care:

- Do not clean with alcohol or aggressive solvents.
- Clean the stomas using a mild solution of soap and water.
- Apply baby powder to return the surface to a skin-like feel and appearance. Reapply as needed.
- Always remove the stomas when preparing for transport.

2. OVERVIEW

2.1 FEATURES

- Soft, lifelike face skin and dilated left pupil
- Dully articulated neck and jaw with removable upper and lower dentures
- Surgical site for tracheotomy
- Bilateral carotid and right radial pulse
- Anatomically painted outline of cardiopulmonary features
- BVM with realistic chest rise Jointed elbows, wrists, knees, and ankles
- Bilateral IM sites in deltoids, quadriceps, and left buttock
- Intravenous training arm and hand with intramuscular and subcutaneous injection sites
- Interchangeable male and female breasts; left female breast has malignancy
- Breast palpation capability with brassiere attachment and 7 abnormal breasts inserts
- Set of two decubitus ulcers depicting initial stage of ulceration and deeply infected stage
- Sculpted stomas for transverse colostomy, ileostomy, and suprapubic stoma, each connected to an internal, removable tank
- Amputation stump

2.2 PROCEDURES

- Oral, nasal, otic, tracheotomy, and gastrostomy openings for instruction in nasogastric lavage and gavage
- Anatomically accurate airway with trachea, bronchi, and lungs to perform intubation, ventilation, and suction
- Mouth to mouth and mouth to nose resuscitation
- Practice regular or Counterpulsation CPR. Chest compressions and airway ventilations are measured and logged
- Practice intravenous, intramuscular, and subcutaneous injection techniques
- Take blood pressure readings on the left arm using a modified cuff (optional)
- Male and female genitalia to perform catheterization. Realistic vulva permits instruction in asepsis and disinfection.
- Perform vaginal douching, bimanual exams, and pap smear exercises with realistic vagina and cervix
- Prostatic palpation and massage
- Enema administration

2.3 OPTIONS

Blood Pressure Left Arm with OMNI® Code Blue Pack

The Blood Pressure Training System consists of a full size adult left arm. This is a versatile training tool developed to assist health professionals teach the processes and skills required to perform blood pressure auscultation procedures and techniques.

Ulcerated Foot

Interchangeable patient foot depicting 3 ulcers. Evaluate and practice care of decubitus ulcer and ulcers on the foot.

3. INITIAL SETUP

3.1 CARE AND CAUTIONS DURING UNBOXING

- Remove the simulator from the box with at least two people. Hold and lift it out of the protective case from both sides of the torso.
- The simulator comes partially assembled. Avoid lifting the simulator by the arms as this may cause damage to the joints.
- Rest the simulator on a bed or clean, flat surface capable of supporting the weight of a real adult patient.

NOTE: Remove the legs when transporting the simulator inside the protective case.

3.2 PACKAGE CONTENTS



1. Upper body of adult simulator
2. Lower body of adult simulator
3. Breast module
4. IV arm kit
5. OMNI® Controller
6. Trachea tape replacement
7. Blood dispensing bag
8. Artificial blood concentrate
9. Baby powder
10. Mineral oil

3.3 LOWER BODY ASSEMBLY

1. Remove the insert that supports the lower torso.



2. Unscrew one knob at the end of the rod that passes through the midsection by twisting it counterclockwise.



3. Pull the rod out and set it aside.



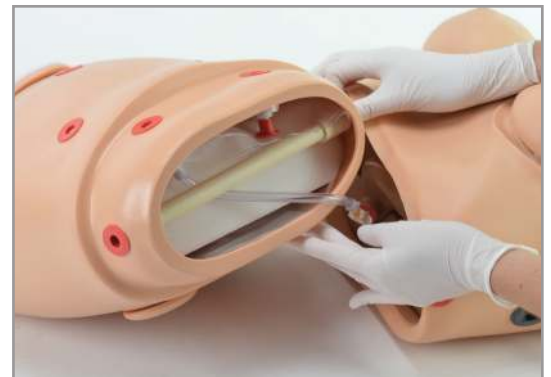
4. Locate the stomach reservoir inside the upper torso and connect the tube from the stomach reservoir to the white port in the lower torso.



5. Place the support back into the lower torso.



6. Carefully connect the lower torso with the upper torso.



7. Align the holes on each side of the waist to insert the waist rod.

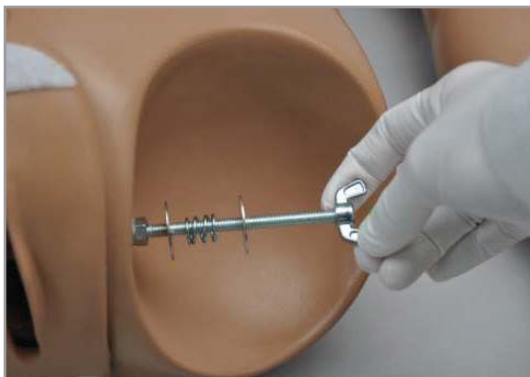


8. Replace the waist knob and twist it clockwise to lock it in place.



3.4 LEG ASSEMBLY

1. To attach the legs, remove the wing nuts, washer, and springs from the bolts on the hips.



2. Remove the IM pad from each leg and slide the lig into the hip joint by inserting the bolt through the orifice in the leg.



3. Assemble the fasteners onto the hip bolt in this order: washer, spring, washer, and wing nut.



4. Tighten the wing nut until the spring is compressed slightly.



5. Place the IM pad back on the leg.



3.5 POWERING ON

Connect the power supply to the power input located on the simulator's left side, then connect the power supply to the wall outlet.



3.6 CONNECTING THE PULSE LINE

Connect the pulse line by unscrewing the red cap and twisting on the pulse line tube with the squeeze bulb attachment.



3.7 CONNECT THE OMNI® CONTROLLER

CAUTION: Do not connect the simulator or OMNI® to a computer, LAN network or unauthorized diagnostic equipment using the communication cable (Ethernet cable). Doing so will cause serious damage to the equipment.

- Connect the controller’s communication cable to the port on the side of the simulator.



- A startup screen is shown while the OMNI® controller detects the simulator’s features.
- After the startup screen, the OMNI® controller will automatically proceed to the main screen.



3.8 FILLING THE IV ARM

1. Place the blood dispensing bag on the stand.



2. Remove the IV caps on the shoulder.



3. Connect the fill tube and drainage tube to the shoulder.



4. Close the clamp on the drain tube.



CAUTION: Do not attempt to fill IV system without the drain connector in place. Always keep the drain port connected when injecting fluids into the system.

5. Attach the fill tube to the bottom port of the blood dispensing bag and place the drain tube inside a container.

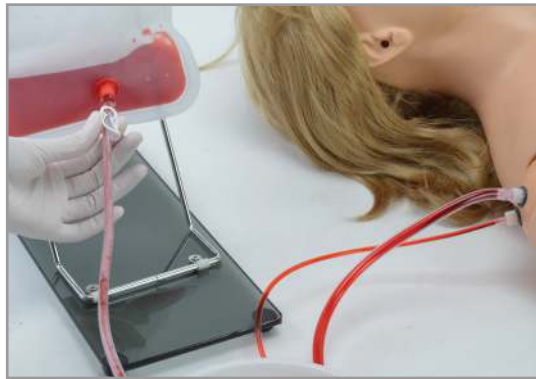


6. Add water or artificial blood to the blood dispensing bag using the funnel provided or the large syringe.



CAUTION: Use only Gaumard's simulated blood provided with your simulator. Any other simulated blood brand containing sugar or any additive may cause blockage and/or interruption of the vasculature.

7. Open the clamp to allow fluid to flow through the system and into the drainage container.



8. Close the drainage tube's clamp when there are no more air bubbles in the tube.



9. Place the black rubber stopper on the upper port of the blood dispensing bag.



4. WORKING WITH THE SIMULATOR

4.1 OPHTHALMOLOGIC EXERCISES

The head has eyes that open and close permitting the following exercises:

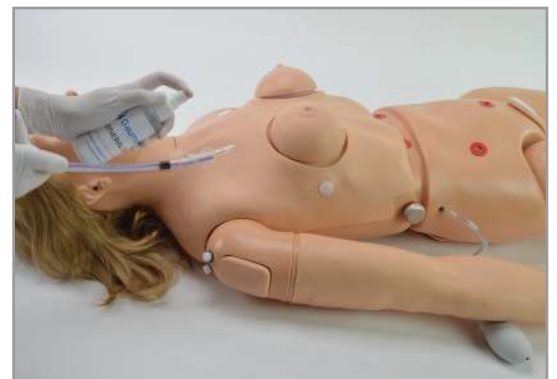
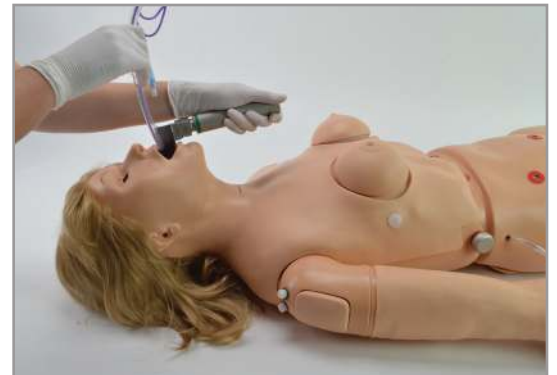
- Administration of orbital medicines into the conjunctival sac
- Removal of foreign bodies
- Eye irrigation



4.2 AIRWAY

Intubation

- The simulator's airway can be intubated through the left nasal opening, the trachea and the mouth using LMA or endotracheal tubes.
- Lubricate the tools used in these exercises to ensure easy insertion and avoid damage to the simulator.



Procedure	Recommended Device Size
Intubation (Blade size)	Miller4 or MAC 3.5
LMA	Size 4
Nasal Intubation	8 mm outer diameter max
Oral Intubation	ETT 7.0 or 7.5 (no cuff)

Tracheostomy Care

- The simulator is supplied with a tracheostomy opening. This allows for the trachea to be pierced during a simulation with a real device to observe chest rise.



Replacing the Trachea Skin

1. Gently lift the chest skin of the simulator to reveal the chest cavity.



2. Remove the used trachea tape from around the trachea.



3. Replace the pierced trachea tape with a new strip of tape by wrapping it around the tracheal opening. Replacement tape is provided with your simulator.



4. Lay the chest skin over the torso and gently press down the Velcro to secure it in place.

NOTE: Air leaks in the airway will result in poor chest rise during ventilation and false intubation readings.



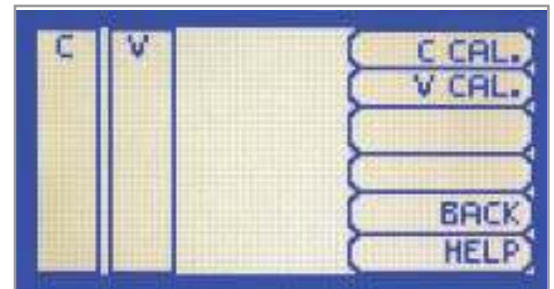
Calibrating Ventilations

Through this menu, set the standard against which ventilation will be evaluated during the exercise.

1. Press CALIB.



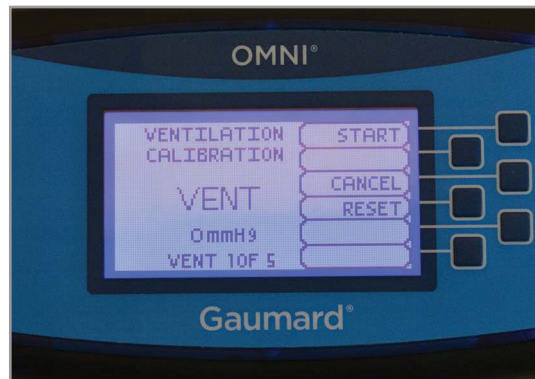
2. Select V CAL on the OMNI. Press START to begin the calibration procedure.



3. When OMNI® is ready to calibrate, it will display VENTILATE. Follow the cues on the screen to perform one ventilation at a time, until finished.



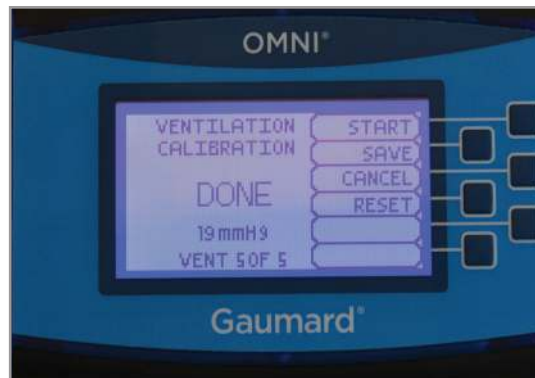
4. When OMNI® is ready to calibrate, it will display VENTILATE.



5. Perform a ventilation.



6. Follow the cues on the screen to perform the remaining four ventilations. When the calibration is complete, OMNI® will display DONE.



7. Press SAVE to complete the calibration procedure.



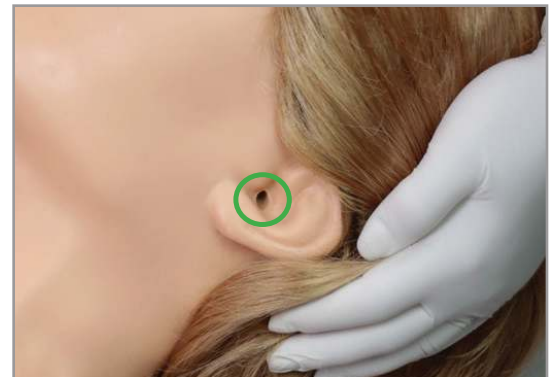
Ventilations

- Ventilate using a BVM and obtain realistic, dual chest rise.
- Use a fitted mask to limit air leakage and to provide a visible chest rise.



Ear, Nose, and Throat

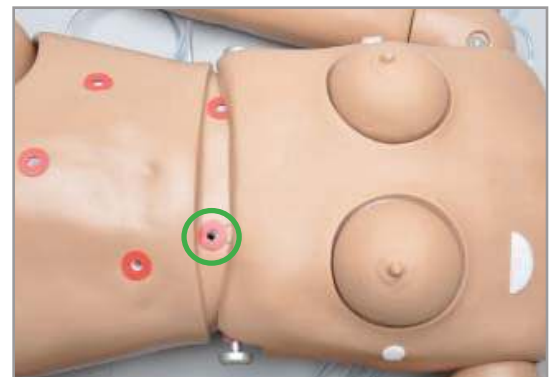
- Left ear: the interior of the ear contains a simulated ear canal with a capacity of 10 mL to practice syringing exercises.



- Nasal/oral openings are both connected to the stomach reservoir.
- The nostrils can be pinched for CPR simulations.



- The gastric reservoir (capacity: 850 mL) has an opening for multiple gastric exercises.



CAUTION: Always use lubricant prior to the introduction of a Levin tube or any other invasive device.

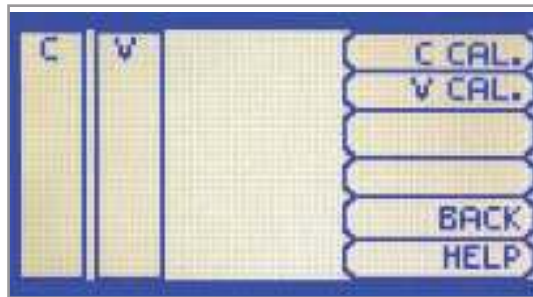
4.3 INTERNAL RESERVOIR CAPACITY

Reservoir	Capacity
Stomach	850 mL
Bladder	1800 mL
Rectum (Colostomy)	1800 mL
Ileostomy	650 mL

4.4 CIRCULATORY & CARDIAC

Calibrating Chest Compressions

1. Press CALIB. and Select C CAL.



2. Press START to begin the calibration procedure.



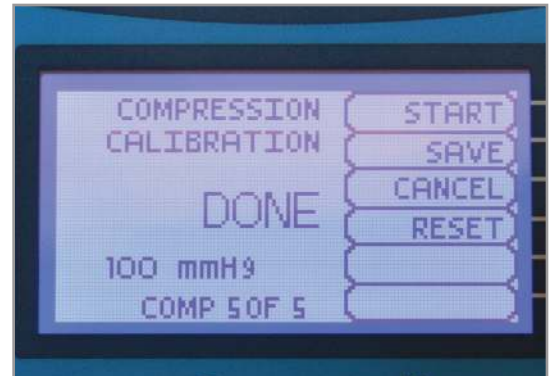
3. When OMNI® is ready to calibrate it will display COMPRESS. Follow the cues on the screen to perform one ventilation at a time, until finished.



4. Perform a correct compression.



5. Follow the text cue on the screen to perform the remaining four compressions. When the calibration is complete, OMNI® will display DONE.



6. Press SAVE to complete the calibration procedure.

NOTE: The simulator is precalibrated to the current CPR guidelines at time of manufacture. If the CPR guidelines change, calibrate the sensors inside the simulator using this option.



CPR

- Chest compressions are measured and logged, showing the facilitator exactly how providers are performing.
- Mouth to mouth resuscitation without a barrier device is not recommended as it may contaminate the airway.



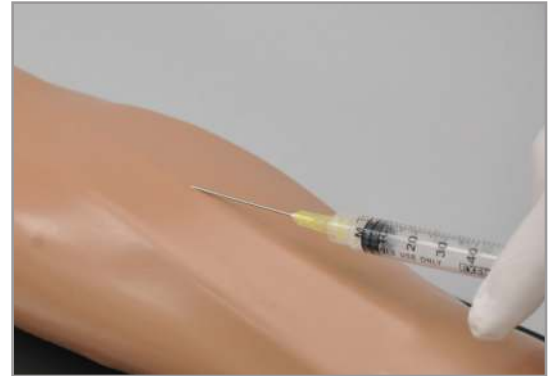
Pulses

- The simulator is equipped with bilateral carotid and right radial pulses.
- The pulses can be generated manually using the squeeze bulb located on the left side of the simulator.



IV Arm

- The right arm can be used for infusion, blood collection, intravenous injection, intramuscular injection, TB screening, and subcutaneous injection exercises.
- The arm and hand contain venous grooves, fitted with soft latex tubes to simulate the consistency of veins. Covering the venous structure is a pliable vinyl skin that is removable and washable.



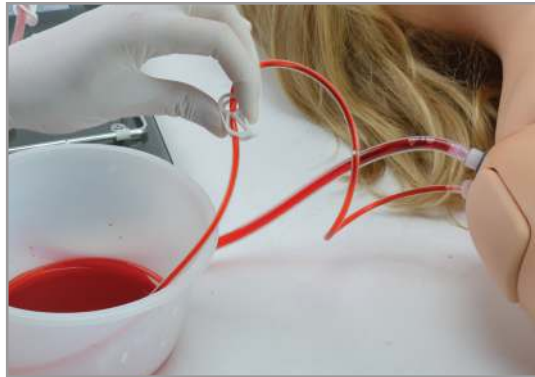
Blood Pressure

- To vary the blood pressure in the vasculature of the arm, replace the black rubber stopper with the squeeze bulb.
- Squeeze the bulb to inflate the bag and create the desired blood pressure.
- To simulate a clenched fist, clamp the drainage tube and apply pressure using the squeeze bulb.
- To simulate collapsed veins, release the air pressure by loosening the squeeze bulb's valve.



Blood Collection

1. Place the simulator on a level surface and ensure the drain tube is clamped.

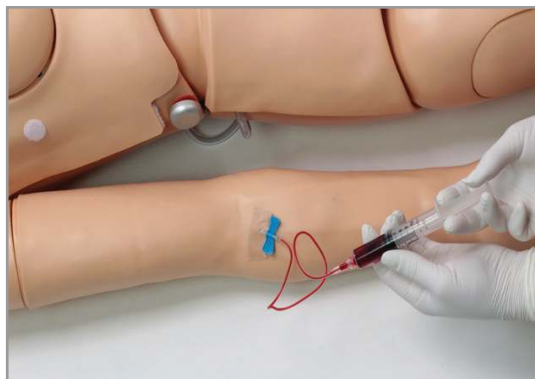


2. Apply the desired pressure to the veins via the squeeze bulb.



3. Perform the blood collection exercise.

NOTE: Drain and flush the venous system with clean water after each day of simulation. Refer to section 1.2 "Cleaning" for more details.



Intravenous Injection

When practicing injections, unclamp the drainage tube to ensure the veins do not overflow.



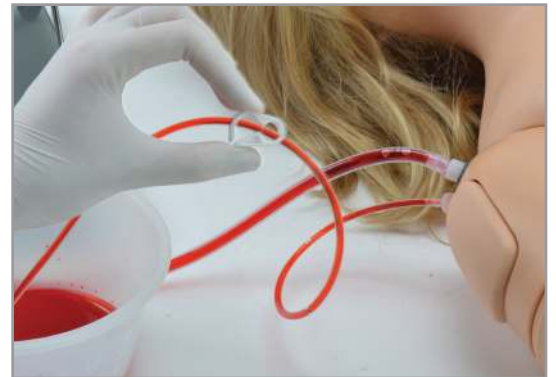
Intravenous Therapy / Infusion

When preparing for IV therapy or infusion, make sure to unclamp the drainage tube to allow for continuous flow.



Draining the Venous System

1. Unclamp the drainage tube.



2. Replace the black rubber stopper with the squeeze bulb.



3. Squeeze the bulb to push the remaining fluid out of the venous system,



4. Remove the squeeze bulb. Using the funnel, fill the dispensing bag with a 30:70 mix of water to Isopropyl alcohol in order to flush the fluid system.



5. Replace the funnel with the squeeze bulb and squeeze the remaining fluid out through the drainage tube. Once the venous system is purged, push air through the system using the squeeze bulb.



6. If it is unnecessary to flush the dispensing bag, the syringe and tube from the IV filling kit may be attached to the arm.



7. Make sure the drainage tube is open and push the fluid through the arm until there is no more fluid coming out of the arm.

At this point, inject air through the arm to dry the vasculature and prevent mold from forming.



NOTE: Drain and flush the venous system with clean water after each day of simulation.

4.5 CATHETERIZATION

Filling the Bladder

1. Insert the funnel or the fill kit syringe into the suprapubic ostomy.
2. Fill the bladder reservoir with up to 1800 mL of fluid.



Increasing Urinary Flow

1. Remove the ostomy from the suprapubic stoma site and attach the rubber plug to seal the bladder reservoir.



2. Use the squeeze bulb located on the right side of the lower torso to inflate the internal cushion. This will lift the bladder and will increase bladder pressure and which intensifies the urinary flow.



Simulating Continuous Urinary Output

Multiple catheterization exercises may be performed with the aid of the dispensing bag on a stand.

1. Fill the dispensing bag with fluid and place it on the stand.



2. Remove the stoma from suprapubic opening.



3. Connect the outflow tube from the auxiliary bag into the suprapubic opening using the red connector. The fluid in the bag will flow into the bladder reservoir simulating bladder pressure.



Female Catheterization

- Make sure to catheterize the simulator while it is on its back.
- The urethra plug must be connected when performing female catheterization exercises.



- Use an 18 Fr catheter as smaller catheters may cause leakage.
- Lubricate the catheter with the mineral oil provided before insertion.



Male Catheterization

1. To attach the male genitalia, remove the red adapter connected to the urethra passage and set it aside.

NOTE: Do not discard the adapter as it is necessary to perform female catheterization exercises.



2. Slide the tube attached to the male genitalia into the opening of the urethra on the simulator, and gently press down on the Velcro to secure it in place.



- Make sure to lubricate the catheter before insertion.
- Catheterize the simulator in the upright position or while it is on its back.
- Use an 18 Fr catheter as smaller catheters may cause leakage.



Draining the Bladder Reservoir

1. Catheterize the simulator and position and squeezing the squeeze bulb on the right side to push the fluid out..



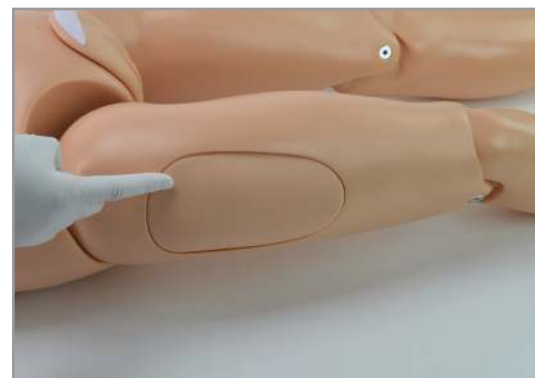
Injection Site

Intramuscular injection sites are to practice placement only. Do not inject fluids into the IM sites when simulating intramuscular and subcutaneous injections.

- Both deltoids



- Both quadriceps



- Left upper buttock



The IM site is a consumable item. To replace the injection pads, lift the IM injection pad and insert the new one by gently pressing it down.



4.6 GYNECOLOGIC

Breast Exam Module

The simulator is provided with two breast inserts attached and additional interchangeable breast inserts.

The left female breast contains a simulated tumor. The right female breast is healthy.



Interchangeable Breasts

The cysts and masses located in the breast have distinct textures useful in recognizing normal and abnormal conditions found in the breast.



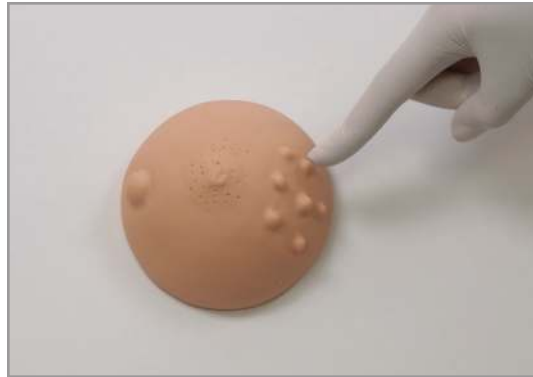
Breast No. 1

Demonstrate and practice the movement of the mammary gland on the surface of the pectoralis major muscle.



Breast No. 2

This breast represents various stages of fibrocystic disease. The larger node may simulate a hard node or a cystic mass or swelling. It has seven discrete nodes on one side, a larger node on the other side, and a very discrete puckered area around the nipple.



Breast No. 3

There is a solitary tumor on this breast. Its margins are circumscribed and it has a stalk. The tumor can be moved within the breast.



Breast No. 4

This breast shows a retracted nipple and on careful palpation, a mass may be felt under the nipple. This breast represents a carcinoma in one of the milk ducts and also shows the “orange skin” effect on the nipple area.

NOTE: Attach the Velcro on the nipple to the Velcro on the inside of the palpation brassiere.



Breast No. 5

This breast shows an easily palpable tumor: a giant sarcoma (or giant mammary myxoma) where its wildly growing masses can be easily felt and seen. The largest mass is shown in ulcerated form.



Breast No. 6

This breast replicates a form of scirrhous carcinoma. The growth lacks well-defined borders and cannot be moved within the breast.



Breast No. 7

This replica of the lymphatic drainage of the left breast outlines the various pathways along which breast tumors metastasize. The auxiliary pathway, subclavian pathway, and internal mammary pathway are shown and are easily palpable.



Changing Breasts for Palpation Exercises

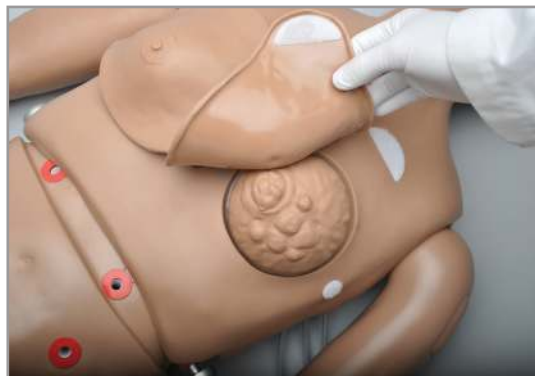
1. Place the simulator in a semi-upright position and gently lift the breast and set it aside.



2. Choose the desired breast and place it on the chest Velcro side down and gently press it in place.



3. Lay the palpation brassiere on the chest lining it up with the Velcro.



4. Gently press the palpation brassiere to secure it in place.



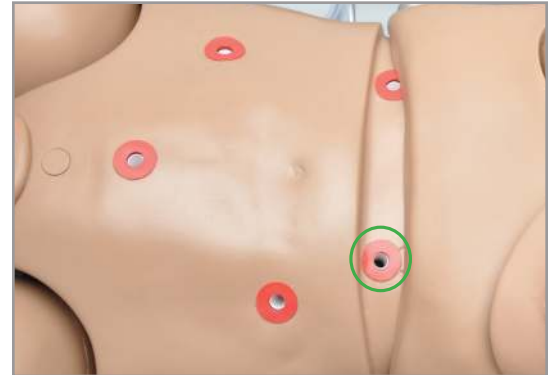
4.7 GASTROINTESTINAL

Gastric Feeding and Suctioning

1. To fill the stomach reservoir for gastric feeding and suctioning, attach the funnel to the gastronomy port located at the waist and fill the reservoir with up to 850 mL of fluid.

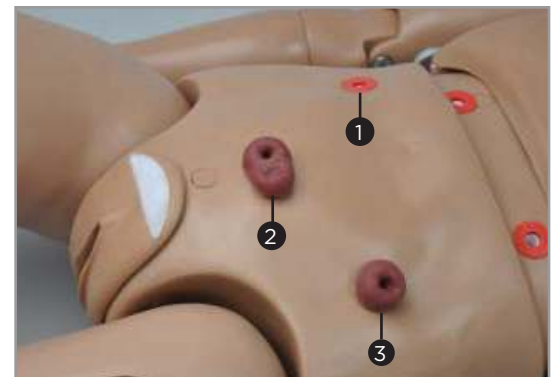
NOTE: Use a No. 10 Levin tube for tube feeding and gastric suctioning.

2. When the procedure is complete, you may collect any remaining fluid with the same suctioning tool.



Ileostomy, Suprapubic Cystostomy, and Transverse Colostomy

- Realistic ostomy sites permit ostomy skin care, stoma hygiene exercises, and treating conditions around the site.
- Practice changing and placing ostomy bags on the openings.
- Do not palpate the stomas with fingernails. The stoma site is absorbent and dirt and oil may cling to the material.



1. Ileostomy
2. Suprapubic Cystostomy
3. Transverse Colostomy

Stomas

- To fill the ileostomy reservoir, remove the stoma and inject up to 650 mL of fluid into the stoma port.



- To fill the transverse colostomy reservoir, remove the stoma and inject up to 1800 mL of fluid into the stoma port.



Enema

- The legs of the simulator articulate and permit enema administration.
- Use the small anal nozzle provided to fill the enema reservoir with up to 1800 mL.
- A non-return valve is built into the anal canal to prevent fluid from escaping.



4.8 NURSING PROCEDURES

Vaginal Douching

After performing douching exercises, drain any excess fluid remaining in the simulator by placing the simulator in the upright position.



Hygiene

The simulator has a wig that allows for combing, shampooing and head draping exercises.



Denture Care

- The simulator is supplied with average size teeth and tongue.
- The upper and lower dentures are removable and the tongue can be moved side by side.



1. To remove the teeth, insert one finger into the upper or lower jaw and pull it out gently.



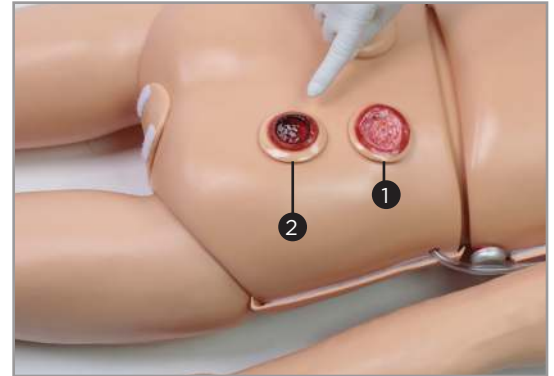
2. To attach the teeth, gently press the denture into the mouth Velcro side down.



Decubitus Ulcers

Two types of decubitus ulcers are provided with the simulator:

1. Initial stage of ulceration
2. Suppuration or pus/ deeply infected stage



Amputation Stump

The simulator is provided with an amputation stump for wound treatment and care.



1. To attach the amputation stump, remove the lower leg by unscrewing the bolts at the knee joint using the hexagonal wrenches provided.



2. Attach the amputation stump by inserting it over the knee joint.



5. WORKING WITH OMNI® CODE BLUE

5.1 OMNI® CODE BLUE CONTROLLER

OMNI® Code Blue is a CPR training tool designed to help teach CPR by monitoring cadence and depth of compressions as well as airway ventilations in real time.

eCPR

- eCPR is an application that enables monitoring and logging of compressions and ventilations, performed in real time by the user, on a PC.
- This software aims to provide additional testing and teaching tools for CPR using an interface to display a waveform graph of the compressions and ventilations.
- For instructions on how to use eCPR, please refer to the OMNI® User Guide.

Startup Screen

The OMNI® startup screen is divided into three sections: Feedback Graphics, Current Settings, and Navigations Menus.



Feedback Graphics

Monitor and evaluate depth and cadence of compressions and ventilations in real time.



Current Settings

The current settings are listed on the middle of the screen. The settings will reflect the information saved during a previous session.



Navigation Menus

- Edit the simulator settings using the navigation menus.
- Select a menu item by pressing the soft key buttons located on the right side of the controller. Each menu has additional submenus or toggle selections.
- Use the submenus to decrease, increase, accept, or cancel values.
- Use the toggle selection to switch between available options in the menu.



5.2 NAVIGATION SUBMENU

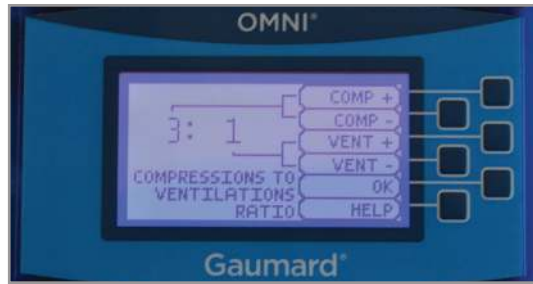
MODE

- This submenu is for the CPR operational mode. Switch between TEST and COACH mode.
- The COACH mode generates audible tones to coach CPR ratio. A high-pitched beep signals the care provider to perform a compression and a low pitched beep signals a ventilation.
- Tap on MODE to switch to TEST mode to perform CPR without the audible cues.



C:V RATIO

- Customize the compression to ventilation ratio to match correct guidelines.
- Adjust the compression to ventilation ratio using the + And - buttons. Press OK to save the changes and return to the previous screen.
- The default value for the C:V Ratio is 3 compression to 1 ventilation.



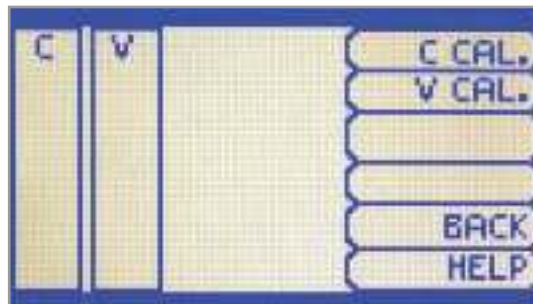
CMP RATE

- This submenu is for adjusting the number of compression and ventilations per minute.
- The default value for the compression rate is 100 compressions per minute. Adjust rate using the + and - buttons.
- Press OK to save changes and return to previous screen.
- The compression rate limit is 50 - 150 CPM. the ventilation rate is 2 - 60 VPM.



CALIB.

- This submenu is to calibrate the pressure sensor in the simulator.
- Press CALIB. to access additional calibration menu selections.
- See section 4.2 for instructions to calibrate ventilations and section 4.3 to calibrate compressions.



RESET PRESSURE SENSOR

- It is recommended that the OMNI® controller's pressure sensor is reset at altitudes greater than 1000 ft. to avoid inaccurate compression and ventilation readings.
- Perform the sensor reset procedure as part of the initial calibration process.



1. Select RESET within the compression or ventilation calibration menu. After resetting the sensor, OMNI® will display DONE.



2. Select SAVE to finish



HELP

The help window provides access to global settings such as backlight time and OMNI® and Simulator serial number.



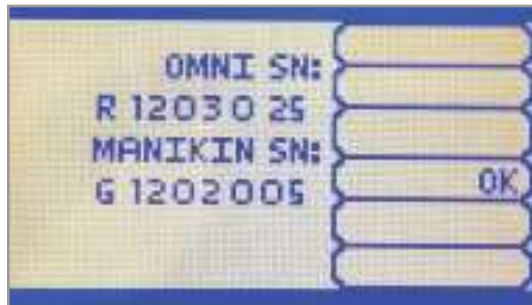
BACKLIGHT

- The default value for OMNI®'s backlight timer is 10 minutes. After 10 minutes the backlight will turn off.
- To increase the backlight duration, adjust the backlight timer with the plus or minus sign. Press OK to accept the changes.



SERIAL NUMBER

View OMNI® and Simulator serial number. Press OK to return to the HELP menu.



6. OPTIONS

6.1 BLOOD PRESSURE LEFT ARM WITH OMNI® CODE BLUE PACK

The Blood Pressure Training System consists of an adult size left arm. This is a versatile training tool developed to assist health professionals teach the process and skills required to perform blood pressure auscultation procedures and techniques.

BP Arm Features

Palpable Pulse

Programmable, palpable radial pulse is present when the cuff pressure is less than the selected systolic blood pressure.

Korotkoff Sounds

Korotkoff sounds, K1 through K4 (K5 is silent) are audible between systolic and diastolic pressure.

Depending on the selected heart rate and the rate of cuff deflation, the Korotkoff sounds will adjust automatically.

The sounds are silenced automatically if the auscultatory gap is enabled.

Auscultation

The simulator operates with a modified blood pressure cuff. Connect the BP cuff extension to the arm's control panel before use. Use A conventional stethoscope to auscultate Korotkoff sounds in the antecubital area.

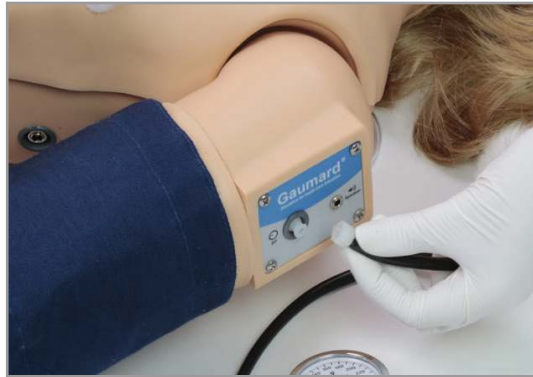
BP Arm Setup

1. Wrap the modified blood pressure cuff around the arm above the elbow.

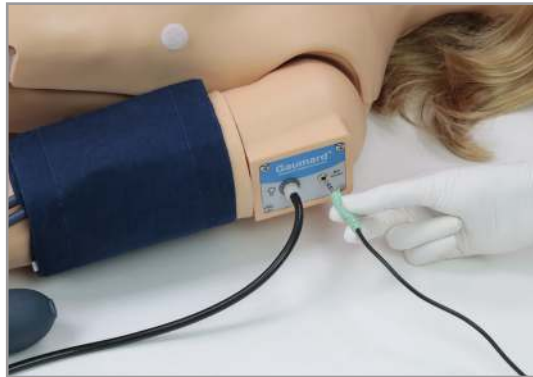
NOTE: Make sure to orient the cuff where the arrow on the cuff points towards the elbow.



2. Connect the BP cuff extension to the adapter labeled BP on the control panel.



3. Connect the speakers to the port on the shoulder.



BP Cuff Calibration

1. Follow steps 1 and 2 in section 6.1 "BP Arm Setup."



2. Select the CALIB menu from the main screen and press NEXT to begin the calibration procedure.



3. OMNI® will display a prompt to set the BP cuff to 0mmHg then press NEXT. Do not inflate the cuff until prompted. OMNI® will prompt you to set the BP cuff to 20 mmHg. Increase the BP cuff pressure when the display prompts you to inflate the cuff one value at a time. Continue to press NEXT after setting each increment. After calibrating the sensor, OMNI® will return the main screen and display the reading shown on the sphygmomanometer.



BP Arm OMNI® Menus

- Use the BP Arm menu to gain access to additional settings, feedback graphics and navigation menus that control all the features of the blood pressure arm.



CURRENT SETTINGS

Current settings information is listed on the top portion of the screen.



FEEDBACK GRAPHICS MENU

The feedback graphic displays the BP cuff pressure in real time at the bottom of the screen.



NAVIGATION SUBMENUS

Edit BP settings using the navigation menus. Select a menu item by pressing the soft key buttons located on the right side of the controller. Each menu has additional submenus. Use the submenus to decrease, increase, accept, or cancel values.



Set BP

Use this menu to set the blood pressure in the simulator.

Select systolic or diastolic and adjust the pressure using the + and - buttons.

Press OK to save the changes and return to the previous screen



Pulse

Use this menu to set the heart rate. Adjust the beats per minute using the + And - buttons.

Press OK to save the changes and return to previous screen.



AU. Gap

Enable and set an interval of pressure where Korotkoff sounds dissipate. The auscultatory gap is disabled by default.

Pressing the Enable button activates the UPPER and LOWER menus. Use these menus to set the limits of the auscultatory gap.

Adjust the limits of the auscultatory gap using the + And - buttons.

Press OK to save the changes and return to previous screen. The default upper and lower limits for the auscultatory gap are 100 mmHg and 90 mmHg.



Volume

Increase or decrease the volume of Korotkoff sounds using the VOLUME menu.

Press OK to save the changes and return to the previous screen. The default value for the Korotkoff sounds volume is 5.



Calib. Menu

Calibrate the sensors inside the simulator using this option. Set the standard against which auscultation will be evaluated during the exercise.

BP cuff calibration should be performed only when the Korotkoff sounds do not match the systolic and diastolic values set from OMNI®.



6.2 ULCERATED FOOT

Evaluate and practice care of ulcers on the foot which contains toes that are separated allowing for bandaging exercises. The material of the foot is resistant to water, oil, and liniments.

1. Unscrew the bolts from the ankle using the hexagonal wrenches provided.



2. Remove the healthy foot from the ankle socket and set it aside.



3. Attach the ulcerated foot onto the ankle socket.



4. Screw in the bolts with the hexagonal wrenches to secure the foot. Follow these same steps to reattach the healthy foot.



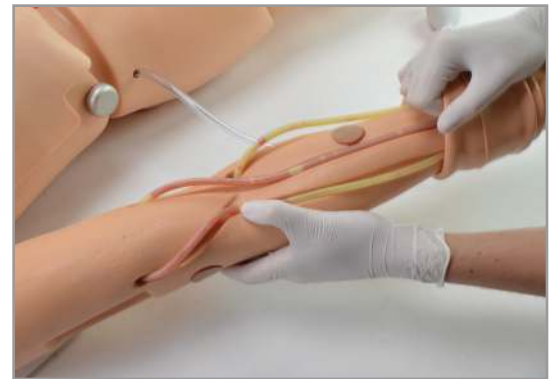
7. ROUTINE MAINTENANCE

7.1 REPLACING THE ARM SKIN

1. Starting at the top of the arm, gently slide the skin off.



2. To place the new arm skin, gently slide it over the hand and up the arm.

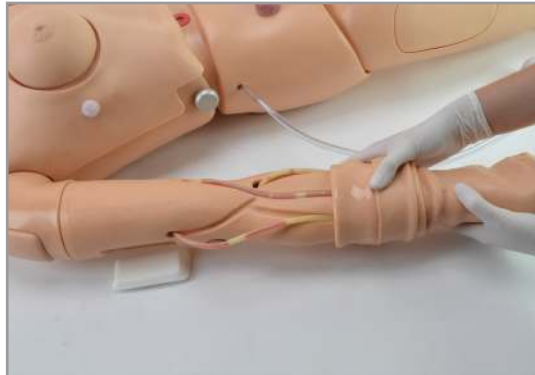


3. If needed, use more lubricant to ease the skin into place.

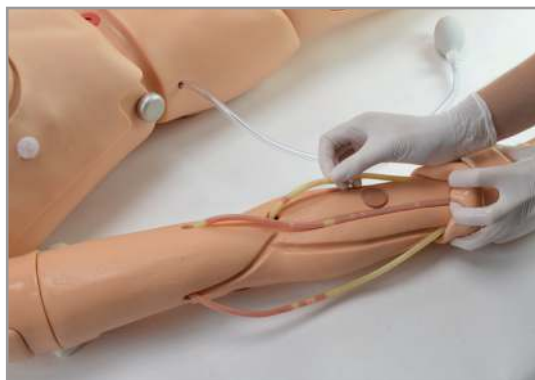


7.2 CHECKING FOR VEIN BLOCKAGE

1. Follow steps 1 and 2 in section 7.1 "Replacing the Arm Skin" to remove the arm skin.



2. Check the tubes for kinks. To avoid further kinks in the tubes, use tape to secure them down to the arm.



3. Flush the system with water by following the steps in section 4.3 "Draining the Venous System."



4. Reattach the arm skin.

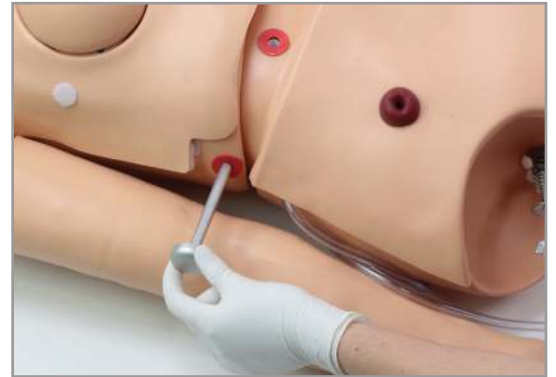
NOTE: Arm reveining is recommended to be done by a technician at Gaumard headquarters. If the veins need to be replaced, please return it to Gaumard headquarters by opening a ticket through the Technical Support Department.



7.3 FLUSHING THE FLUID RESERVOIRS

It is good practice to flush the fluid reservoirs periodically to prevent mold from forming.

1. To reach the reservoirs, loosen the waist knobs and remove the waist rod.



2. Remove the support insert and set it aside.



3. Remove the waist tube and set it aside.



4. Remove the foam insert from the lower abdomen.

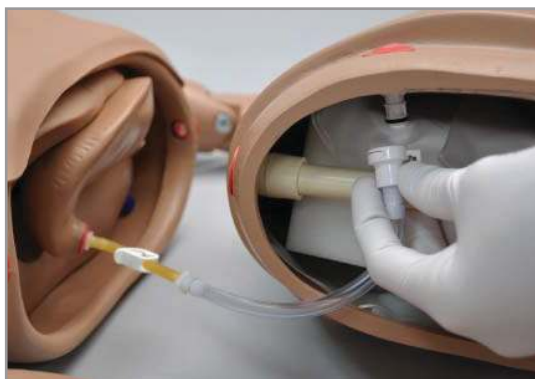


5. After flushing the reservoirs, replace the foam insert, connect the waist tube, and reattach the upper and lower torso as directed in section 3.3 Lower Body Assembly.

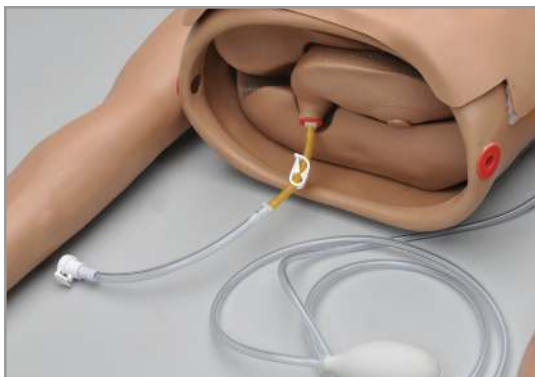


Stomach Reservoir

1. Disconnect the white port from the stomach reservoir and unclamp the stomach tube.

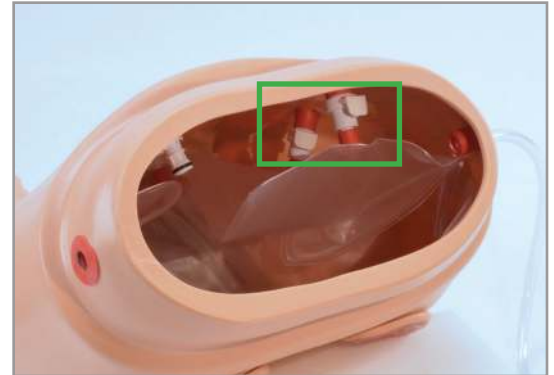


2. Squeeze the stomach reservoir to drain the liquid.
3. Clamp the stomach tube and reconnect the white port to the stomach.

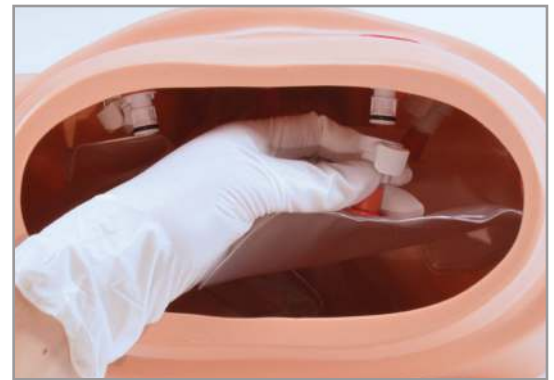


Ileostomy Reservoir

1. Gently disconnect the ileostomy port and the ileostomy site clips to release the bag.

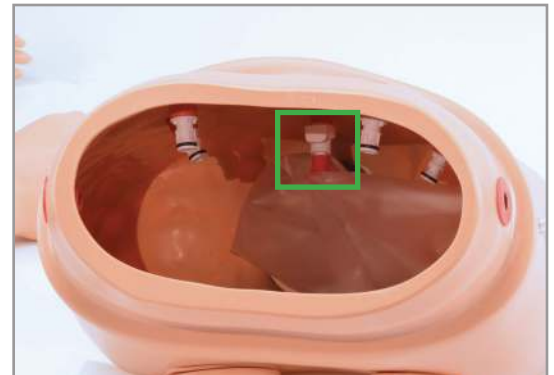


2. Inject a 30:70 mix of isopropyl alcohol to water and squeeze the bag over a container or sink.
3. Insert the clips to the ports to reattach the bag.



Bladder Reservoir

1. Gently disconnect the bladder port and the suprapubic Cystostomy site clips to release the bag.

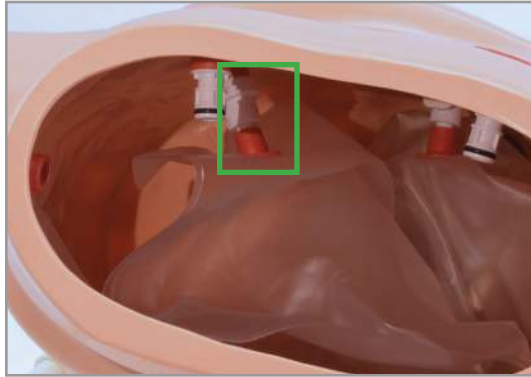


2. Inject a 30:70 mix of isopropyl alcohol to water and squeeze the bag over a container or sink.
3. Insert the clips to the ports to reattach the bag.



Colostomy Reservoir

1. Gently disconnect the rectal port and the transverse colostomy site clips to release the bag.



2. Inject a 30:70 mix of isopropyl alcohol to water and squeeze the bag over a container or sink.
3. Insert the clips to the ports to reattach the bag.



8. TROUBLESHOOTING

8.1 OMNI® IS NOT TURNING ON

Probable Cause	Solution
Power supply may not be connected to the simulator	Make sure the power supply cable is connected
Communication cable is not connected to OMNI® or the simulator	Connect the communication cable to the simulator and to OMNI®

8.2 COMMUNICATION WITH THE SIMULATOR CANNOT BE ESTABLISHED OR IS LOST

Probable Cause	Solution
Corrupted connection	Reboot OMNI® by unplugging the communication cable and reconnecting after a few seconds
Data cable is not connected	Ensure the Ethernet cable is plugged into OMNI® and the simulator
	Verify the power cable is connected to the simulator

8.3 OMNI® IS NOT DETECTING ANY COMPRESSIONS OR VENTILATIONS

Probable Cause	Solution
System is not calibrated	Calibrate compressions and ventilations using OMNI®

8.4 OMNI TAKES TOO LONG TO BOOT UP

Probable Cause	Solution
A system restore is required	<ol style="list-style-type: none"> 1. Unplug the communication cables from OMNI® 2. Press and hold down the two outer keys located on the right side of the controller, while reconnecting the communication cable. 3. Once the “please wait” message appears on the screen, release the two outer keys. 4. Wait for the main screen to load and continue with simulations.

9. APPENDIX

9.1 CONSUMABLE PARTS LIST

Product	Item Number
Arm Skin	S303.813
Dispensing Blood Bag	S303.811
Decubitus Ulcers	S303.764
Artificial Blood Concentrate	S303.812
Trachea Tape	S303.735
Sub-Q Injection Site	S303.834
IM Injection Site	S303.857
Lubricant	S303.974

9.2 EXCLUSIVE ONE-YEAR LIMITED WARRANTY

Gaumard warrants that if the accompanying Gaumard product proves to be defective in material or workmanship within one year from the date on which the product is shipped from Gaumard to the customer, Gaumard will, at Gaumard's option, repair or replace the Gaumard product.

This limited warranty covers all defects in material and workmanship in the Gaumard product, except:

- Damage resulting from accident, misuse, abuse, neglect, or unintended use of the Gaumard product;
- Damage resulting from failure to properly maintain the Gaumard product in accordance with Gaumard product instructions, including failure to properly clean the Gaumard product; and
- Damage resulting from a repair or attempted repair of the Gaumard product by anyone other than Gaumard or a Gaumard representative.

This one-year limited warranty is the sole and exclusive warranty provided by Gaumard for the accompanying Gaumard product, and Gaumard hereby explicitly disclaims the implied warranties of merchantability, satisfactory quality, and fitness for a particular purpose. Except for the limited obligations specifically set forth in this one-year limited warranty, Gaumard will not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory regardless of whether Gaumard has been advised of the possibilities of such damages. Some jurisdictions do not allow disclaimers of implied warranties or the exclusion or limitation of consequential damages, so the above disclaimers and exclusions may not apply and the first purchaser may have other legal rights.

This limited warranty applies only to the first purchaser of the product and is not transferable. Any subsequent purchasers or users of the product acquire the product "as is" and this limited warranty does not apply.

[This limited warranty applies only to the products manufactured and produced by Gaumard. This limited warranty does not apply to any products provided along with the Gaumard product that are manufactured by third parties.](#)

For example, third-party products such as computers (desktop, laptop, tablet, or handheld) and monitors (standard or touch-screen) are not covered by this limited warranty. However, third-party products are covered by the warranties provided by the respective third-party manufacturers and such warranties are transferred from Gaumard to purchaser upon purchase of the Gaumard product. Defects in third-party products are covered exclusively by the warranties provided by the third-parties. Gaumard does not provide any warranty, express or implied, with respect to any third-party products. Please contact the third-party manufacturer for information regarding the availability of extended warranties for third-party products. Any waiver or amendment of this warranty must be in writing and signed by an officer of Gaumard.

In the event of a perceived defect in material or workmanship of the Gaumard product, the first purchaser must:

1. Contact Gaumard and request authorization to return the Gaumard product. Do NOT return the
2. Gaumard product to Gaumard without prior authorization.
3. Upon receiving authorization from Gaumard, send the Gaumard product along with copies of (1) the original bill of sale or receipt and (2) this limited warranty document to Gaumard at 14700 SW 136 Street, Miami, FL, 33196-5691 USA.

If the necessary repairs to the Gaumard product are covered by this limited warranty, then the first purchaser will pay only the incidental expenses associated with the repair, including any shipping, handling, and related costs for sending the product to Gaumard and for sending the product back to the first purchaser. However, if the repairs are not covered by this limited warranty, then the first purchaser will be liable for all repair costs in addition to costs of shipping and handling.

9.3 CONTACT GAUMARD

Before contacting technical support, please make sure to have your simulator and user guide readily available.

Email: support@gaumard.com

USA: 800-882-6655

INT: 01-305-971-3790

9.4 GENERAL INFORMATION

E-mail: sales@gaumard.com

USA: 800-882-6655

INT: 01-305-971-3790

Fax: 305-252-0755

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Office Hours

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Always dispose of this product and its components in compliance with local laws and regulations.

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MADE IN THE U.S.A.

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