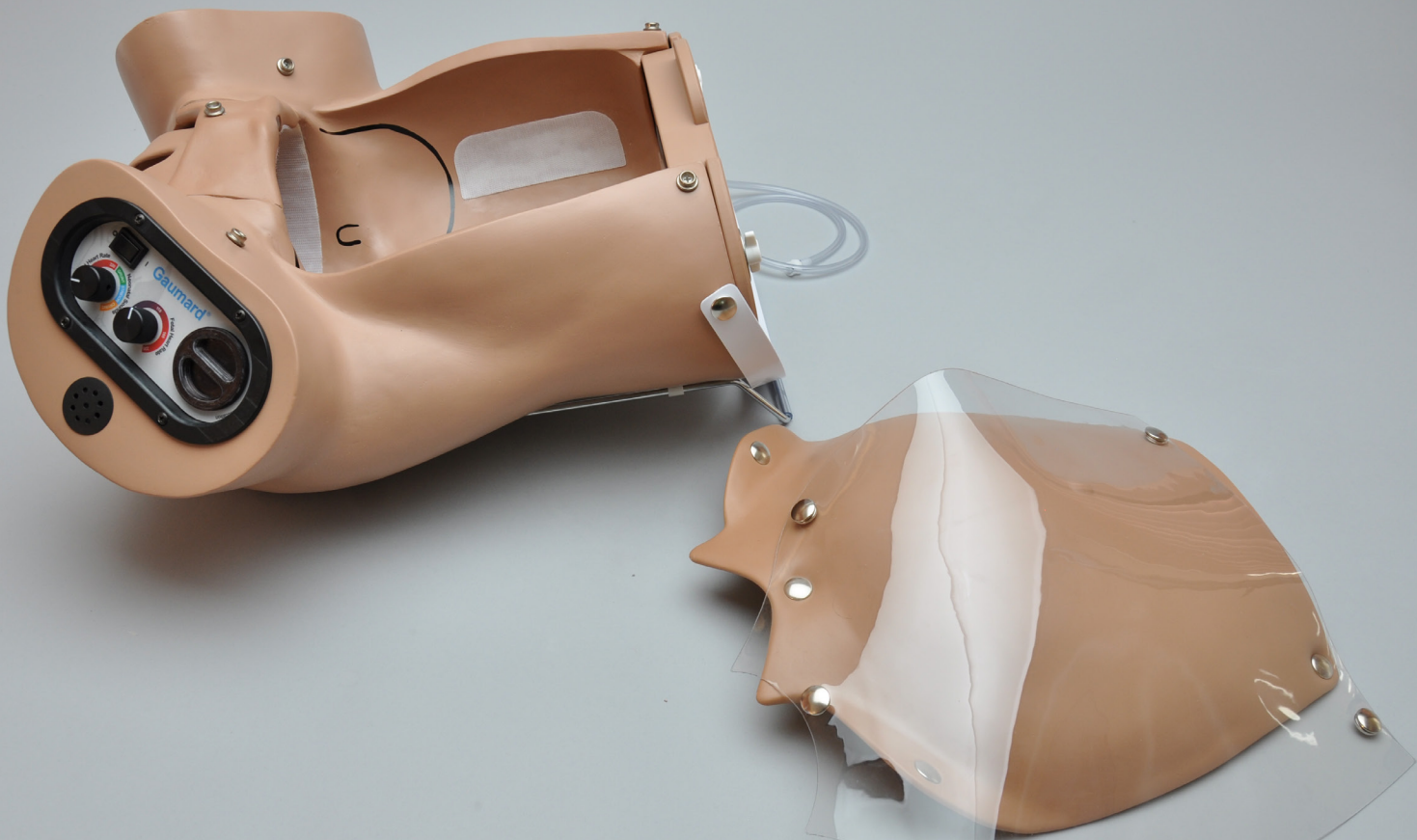


Obstetric Susie® Birthing Simulator

S500.200



Gaumard®
Simulators for Health Care Education

Obstetric Susie® Birthing 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 13.7.1
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Care and Cautions

Overall Warnings

Remember that damage caused by misuse is not covered by your warranty. It is critical to understand and comply with the following guidelines:

GENERAL

- This simulator is constructed of material that approximates skin texture. Therefore, in handling the model, use the same gentle techniques as you would in working with a patient.
- Ball point pens, ink and markers permanently stain the skin.
- Do not wrap this or any other Gaumard product in newsprint.
- Do not use alcohol, acetone, Betadine® or any other antiseptic which contains iodine in this or any Gaumard® simulator. These products could damage or stain the skin of the simulator.
- Only use Gaumard's provided simulated blood. Any other simulated blood containing sugar or any additive may cause blockage and/or interruption of the vasculature system.
- Replacement parts are available from Gaumard Scientific or your Distributor.

OPERATING CONDITIONS

Operating the simulator outside these ranges may affect performance:

- Operating temperature: 50°- 95° F (10°- 35° C).
- Humidity: 5%-95% (non-condensing).

STORAGE CONDITIONS

- Improper storage may damage the simulator.
- Keep it stored in the box and/or bag provided.
- Do not stack or store heavy materials on top of the carton.
- Storage temperature: 32°- 113° F (0°- 45° C).
- Humidity: 40%-60% (non-condensing).

CLEANING

- Clean the skin of the simulator after every training session. The skin should be cleaned with a cloth dampened with diluted liquid dish washing soap and dry thoroughly.
- Remove all traces of any lubricant.
- Do not clean with harsh abrasives.
- Do not use povidone iodine on the simulator.
- The simulator is "splash-proof" but not waterproof. Do not submerge or allow water to enter the interior of the simulator.

BIRTH CANAL MAINTENANCE

- The birth canal insert can be cleaned with a mild solution of soap and water. After cleaning, dust with talcum powder.
- Store the unit in a cool, dry place.
- After exercise is completed, DO NOT leave birthing baby in contact with the birth canal.
- Always lubricate the birth canal prior to delivery.
- The birth canal insert is attached to the pelvis of the simulator. Only remove the insert when replacement is necessary.

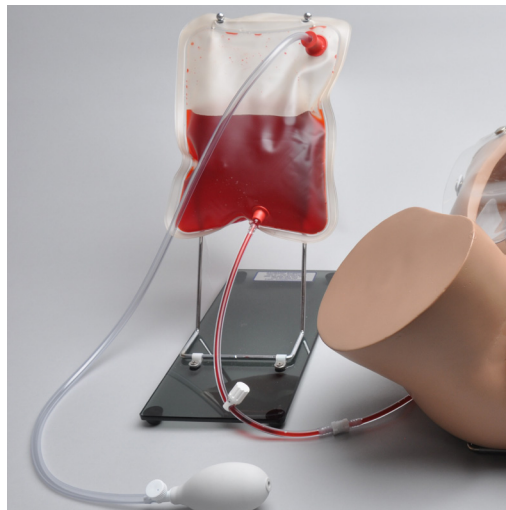
Getting Started

Overview

Obstetric Susie permits providers to appreciate the complete birthing experience from the onset of labor, to delivery, and treatment after delivery.

ACCESSORIES

- Postpartum hemorrhage kit



ABDOMINAL COVERS

- Two removable abdominal covers: one transparent and one opaque



SIMULATIONS

- Vertex or breech deliveries
- Vacuum augmentation or forceps assisted deliveries
- Postpartum hemorrhage 1.25 liters of fluid
- Control postpartum hemorrhage by massaging uterus

OBSTETRIC SUSIE

- Life-size pelvic cavity has all major anatomic landmarks. It is designed with an open abdomen, which has two replaceable abdominal covers that can be attached to the outside wall with embedded snaps.
- Audible heart sounds from 0 to 200 bpm.
- Bladder catheterization with variable urinary flow.



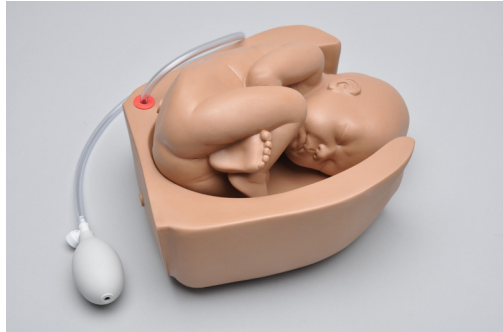
FEMALE BIRTHING BABY

- Birthing baby having skull with fontanelles
- Soft face skin fits over head for vacuum/forceps delivery
- Audible heart and sounds from 0 to 220 bpm



PALPATION MODULE FOR LEOPOLD MANEUVERS

The palpation module includes an inflatable cushion to adjust the tension of the stomach; and a one-piece fetus to perform Leopold maneuvers.



MALE NEWBORN

- Umbilical pulse operated by squeeze bulb
- Audible crying, grunting and stridor activated from the control panel located in Obstetric Susie



REPLACEABLE VULVAL INSERT AND DILATING CERVIX

As the fetus proceeds down the birth canal, it pushes against a fabricated uterus/cervix. This device looks like a disk with a small hole in the center and is attached to the entrance of the birth canal. The device is fabricated in such a way that permits considerable distension. The initial diameter of the cervix is about 2 centimeters.



As the fetal presenting part presses against the simulated uterus/cervix, the cervix dilates and swells as the fetus moves down the birth canal. At crowning, the dilated cervix allows the head to pass through the cervix and through the vulval insert which simulates the labia. The dilating cervix allows the students to measure both fetal head descent and cervical dilation.



UMBILICAL CORD AND PLACENTA

A detachable umbilical cord is attached to the birthing fetus, which allows for either cutting of the cord for realism, or detachment of the cord without cutting. The umbilical cord has a simulated umbilical vein in blue and two arteries in red.



The hand-painted placenta is detachable from the umbilical cord and may be attached to the interior abdominal wall with Velcro. The placenta can be placed in several positions to simulate placenta previa.

WARNING

Always apply silicone oil to the head and shoulders of the birthing fetus, as well as the inside of the vulval insert and placenta to facilitate the birthing process.

MEDICATION ADMINISTRATION

Susie includes a rectum to simulate the administration of medications.

OTHER

One year limited warranty, available extended warranty to three years

Terminology

FACILITATOR

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

PROVIDER

A person participating in the simulation as a healthcare provider.

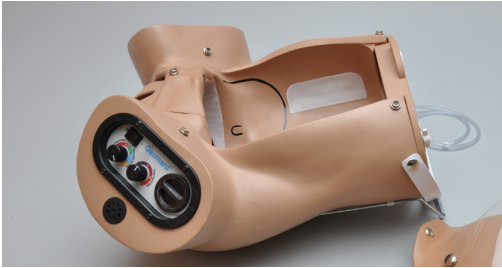
Equipment Set Up

Overview

To activate the heart rate and breathing sounds follow the instructions listed below:

BATTERY INSTALLATION AND REPLACEMENT

1. Place the simulator on a flat, clean surface, and turn the switch to the "0" position.



2. Rotate the battery cover counter clockwise for about 1/4 turn to release it from the control panel.



3. Remove the battery holder and insert 4 AA batteries.

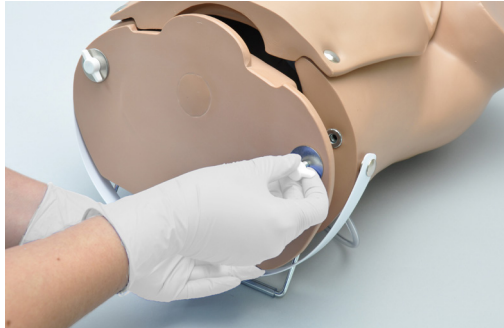


4. Introduce the battery holder into the control panel and attach the battery cover.

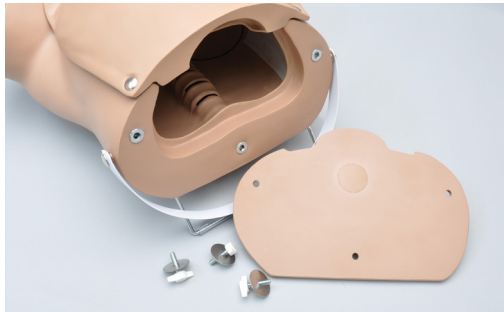


REMOVING THE END PLATE

1. Remove the three wing nuts and washers that hold the end plate in place. The wing nuts are designed to be loosened with your fingers.

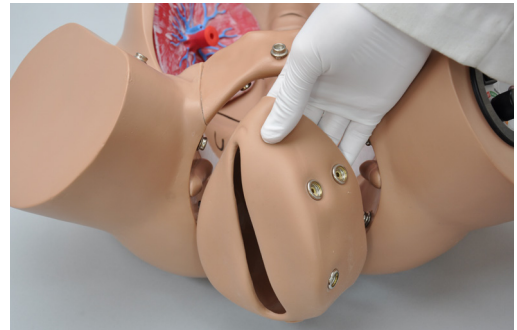
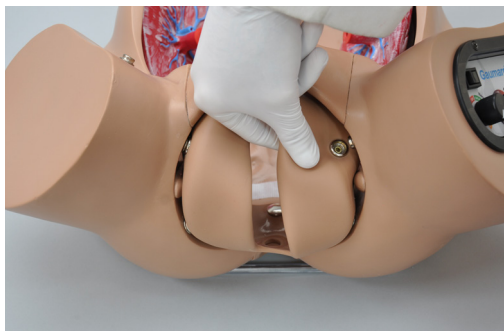


2. After removing the screws, pull out the end plate.



REPLACING THE VULVAL INSERT

To replace the vulva, detach the insert by unplugging the metal snaps connected to the torso.



REPLACING THE DILATING CERVIX

1. To replace the cervix, gently undo the replaceable insert Velcro from the Velcro attached to the torso.

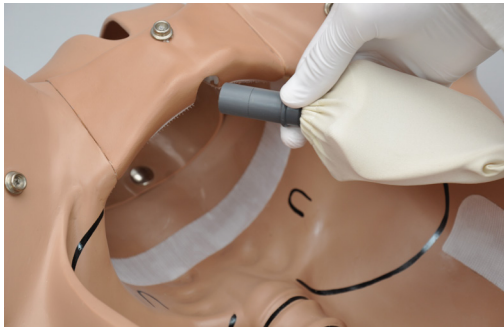


2. Remove the cervix from the torso.



BLADDER SET UP

To practice catheterization exercises, attach the bladder insert to the anterior pelvis of the torso. Match the ring of the simulated urethra to the groove of the anterior pelvis and push upwards.



6. Attach the tube with squeeze bulb to the upper port of the blood dispensing bag.



7. To gradually increase the hemorrhage flow, slowly rotate the knob counterclockwise.
8. To increase the hemorrhage flow pressure, depress the squeeze bulb.

POSTPARTUM HEMORRHAGE KIT SET UP

1. Locate the hemorrhage fill tube located on the right side of the Obstetric Susie.
2. Place the blood dispensing bag on the metal stand.
3. Connect the blood dispensing bag tube to the simulator hemorrhage fill tube.
4. Close the flow regulator by turning the knob clockwise.
5. Fill the blood dispensing bag with simulated blood by placing the provided funnel onto the upper port and dispensing the fluid.

Working with Obstetric Susie®

Control Panel

The simulator includes an electronic module inside the left leg with selectable audible fetal and maternal heart beats as well as neonatal crying, stridor and wheezing sounds.

To activate the sounds, follow the instructions listed below:

1. Turn on the module by pressing the power switch located on the left to position “1”.



2. Rotate the control knob clockwise to select a maternal heart rate value between 0 to 220 bpm. To decrease the maternal heart rate, move the control knob counterclockwise.



The second half turn of the control knob includes the following neonatal sounds: grunting, stridor, and crying. To select a neonatal sound, rotate the control knob until the indicator points to desired sound.

3. The second knob located in the control panel controls the fetal heart rate. Rotate the control knob clockwise to increase the heart rate from 0 to 220 bpm.



4. Turn off the module by pressing the power switch towards the “0” position.

Obstetrics

The Susie® Birthing Torso offers the ability to demonstrate a variety of obstetric techniques including:

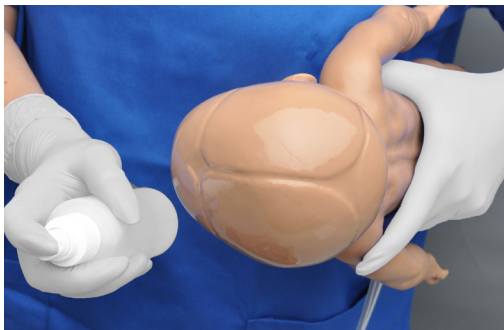
- Fetal palpation of the head, shoulders, backbone, knees, and elbows
- Vaginal delivery
- Shoulder dystocia
- Cesarean section delivery
- Complete, frank, and footling breech deliveries
- Pinard’s maneuver
- Intrauterine manipulation
- Prolapse of umbilical cord
- Normal delivery of umbilical cord and placenta

- Placenta previa-total, partial, and marginal
- Palpation of fetal fontanelles
- Simulated suction of the nose and mouth of the neonate

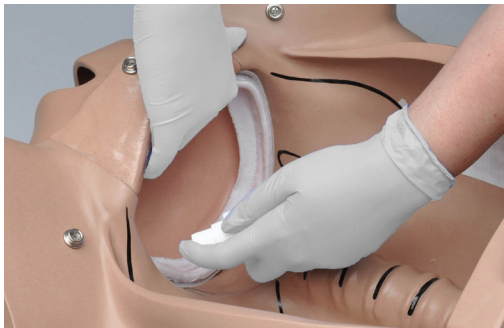
Normal Labor and Delivery

To complete a normal delivery, follow the instructions below:

1. Select a vulval insert and dilating cervix and snap them into place.
1. Select a birthing fetus with placenta and cord, as well as one of the two abdominal covers.
2. Remove the abdominal cover if needed.
3. Lubricate the head and shoulders of the birthing fetus.



4. Lubricate the vulva and cervix internally and externally using silicone lubricant.



WARNING

Always lubricate the baby and the birth canal prior to every delivery. Poor lubrication may cause binding.

5. Attach the umbilical cord to the baby. The umbilical cord can be wrapped around the fetal neck.
6. Attach umbilicus to placenta.

7. Remove the end plate following the instructions listed in the Set Up section and attach the placenta to the abdominal wall using the Velcro® fastener. The abdominal wall has two placement sites to attach the placenta.

Orienting the Velcro patches in parallel causes the placenta to be retained; orienting them at right angles allows the placenta to release with modest traction.

8. Position the female birthing baby so that its head faces toward the left side of the simulator. This is the ROA or right occipital anterior position.

Any other delivery position may be chosen; however, take care that the fetal shoulders are aligned with the long axis of the vulva insert.

WARNING

If the fetal shoulders are NOT aligned with the vulva, binding may occur.

9. Select desired fetal heart rate using the Control Panel. Adjust the heart rate at any time during delivery to simulate episodes of bradycardia or tachycardia.
10. Once the shoulders are delivered, the health provider can complete delivery of the baby and placenta.

In the event the birthing baby binds in the birth canal, pause and back up. In most cases, binding can be prevented by thoroughly lubricating the fetus, the dilating cervix and the vulva.

During delivery, fetal heart tones can be heard by placing the provided pinard stethoscope on to the abdomen.



Move the bell of the stethoscope around until the heart tones are clearly heard. Change the fetal heart rate using the Control Panel.

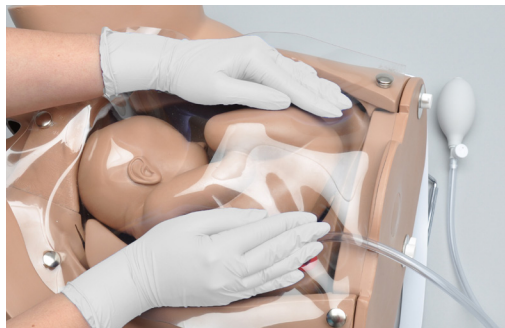
The cervix dilates as the fetal head moves down the birth canal. Crowning of the fetal head can be seen. Mouth and nose suctioning can be simulated.



Leopold Maneuvers

Practice Leopold Maneuvers with the simulator.

1. Remove the abdominal cover, birthing baby, and placenta.
2. Place inflatable cushion within simulator.
3. Route the inflation bulb outside Susie.
4. Place birthing fetus in the vertex, breech, or transverse position onto the elevating pillow and lift fetus anteriorly using squeeze bulb. Alternatively, place the one-piece fetus on the inflatable cushion.
5. Snap abdominal cover into place.
6. Lift fetus anteriorly using squeeze bulb.
7. Conduct the four Leopold Maneuvers.



Vacuum-assisted Delivery

Vacuum-assisted delivery may be practiced with using a vacuum cup.

1. Begin the vacuum-assisted delivery by inserting the soft scalp over the skull of the birthing fetus.

Placing the soft scalp over the skull improves the vacuum seal between the fetal head and the vacuum.

2. Lubricate the fetus supplied with Susie and, place it onto the delivery system in the normal ROA position.
3. Advance the fetus down the birth canal.
4. Pause as soon as the cervix is fully dilated.
5. Insert a lubricated vacuum cup into the vagina and place the cup onto the flexion point of the skull located between the fontanelles. Use the manual vacuum pump supplied with such devices to cause the attachment of the cup to the skull. Wait a few minutes for the "chignon" to form.
6. Await the next contraction that may be simulated by increasing Susie heart rate.
7. Have the student apply a steady traction, perpendicular to the plane of the cup while sustaining the fetus in Susie.



Shoulder Dystocia

Susie may be used to practice the resolution of shoulder dystocia using the McRoberts maneuver, suprapubic pressure, posterior arm sweep, or elbow-knee delivery.

1. To demonstrate shoulder dystocia, place the birthing baby in the abdominal cavity.
2. Simulate dystocia at any time during the delivery by manually locking the birthing baby inside the Obstetric Susie. Providers must use various maneuvers to deliver the baby.

Cesarean Delivery

Demonstrate a C-section using Susie. Remove the metal snaps just above the pubic bone and birth the baby between the abdominal cover and the pubic bone.

To complete this procedure follow the steps below.

1. Insert inflatable cushion.
2. Attach abdominal cover using the metal snaps except for snaps above the pubic bone.
3. Deliver the birthing baby between the stomach cover and pubic bone.

Prolapse of the Umbilical Cord

Simulate prolapse of the umbilical cord by positioning the umbilical cord in a critical position and decreasing the fetal heart rate from the control panel.

Placenta Previa

To simulate placenta previa with Susie, place the placenta in the desired position to simulate the condition, with the maternal side against the uterine wall or the cervical os. Then place the fetus within the uterine cavity with the presenting part closest to the placenta.



External Version

Version may be attempted to rotate the fetus from a breech position into one permitting normal vertex presentation.

1. To practice external version, remove the abdominal cover and the fetus.
2. Insert the inflatable cushion.
3. Thoroughly lubricate the inside surface of the abdominal cover, the fetus, and the inflatable cushion.
4. Place the lubricated fetus onto the lubricated inflatable cushion and snap the lubricated abdominal cover into place.
5. Inflate the cushion to elevate the fetus anteriorly.
6. Inflate the cushion at the base of the pelvic cavity to position fetus.
7. Confirm the breech position and attempt to manually turn the fetus within the uterus by transabdominal manipulation.

Breech Birth

1. Remove the soft scalp from the fetal head.
2. Place the fetal legs in either an extended position to simulate “footling” delivery or retract the legs for a “frank” delivery.
3. Lubricate the lower torso and legs of the fetus.



Delivery of the Placenta

The placenta supplied with Susie may be positioned so that it births spontaneously or requires either modest cord traction or manual removal.

In addition, the placenta is designed with two removable placental fragments. These fragments are attached to the body of the placenta with Velcro. You may reverse one or both fragments causing one or both to birth with the placenta or remain affixed to the uterine wall.

Providers should carefully inspect the birthed placenta to make sure it is complete and that no fragments remain internally.

Bladder Catheterization

Perform bladder catheterization exercises with Obstetric Susie. To add fluid to the bladder, follow the instructions listed below:

1. Follow the instructions listed in the Set Up section to connect the bladder to Susie.
2. Locate the bladder fill kit.
3. Lubricate and insert the bladder fill adapter into the urethra.
4. Fill the syringe with fluid.
5. Connect the fill syringe to the adapter, and depress the syringe to add fluid into the bladder.

6. Disconnect the syringe from the bladder fill adapter and repeat steps 5 and 6 if needed. The maximum volume capacity of the bladder is 300 ml.
7. Remove the bladder fill adapter and lubricate the provided catheter.
8. Catheterize with an 18 Fr urinary catheter.

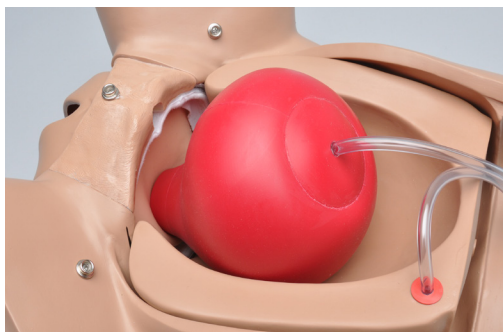


Postpartum Activity

After delivery the uterus normally contracts reducing postpartum bleeding. Under certain conditions contraction does not occur and extensive bleeding may continue. If this condition is not recognized and treated in a timely manner the new mother may go into shock and die. Inadequate uterine contraction may present as a “boggy” or soft uterus assessed through abdominal palpation. Uterine contraction may be augmented using certain drugs and/or uterine massage.

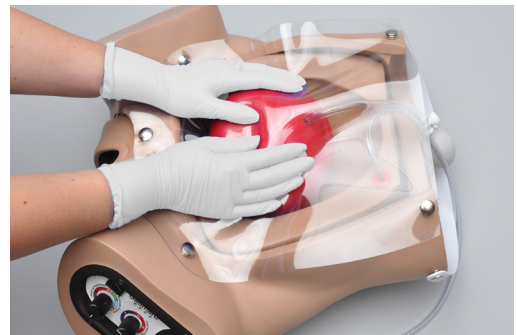
Fundal Massage and Postpartum Bleeding

1. To practice uterine massage, remove the abdominal cover and insert the inflatable cushion.
2. Gently position the large postpartum uterine assembly to the cervix as shown below.

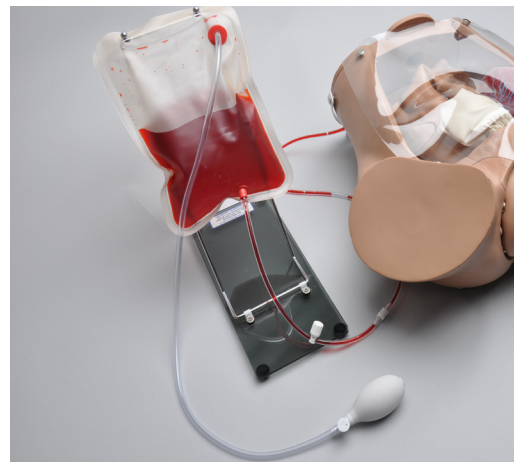


The postpartum uterine assembly consists of a thin outer uterine skin and a smaller, harder inner uterus.

3. Use the squeeze bulb attached to the postpartum uterine assembly to inflate the space between the two uteri, expanding the soft external skin sufficient to simulate a “boggy” uterine condition.
4. Lift the uterus anteriorly using the inflatable cushion.
5. Bimanual massage will cause air to leak from the thumb screw in the squeeze bulb causing the outer skin to contract. When sufficient air is released the student will begin to feel the harder inner uterus which simulates the contracted postpartum state.



6. Use the blood dispensing bag connected to Obstetric Susie fill tube to simulate postpartum bleeding.



Newborn Care

Susie includes a full term male newborn simulator with the following capabilities:

- Umbilical pulses
- Umbilical catheterization

UMBILICAL PULSES

Generate pulsatile umbilical pulses by depressing the squeezable bulb located on the left side of the simulator.

UMBILICAL CATHETERIZATION

Use the provided silicone oil to lubricate the umbilical catheter prior to perform a catheterization procedure.

To perform catheterization exercises follow the instructions listed below:

1. The umbilical cord is connected to an internal reservoir that can be filled with 2-3 cc of water. To add fluids into the umbilical cord open the adjustable clamp attached to the fill/drain tube on the left side of the simulator.
2. Fill the syringe with fluids.
3. Connect the syringe to the fill/drain tube located on the left side of the simulator.
4. Depress the syringe to add the fluids into the system.
5. Close the adjustable clamp.
6. Perform catheterization procedures with a lubricated umbilical catheter.

To drain all the fluids from the system, open the adjustable clamp attached to the fill/drain tube on the left side of the simulator.

Appendix

Warranty

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. Gaumard does not provide any warranty, express or implied, with respect to any third-party products. Defects in third-party products are covered exclusively by the warranty, if any, provided by the third-party.

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:

Contact Gaumard and request authorization to return the Gaumard product. Do **NOT** return the Gaumard product to Gaumard without prior authorization.

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.

Extended Warranty In addition to the standard one year of coverage, the following support plans are available: Two-Year Extension (covers second and third years)

Call for pricing (USA only)



Gaumard®
Simulators for Health Care Education

Contact Us

E-mail Technical Support: support@gaumard.com

Before contacting Tech Support you must:

1. Have the simulator's Serial Number
2. Be next to the simulator if troubleshooting is needed.

E-mail Sales and Customer Service: sales@gaumard.com

Phone: Toll-free in the USA: (800) 882-6655

Worldwide: 01 (305) 971-3790

Fax: (305) 667-6085

Post: Gaumard Scientific

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Miami, FL 33196-5691

USA

Office hours: Monday-Friday, 8:30am - 4:30pm EST (GMT-5, -4 Summer Time)

General Information

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