INSTRUCTION MANUAL

R17600 Nursing Doll, Standard Version

R17610 Nursing Doll, Basic Version

General Patient Care
Heart and Lung Sounds
Blood Pressure Auscultation
Injection Training
GYN Training

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PLEASE READ THE FOLLOWING INSTRUCTIONS PRIOR TO COMMENCING TRAINING EXERCISES ON YOUR NEW MANIKIN.

HANDLE YOUR SIMULATOR IN THE SAME MANNER AS YOU WOULD HANDLE YOUR PATIENT - WITH CARE AND CONSIDERATION.

SHOULD YOU HAVE ANY QUESTIONS AFTER READING THIS INSTRUCTIONAL MANUAL, PLEASE CALL US.

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SECTION 1 - INTRODUCTION

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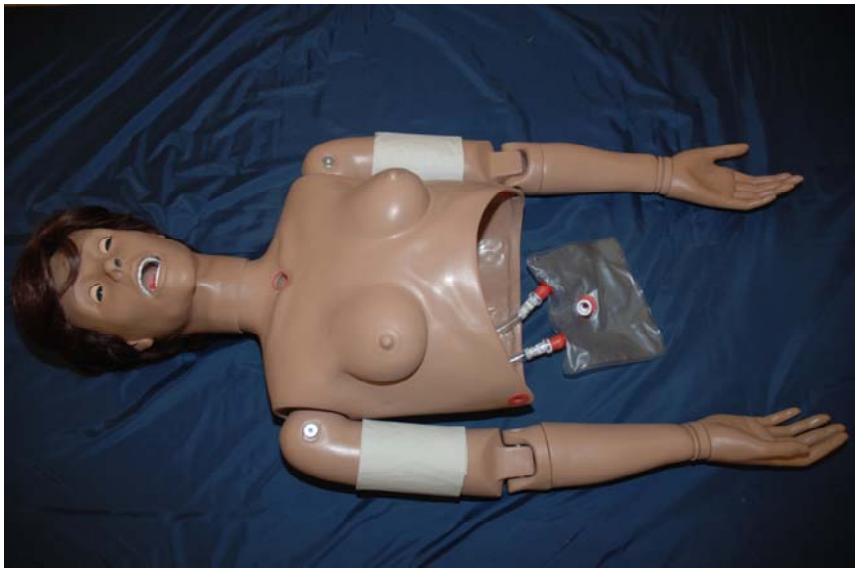


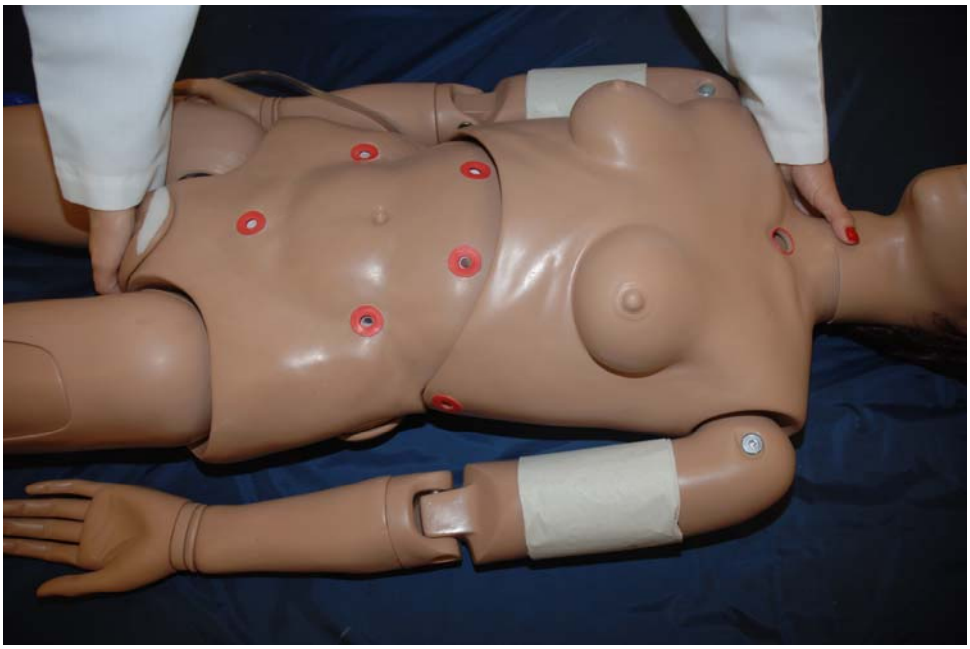
Upper body. An optional blood pressure arm may be attached to Susie's left side and an optional IV arm to her right.

Lower body with legs and feet. A waist rod joins the upper and lower torsos. The blue bulb shown near the right knee is used to inflate an internal cushion lifting the uterus and bladder anteriorly providing increased urinary flow.

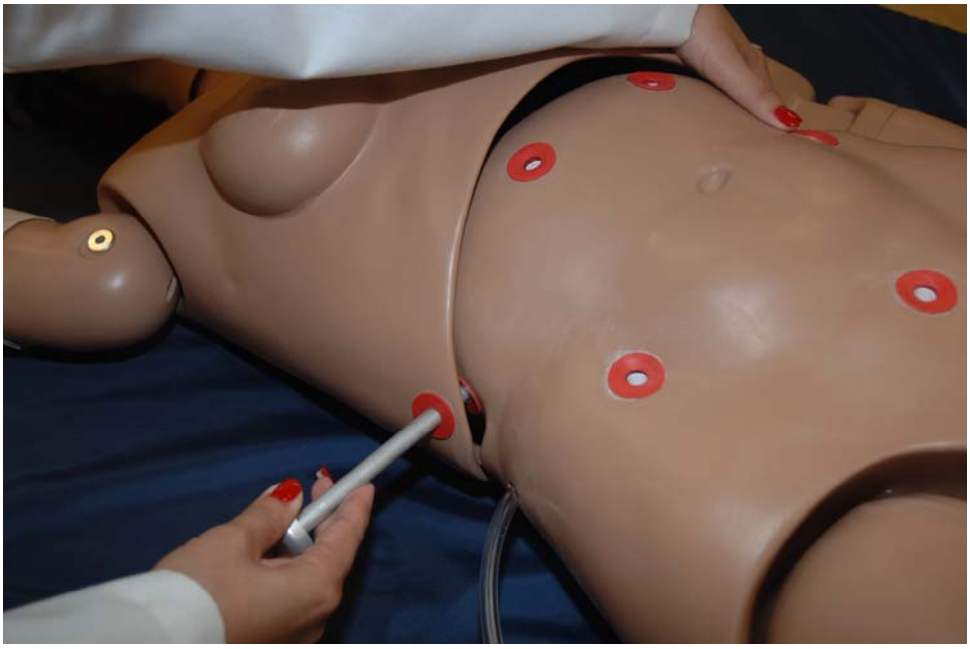
Assembly

To assemble Susie, unscrew one knob at either end of the waist rod, pull rod out. Make sure the white guide tube remains in place.

Within the upper torso locate the stomach reservoir. Connect the tube from the stomach to the port shown above. The click valve on this tube is normally closed. You are now ready to attach the lower torso of the manikin to the upper torso.



Ease the lower torso into the upper torso, being careful not to disengage the stomach reservoir.



Line up the holes and slide the waist rod through the white guide tube. Replace the waist knob and finger tighten.

SECTION 2 - GENERAL CARE CAPABILITIES

1. Bandaging

The fingers and toes of this simulator are separated to permit bandaging exercises. The surface of the manikin is smooth and resistant to water, oil, and liniments.

2. Eyes/Ophthalmologic Exercises

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

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

3. Teeth and Tongue

The teeth and tongue are of normal size and **may be removed.**

4. Hygienic Care

The head of the female simulators are supplied with a wig, permitting instruction in combing, shampooing, and head draping. The manikin surface is water resistant so that bathing exercises may be practiced.

5. Injection Sites

Sites in the upper left and right arm, as well as optional sites in the left and right thigh, allow administration of intramuscular injections. Sites are removable. Inside each site is a sponge to absorb the injectate. There is also a site in the upper gluteal region to permit intramuscular injections in the buttocks. All injection sites are easily removed and replaced. Numerous injection sites are located in the optional injection training arm and hand described later.

IM site on shoulder

Subcutaneous site on optional injection training arm

IM site on upper buttock

Optional IM sites on left and right thighs

7. Male and Female Organs

If your simulator has interchangeable male and female organs, note a red adaptor at the opening of the urethra for female catheterization exercises. This red adaptor will be removed when the male organ is used for catheterization.

8. Range of Simulated Movement

The joints are strong and their movements are lifelike and realistic. The manikin bends at the waist. The head and jaw articulate.

9. Ears, Nose and Throat

Left ear - the interior of the ear contains a simulated ear canal with a capacity of 10 ml, facilitating syringing exercises.

Nasal/oral openings: both are connected to the stomach reservoir/tank, so that a #10 Levine tube may be used to demonstrate tube feeding and gastric suction.

A gastric reservoir (capacity: 850 ml) is provided, with an opening for gastrostomy.

REMEMBER TO ALWAYS USE A LUBRICANT PRIOR TO INTRODUCTION OF A LEVINE TUBE OR ANY OTHER INVASIVE DEVICE.

10. Tracheostomy

An curved cavity is located at the sternal notch for placement of a lubricated trach tube. You may inflate the cuff of a Shiley 8,

11. Stomach

The upper torso also includes a stomach tank into which a #10 Levine tube may be used to demonstrate tube feeding and gastric suction. A gastrostomy port connects directly to the stomach tank from the red flange located near the waist. **ALWAYS USE A LUBRICANT WHEN INTRODUCING THE LEVINE TUBE**.

12. Transverse Colostomy, Ileostomy, and Suprapubic Cystostomy

The creation of an ostomy port, a temporary or permanent excretory opening, is an important part of abdominal surgery. The simulator demonstrates the appearance of ostomy openings. The **R17600** has anatomically sculptured stomas of a transverse colostomy, ileostomy, and suprapubic cystostomy, which may be performed as a result of abdominal surgery. Conventional ostomy drainage and irrigation exercises can be performed.

The ostomy sites connect to reservoirs of appropriate size, and disposable or permanent ostomy bags may be applied to all openings. Exercises in skin preparation and stoma hygiene, as well as treatment of skin conditions around the sites may also be practiced. The reservoirs may be cleansed by introducing a solution of soap and water or detergent with a 60 cc. syringe. Alternatively, the reservoirs can be removed from the lower torso and cleaned. Note that the **R17610** do not have ostomies or internal tanks.

13. Intestinal Tract

Administration of an enema may be performed on all manikins except the **R17610**. The legs articulate sufficiently to permit enema exercises with the manikin on its back. The enema should be introduced with an anal nozzle of small diameter. Remember to use a lubricant.

PLEASE NOTE: A non-return valve is built into the anal canal to prevent fluid spilling during instillation. The enema reservoir capacity is approximately 750 ml.

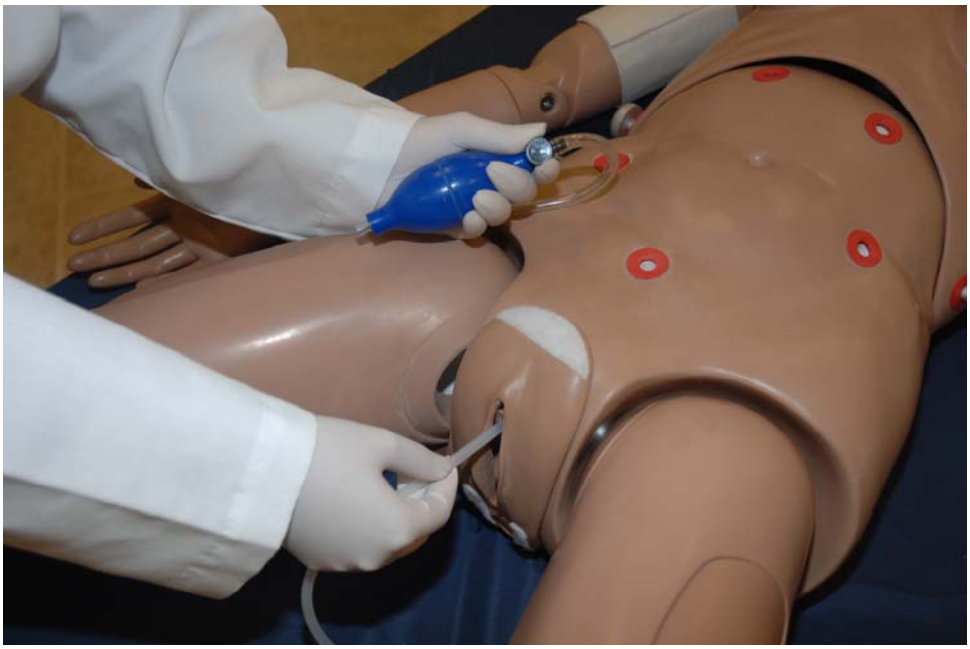
14. Urinary System

The urethral passage and the bladder (capacity: approximately 1800 ml) are connected by a valve assembly to make catheterization exercises more lifelike. Fluid can be withdrawn from the bladder after the insertion of a #18 French catheter. The suprapubic opening may be used for filling the bladder or for drainage exercises. Please note that repeated sterilization can cause a variance in catheter diameters. An older device might permit fluid leakage. Therefore, different catheters should be inserted to determine a proper fit.

NOTE: ALWAYS USE A LUBRICANT WHEN INTRODUCING A CATHETER.

15. Female Catheterization

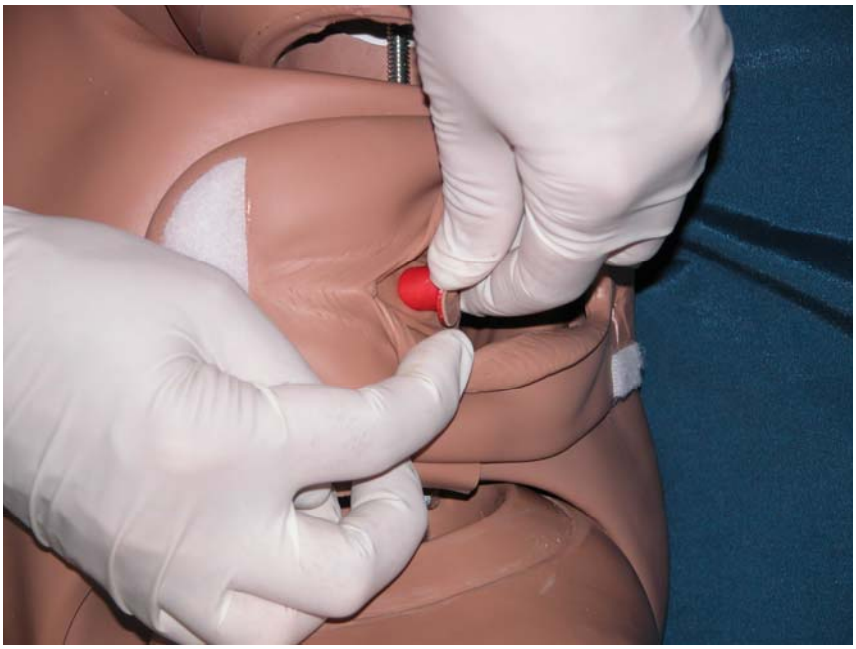
Bladder catheterization may be required to remove urine. This procedure must be conducted under aseptic conditions to prevent the subsequent infection or inflammation of the urinary tract. A suprapubic cystostomy opening is present for practice in cystostomy management and maintenance. When practicing catheterization, the labia minora must be separated to examine the urethral opening, as in the female patient. The realistic simulation of the vulva area also permits instruction in asepsis and disinfection. When actually performing catheterization on the simulator, a **"one eye"** #18 French catheter is recommended. Smaller catheters may cause leakage.



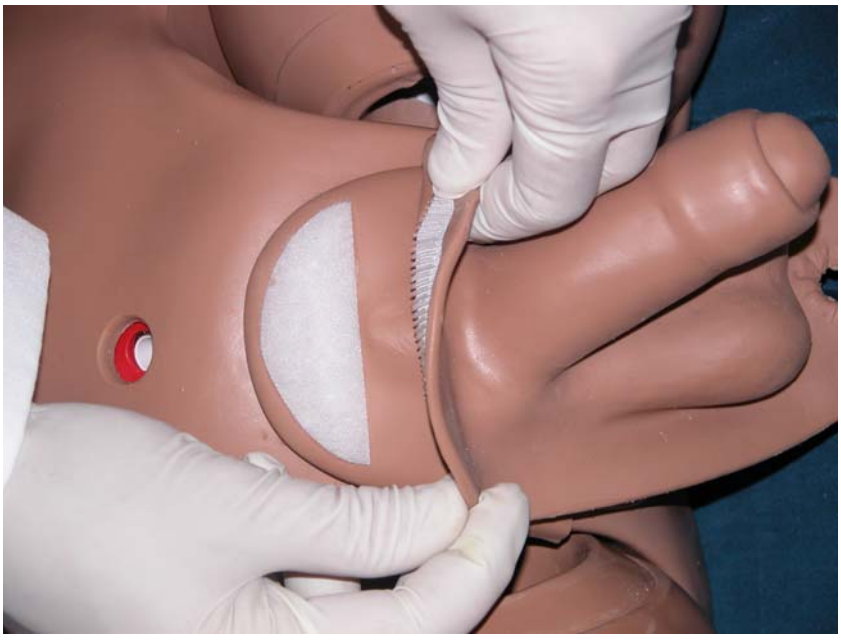
Always lubricate the distal end of the catheter. Once the catheter is in place, use the blue squeeze bulb to increase bladder pressure and assure a good flow of urine.

16. Male Catheterization (All models except R17610)

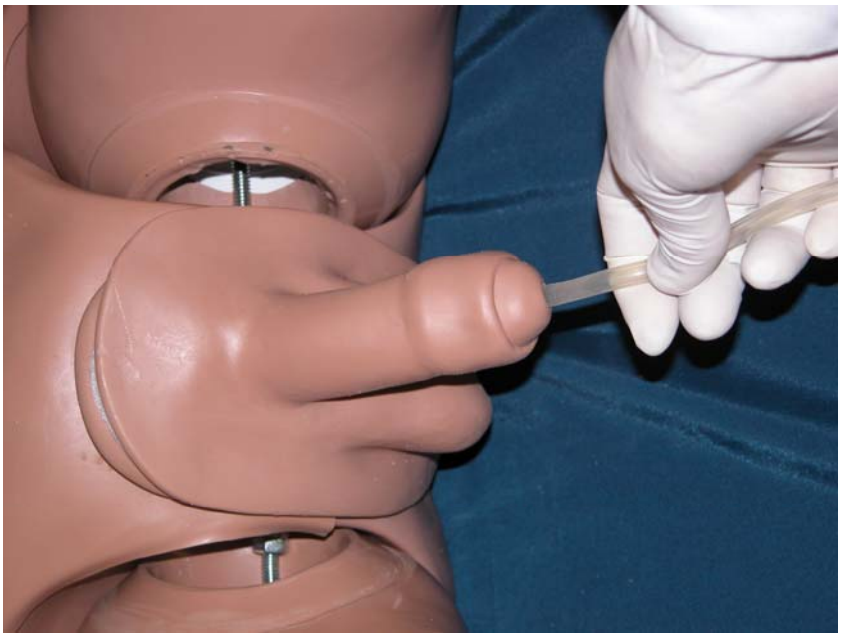
Male catheterization is performed in the upright or recumbent position by the attachment of the male organ. The flexible vinyl male organ contains the urethra, which is connected to an internal urinary bladder through a one-way valve. A suprapubic cystostomy opening is also present for practice in cystostomy management and maintenance. When performing catheterization, the penis must be manipulated to permit passage of the catheter, as in the male patient. The realistic simulation of the male genitalia also permits instruction in asepsis and disinfection. When actually performing catheterization, a **"one eye"** #18 French catheter is recommended for the most efficient use of the simulator. The simulator also demonstrates the appearance of the ostomy opening in the patient who has had a suprapubic stoma as a result of surgery on the bladder or prostate. All suprapubic cystostomy drainage and irrigation exercises can be performed.



In order to perform male catheterization, this red flange must be removed and retained.



Attach the male organ by inserting the tube into the urethra and securing with Velcro



NOTE: ALWAYS USE A LUBRICANT WHEN INTRODUCING A CATHETER.

17. Decubitus Ulcers (optional)

A decubitus ulcer is caused by prolonged pressure in a patient confined to bed and in one position for a long period of time. They are also known as **pressure sores** or **bed sores**. The simulator is supplied with two of these ulcers. These ulcers are anatomically accurate. The first decubitus ulcer illustrates the initial stage of ulceration. The second decubitus ulcer illustrates the suppuration or pus/deeply infected stage.

18. Patient Training Arm and Hand Injection Simulator (optional)

This simulator is a training tool for infusion, blood collection, intravenous injection, intramuscular injection, TB screening and subcutaneous injection exercises.

The simulator is attached to the manikin, and is to be used connected to a blood dispensing bag. You may use the metal stand supplied or a conventional IV pole. The arm is also supplied with an amount of synthetic blood concentrate, and a spare arm skin. The arm and hand contain venous grooves, which are fitted with soft latex tubes that simulate the consistency of the veins. A translucent, pliable vinyl skin, which is removable and washable, is stretched over the venous structure, simulating the normal adult arm.

The arm features the following: (1) subcutaneous injection areas on the volar side of the forearm and the lateral side of the upper arm; (2) an intramuscular injection site in the deltoid area; and (3) two veins in the dorsum of the hand for additional intravenous training techniques.

In addition, the training arm contains simulated cephalic, basilic, antecubital, radial and ulnar veins. Simulated blood may be placed in the dispensing bag, which is equipped with a squeeze bulb. Applying pressure via the squeeze bulb permits the veins to stand out, simulating a clenched fist or tourniquet situation. Release of pressure simulates collapsed veins. Use of the squeeze bulb permits the palpability of the veins to be varied, as seen in routine hospital or emergency situations.

Note that the use of cannulas/needles larger than 21 gauge will shorten the life of the venistructure.

REPLACING THE SKIN AND VEINS

1. To remove the vinyl outer skin, start at the top of the arm and remove by rolling it down and over the wrist. Use of water based silicone or talcum powder will ease movement.
2. Select a new skin and heat it in warm soapy water to a temperature of about 125 degrees F or about 50 degrees C. Dry the skin, and insert it onto the arm at the fist and pull the new skin up into place.
3. To replace the veins make sure you are not allergic to latex. We use very pure latex veins to produce the best possible self-sealing possible.

CLEANING & REPAIR OF THE PATIENT TRAINING ARM AND HAND

1. The skin of the training arm can be cleaned with a mild detergent, or soap and water. After drying the arm, lightly dust it with talcum powder. This will keep the training arm supple and easy to use.
2. If the venous system is blocked, first check that the tubes are not kinked. If blockage persists, remove the fist and flush veins with water.
3. Indelible marks made with ballpoint pens, ink or magic markers will remain.

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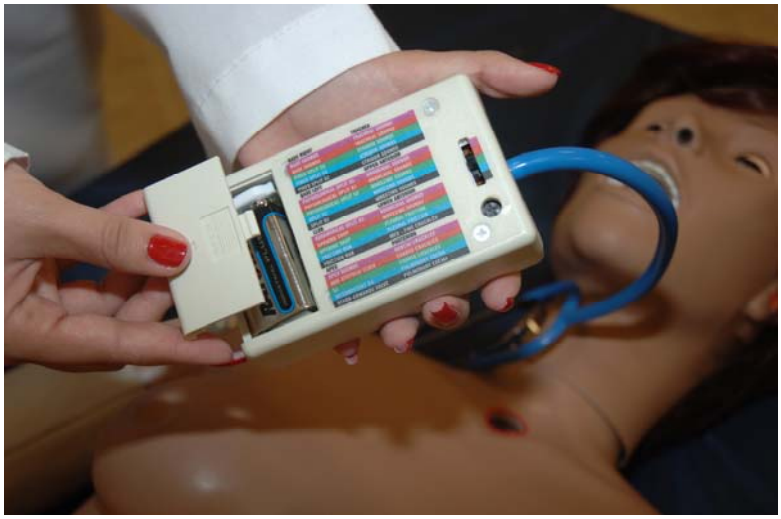
SECTION 6 - HEART AND LUNG SOUNDS (optional)

INTRODUCTION

This teaching system is used for auscultation training. RFID sensors are hidden beneath the skin in a total of 13 locations; nine on the front and four on the back. Included is a Virtual Stethoscope™ which is powered by a 9V cell. Remove the battery housing and place a fresh battery inside, being sure to make secure connections.



Menus of available heart and lung sounds are attached listing the location, the sound and a brief description of the physiological condition associated with each sound.

Hear the appropriate heart or lung sound as the bell of the stethoscope is moved across the front or the back of the torso. An external speaker, which must be powered through a wall outlet, is supplied so that the Instructor can allow the classroom to hear what the student is hearing through the stethoscope.

The vest overlay contains RFID tags that communicate with the Virtual Stethoscope so that the heart or lung sound appropriate for that location is heard. The vest is supplied with blue stick-on dots that may be easily removed by the Instructor.

The four lung fields may also be heard on the back of the patient.

LOCATION	HEART SOUND	COMMENT
Base Right	Base Sound	Patient has a normal heart with mild anemia. The heart is hyperdynamic and has elevated cardiac output. S2 is accentuated at the base.
	Fixed Split S2	Patient has an atrial septal defect which increases flow through the right heart, prolongs RV systole and also produces a mid-systolic murmur (MSM) because of increased flow through the RV outflow tract.
Base Left	Physiological Split S2	The splitting of S2 is easily heard during inspiration and the second sound is single during expiration. The second component of the split sound (P2) is accentuated.
	Split S2	S2 is variably split during mid-inspiration, as three beats are repeated.
Left Side Sternal Border	Paradoxical Split S2	The splitting of S2 is heard during expiration, but the sound becomes single during inspiration. (The background noise is increased during inspiration.)
	Opening Snap	Patient has mitral stenosis, responsible for an early crisp diastolic sound heard at the base 0.08 seconds after S2. S1 is usually loud at the base, which reflects mitral stenosis.
	Friction Rub	Patient has uremic pericarditis, which leads to rubbing of roughened visceral and parietal pericardial surfaces against one another. The 3 component rub exists during deep inspiration.

LOCATION	HEART SOUND	COMMENT
Apex	Apex Sound	Patient has a normal heart with mild anemia. The heart is hyperdynamic and has elevated cardiac output.
	Mid-Systolic Click	Patient has mitral prolapse, which produces a mid-systolic click heard during inspiration.
	S3 Sound	Patient has a readily heard third heart sound. S3 occurs later in diastole than the opening snap.
	Intermittent S4	Patient has left ventricular hypertrophy, and has a fourth sound (S4) which is not heard on every cycle. The sound is presystolic, about 0.1 second before S1.
	Starr-Edwards Valve	This ball-in-cage mitral prosthesis has a mechanical closing sound (S1) and one or more diastolic sounds caused by the ball bouncing within the cage.

LOCATION	LUNG SOUND	COMMENT
Trachea	Tracheal Sounds	Expiration sounds are louder, have a higher pitch, and are of longer duration than during inspiration. The silent period or pause following expiration is longer than the one between expiration and inspiration.
	Stridor Sounds	Patient has marked respiratory distress, and a narrow aperture between the vocal cords that produces a high pitched tone during both inspiration and expiration. During the end of expiration, there is an abrupt drop in pitch.
Upper Anterior (Two Sites)	Bronchial Sounds	Breath sounds are similar to tracheal sounds in that the expiratory phase is louder and lasts longer than the inspiratory phase. The major distinguishing characteristic is the high pitched, hard quality of the expiratory phase.
	Wheezing Sounds	These musical wheezing sounds are often heard in asthma patients. During inspiration, the wheeze is slightly higher in pitch than during expiration. Wheezing in asthmatics is often present in either one or both phases of respiration.
Lower Anterior (Two Sites)	Bronchial Sounds	Breath sounds are similar to tracheal sounds in that the expiratory phase is louder and lasts longer than the inspiratory phase. The major distinguishing characteristic is the high pitched, harsh quality of the expiratory phase.

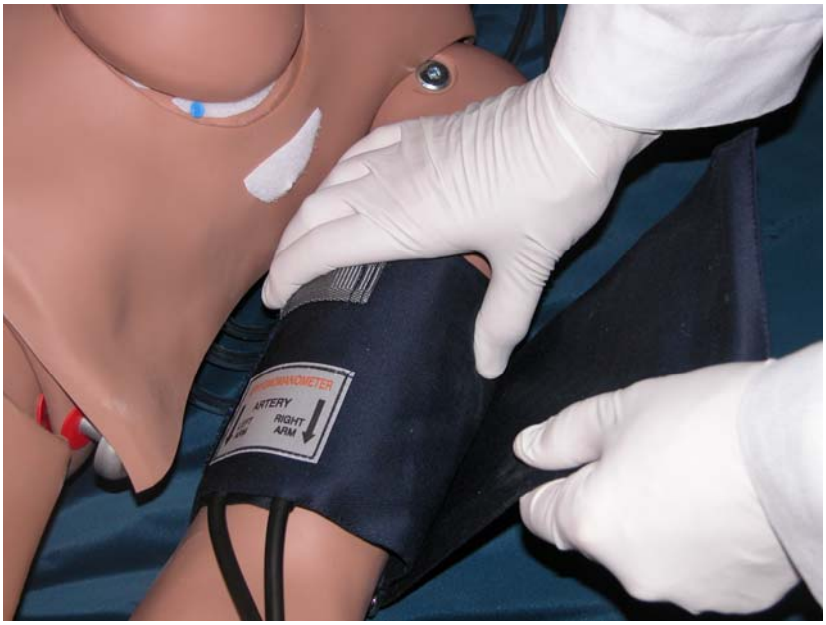
LOCATION	LUNG SOUND	COMMENT
Posterior (Four Sites)	Wheezing Sounds	These musical wheezing sounds are often heard in asthma patients. During inspiration, the wheeze is slightly higher in pitch than during expiration. Wheezing in asthmatics is often present in either one or both phases of respiration.
	Pleural Friction	This sound probably originates from the friction of inflamed pleural surfaces moving against one another. The sound is repetitive as long as the breathing pattern and position remain constant. Similar to but lower in pitch than crackles.
	Medium-Fine Crackles	These noises begin about mid-inspiration and progressively increase in intensity up to the end of expiration. Coarse crackles are also audible in the early expiratory phase of some of the breaths.
	Ronchi, Crackles	Coarse crackles are present during both inspiration and expiration. There are also some very low pitched repetitive sounds that are ronchi. High pitched squeaks are also audible against a background of bronchial breath sounds.
	Coarse Crackles	Coarse crackles begin at the onset of inspiration and diminish in intensity and prevalence toward the end of inspiration. Expiration is not audible.
	Pulmonary Edema	Coarse and medium crackles appear toward the end of inspiration and continue into expiration. The respiratory rate is rapid and expiratory phase is “bronchial” in character. These features exist during respiratory distress and congestion.

SECTION 7 - BLOOD PRESSURE TRAINING ARM (optional)

Assembly

Connect the electrical cable leading to the blood pressure arm to the BP Auscultation Tutor, being careful to not damage the four pins found within the cable connector.

Connect the power supply to the Tutor. You may have to supply a mechanical adaptor to access the wall outlet in your area. Now connect the long clear tube extending from the sphygmomanometer assembly to the BP Tutor.



Wrap the BP cuff around the left arm midway between the deltoid and elbow.

Operation

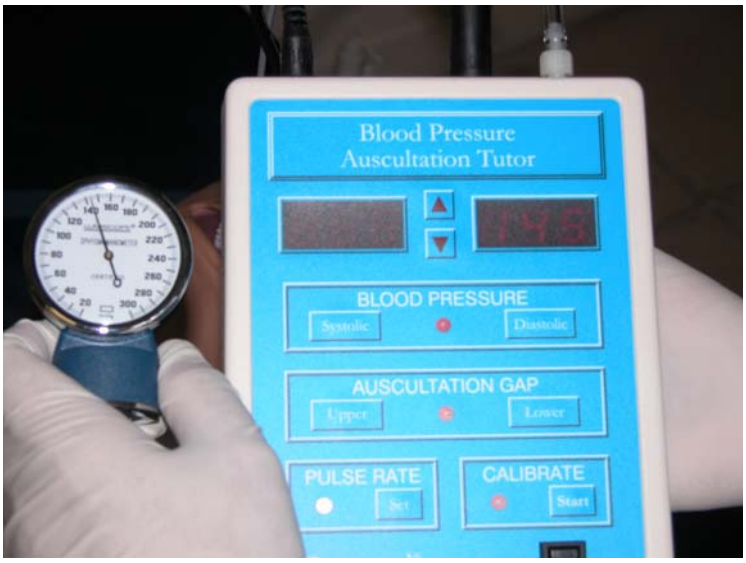
Turn the power switch “ON”. Do not press “Calibrate”. Note you may palpate the wrist and feel the radial pulse. The BP Tutor normally remembers the previous settings. We use these settings to simulate a hypertensive patient having an auscultation gap. The challenge for the student is to recognize that the systolic is 150 not 120. The 150 may suggest hypertension, while 120 would be incorrectly interpreted as normal.

Systolic	150	K1 starts here
Diastolic	90	K4 ceases then K5 silence
Upper auscultation gap	140	K sounds cease but pulse continues
Lower auscultation gap	120	K sounds resume
Pulse	80	

Calibration

Calibration may be required. In the event the Instructor notes that the recorded pressure varies significantly from the pressure on the sphygmomanometer, you may recalibrate as follows:

1. Press Calibrate, then Start, and the display will show “CAL 000”
2. Press Calibrate, then Start, again and the display will show “CAL 128” Inflate the cuff to read 128 on the dial of the sphygmomanometer.
3. Press Calibrate, then Start, again and the display will show “CAL 256” Inflate the cuff to read 256 on the dial of the sphygmomanomater.
4. Now inflate the blood pressure cuff to read 256 and press Calibrate Start again.
5. At this time, the BP Tutor will display the reading on the sphygmomanometer. Lower the cuff pressure to zero and watch the display track the sphygmomanometer.



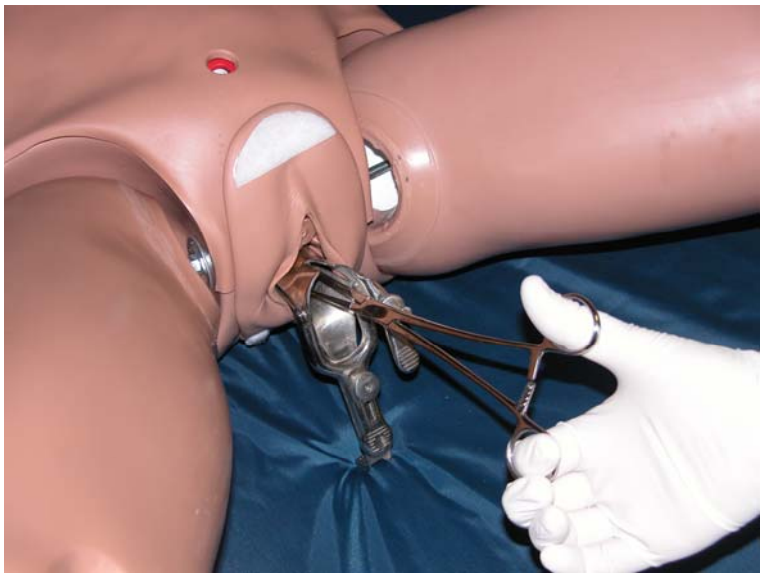
Blood Pressure Training

Turn the Tutor ON and observe the previously selected values:

1. Press Systolic and observe the value. If you agree, press Systolic again and that number is locked in. To increase or decrease the Systolic pressure, press the UP or DOWN red arrows. When the desired value is reached, press Systolic once more and the new value is locked in.
2. Proceed with Diastolic, Upper Auscultation Gap, Lower Auscultation Gap, and Heart Rate in the same manner. Once selected, each value will disappear so that the student cannot see them.
3. Instruct the student to take the blood pressure by attaching the BP cuff and placing the bell of a conventional stethoscope over the speaker concealed in the antecubital region of the arm near the elbow.
4. Instruct the student to pump up the cuff until the radial pulse is no longer felt. Now slowly release the cuff pressure until the first Korotkoff sound is heard indicating the Systolic pressure. Decrease cuff pressure further and hear K2, K3, K4. The K5 sound is silence. **If an auscultation gap was programmed, the student will not hear Korotkoff sounds between the upper and lower limits.**
5. Ask the student to record the observed systolic pressure, the diastolic pressure, the limits of auscultation gap (if any) as well as the pulse rate. Compare the values observed by the student with those originally selected in order to assess student competency.

SECTION 8 – GYNECOLOGIC EXAMINATION

The Susie Simon features a full-size adult female lower torso, consisting of the abdomen and pelvis suitable for practice in vaginal speculum examination and diaphragm sizing and fitting.



A tenaculum forceps can be used to grasp the cervix and pull it toward the student for examination.

SECTION 9 - GENERAL NOTES

1. Lubrication

ALWAYS USE A LUBRICANT WHEN INTRODUCING A CATHETER OR INVASIVE DEVICE

2. Catheters - Troubleshooting

There may not be an immediate outflow of water on introduction of the catheter into the bladder. Should blockage occur, use the blue squeeze bulb at the side of the lower torso to increase pressure in the bladder.

3. Emptying the Reservoir System

To remove the remaining fluid from the bladder reservoir after catheterization exercises are complete, lift the abdominal cover and remove the reservoir.

4. Filling of the Bladder

The bladder should be filled through the suprapubic opening. This may be done in one of two ways. Instillation of water (approximately 500 ml into the1800 ml tank) through introduction of an appropriate funnel at the suprapubic site; or, by using a catheter with a large syringe.

5. Cleaning

The manikin may be cleaned with a mild detergent, or with soap and water. Do not clean with harsh abrasives.

- Indelible marks made with ballpoint pens, ink, or markers will remain.
- Store the manikin in a cool area in the box provided. Do not stack heavy materials on top of the box
- Do not wrap the manikin product in newsprint.

6. Removal of Internal tanks (reservoirs)

The lower torso contains several reservoirs for patient care exercises. Each is connected using “click” connectors permitting that reservoir to be removed and cleaned or replaced as needed.

SHOULD YOU HAVE ANY QUESTIONS AFTER READING THIS INSTRUCTION MANUAL, PLEASE CONTACT OUR CUSTOMER SERVICE DEPARTMENT FOR FURTHER ASSISTANCE.