

Nasco
Life/form®



CENTRAL VENOUS CANNULATION SIMULATOR LF01087U INSTRUCTION MANUAL



WARNING: Product contains dry natural rubber.

Life/form® Products by Nasco

Project Consultant:

The design and assembly of this simulator would not have been possible without the cooperation and expertise furnished to us by:

Forrest M. Gridley, M.A., P.A.-C.
Division of Urology, Department
of Surgery
Physician Assistant Program
Emergency Medical Services
Program
University of Wisconsin-Madison

About the Simulator...

The *Life/form*® Central Venous Cannulation Simulator is anatomically and functionally correct; it is designed to instruct medical personnel in the practice of central venous cannulation. The simulator incorporates superficial anatomical detail and functional accuracy to simulate the clinical experience.

The composition of this simulator approximates the human body in density and feel as closely as is possible. The soft plastic we use in our *Life/form*® training simulators sets us apart from others who use a harder material.

In addition to being very lifelike, this simulator is very easy to maintain. The construction is as simple as possible and allows for ease of maintenance and fast replacement of parts. All features incorporated into this simulator have been carefully checked to be certain this training aid is the ultimate available anywhere.

List of Components

Main Torso
Muscle Bone Assembly
Skin
2 Enema Bags
22 gauge Needle
Baby Powder
1 qt. *Life/form*® Venous Blood
6 Subclavian Tubes (20")
6 Internal Jugular Veins (20")
6 External Jugular Veins (34")
1 Carotid Artery Tube
1 "Y" Connector
1 Straight Connector
12 Strapping Ties
Instruction Manual
Carrying/Storage Case

General Information about the Simulator

Procedures which may be performed:

- A. Subclavian Vein Approaches
 1. Infraclavicular
 2. Supraclavicular
- B. Internal Jugular Vein Approaches
 1. Anterior
 2. Central
 3. Posterior
- C. External Jugular Approach
The external jugular vein portion of the simulator can be set up alone in the simulator or in conjunction with the other vein systems if desired.

In addition, the Central Venous Cannulation Simulator offers other features which extend the application of this instructional aid to include demonstration of anatomical landmarks for:

1. Pericardiocentesis
2. Thoracentesis

Preparing the Simulator for Use



1. Inspect the contents to be certain all necessary components are included (see List of Components).



2. Using the baby powder, generously powder the "torso" portion of the simulator. Following this, powder the muscle and bone insert.



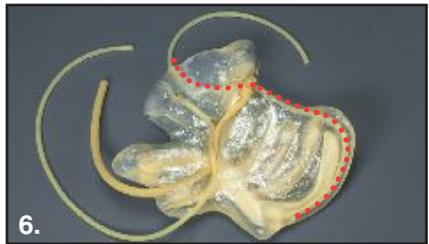
3. Now, with the muscle and bone insert lying upside down (sternum touching table), locate the subclavian vein tubing.



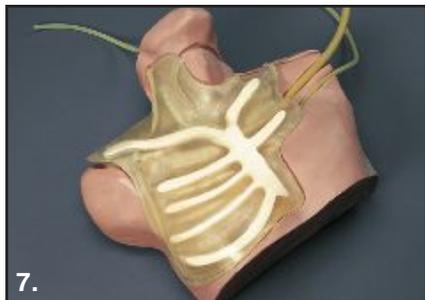
4. This tubing is the largest diameter tube supplied. Note that the end of this tube is knotted. This tube is placed into the simulator with the knotted end inside the muscle and bone insert and is the first tube positioned.



5. Next, position the internal jugular vein tubing (this tube is short and small in diameter) over the top of the subclavian vein tubing, keeping the knot inside the muscle and bone insert. Both the subclavian and internal jugular fit into "grooves" or "channels."

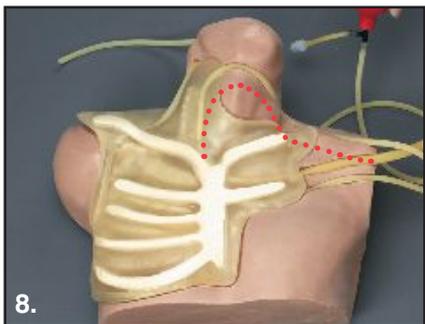


6. Finally, position the external jugular vein in its appropriate channel starting with the knotted end at the lower edge. Run the vein along the outside edge and through the hole to the front side of the insert. Continue following the vein channel on the front side.



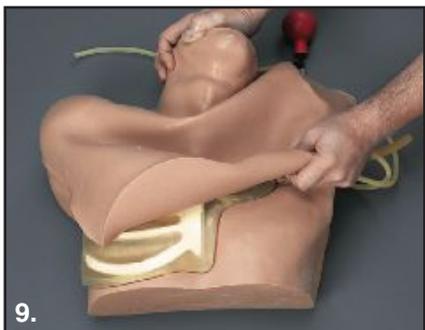
7.

7. Making sure all tubes are properly positioned and held in place, “invert” the muscle and bone section and position this in the torso. Place the open end of the external jugular vein through the hole in the jaw of the torso piece.



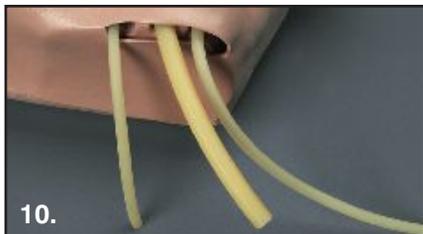
8.

8. Position the carotid pulse tubing into the external “groove” of the muscle-bone section.



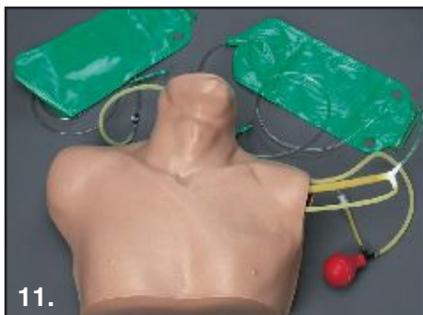
9.

9. Apply the skin to the torso, beginning at the neck. At this point, feed the external jugular vein through the hole in the skin piece.



10.

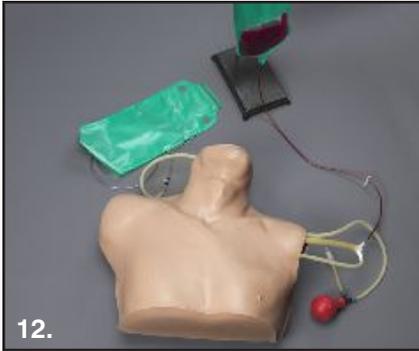
10. Pull the ends of all three tubes through the “slit” in the skin. This is located on the simulator’s left shoulder. Be sure all tubing is still in the channels.



11.

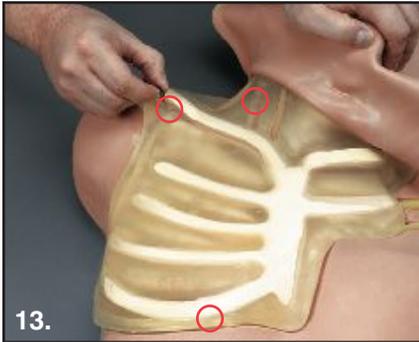
11. Now attach the two short pieces of tubing to the top of the “Y” connector. Attach the larger of the two tubes to the “Y” end with the latex band and the smaller tube to the other end. After attaching the subclavian and the internal jugular to the “Y” connector, apply the strapping ties (provided) to insure a tight seal of the tubing to the connector. These ties will remain in position until the tubing is changed. To remove them, simply cut them off. Attach the enema bag to the bottom of the “Y.”

The external jugular vein is set up with its own enema bag. Connect the bag to the vein by using the straight connector. Do not permanently attach the vein to the connector, as it will be disconnected after each use for easier installation later. Upon removal, bring the vein out through the top of the simulator.



12.

- Mix the blood solution according to the instructions on the bottle. Once mixed, pour contents into the enema bag, seal the top of the bag, and hang on an IV stand (not provided). The bottom of the enema bag should not be more than 12" to 14" above the simulator.



13.

- The simulator is almost ready to use. All that remains is the "bleeding of the lines." To do this, remove the skin from the right shoulder areas — enough to reveal the "knotted ends" of the subclavian and internal jugular. Insert the 22 gauge needle into the tubing of the subclavian very close to the knot. When the air is released completely, simulated blood will flow from the top of the needle. Remove the needle at this point and repeat the procedure at the knotted end of the internal jugular. Replace the skin.

Use of the Simulator

This booklet does not propose to outline a particular procedure to be followed. Rather, it is recommended that a procedural manual and the instructor's directions be followed. This will eliminate confusion and best serve the individual instructor and curriculum.

Care of Simulator

- Cleaning is recommended after each use. The torso and muscle-bone section may be washed in lukewarm water and mild soap. Use REN Cleaner (W09919U) to remove stubborn stains from the simulator. Simply spray soiled area and wipe clean with a soft cloth or paper towel.
- Repowder simulator before each use.

Cautions

- DO NOT leave the tubes in the simulator for storage purposes. Keep tubing away from the simulator torso, skin, and muscle-bone insert. Failure to comply with this warning will result in damage which we cannot cover under warranty.
- DO NOT mark on the simulator in any way.
- DO NOT allow any newsprint or plastic to come into contact with the simulator. Ink, of any type, will cause indelible stains.
- Solvents or corrosive materials will damage the simulator.

Supplies/Replacement Parts for the *Life/form*® Central Venous Cannulation Simulator

- LF01078U** Replacement Kit (includes skin and veins)
- LF00845U** Quart of *Life/form*® Venous Blood
- LF00846U** Gallon of *Life/form*® Venous Blood
- LF09919U** REN Cleaner

Other Available *Life/form*® Simulators

- LF00698U** Adult Injectable Arm (White)
LF00855U Male Catheterization
LF00856U Female Catheterization
LF00901U Prostate Examination
LF00906U Ostomy Care
LF00929U Surgical Bandaging
LF00957U Enema Administration
LF00958U Pediatric Injectable Arm
LF00961U Intramuscular Injection
LF00984U Breast Examination
LF00995U Arterial Puncture Arm
LF00999U Pediatric Injectable Head
LF01005U First Aid Arm
LF01008U Intradermal Injection Arm
LF01012U Heart Catheterization (TPN)
LF01019U Ear Examination
LF01027U Peritoneal Dialysis
LF01028U Suture Practice Arm
LF01034U Suture Practice Leg
LF01036U Spinal Injection
LF01037U Hemodialysis Practice Arm
LF01038U Episiotomy Suturing Set
LF01042U Suture Kit
LF01062U Pelvic, Normal & Abnormal
LF01063U Stump Bandaging, Upper
LF01064U Stump Bandaging, Lower
LF01069U Cervical Effacement
LF01070U Birthing Station
LF01082U Cricothyrotomy
LF01083U Tracheostomy Care
LF01084U Sigmoidoscopic Examination

LF01087U Central Venous Cannulation
LF01095U Blood Pressure Arm
LF01108U Infant Intraosseous Infusion
LF01121U Advanced IV Arm
LF01131U Venipuncture and Injection Arm
LF01139U Advanced IV Hand
LF01142U Auscultation Trainer
LF01143U Testicular Exam
LF01152U Male & Female Catheter
LF01155U Advanced CPR Dog
LF01162U Venatech IV Trainer
LF01174U NG Tube & Trach Skills

LF01184U Venatech IM & Sub Q
LF01193U Special Needs Baby
LF03000U **CPARLENE**® Series
LF03601U Adult Airway Management Trainer with Stand
LF03602U Adult Airway Management Manikin
LF03609U Child Airway Management Trainer with Stand
LF03616U Child **CRiSis**™ Manikin
LF03617U Deluxe Child **CRiSis**™ Manikin with Arrhythmia Tutor
LF03620U PALS Update Kit
LF03623U Infant Airway Management Trainer with stand
LF03632U Child Intraosseous Infusion/ Femoral Access Leg on a Stand
LF03633U Child Airway Management Trainer Torso
LF03693U **Basic Buddy** CPR Manikin
LF03699U "Airway Larry" Airway Management Trainer
LF03709U Infant **CRiSis**™ Manikin
LF03720U **Baby Buddy** Infant CPR Manikin
LF03750U Fat Old Fred
LF03760U Airway Management/Cricoid Pressure Trainer

LF03770U Chest Tube
LF03953U **CRiSis**™ Manikin, complete
LF03955U Deluxe **CRiSis**™ Manikin
LF03956U Deluxe "Plus" **CRiSis**™ Manikin
LF03965U Adult **CRiSis**™ Auscultation Manikin
LF03966U Adult **CRiSis**™ Auscultation Manikin with ECG Simulator
LF04000U **GERI**™/**KERI**™ Manikin Series
LF04200U Adult Sternal Intraosseous Infusion
LF06001U **CPR Prompt**™ Adult/Child Manikin
LF06012U **CPR Prompt**™ Infant Manikin
LF06200U **CPR Prompt**™ Keychain Rescue Aid
LF06204U **CPR Prompt**™ Rescue and Practice Aid

Nasco Fort Atkinson

901 Janesville Avenue, P.O. Box 901
Fort Atkinson, Wisconsin 53538-0901

1-800-558-9595

www.eNasco.com • E-mail: lifeform@eNasco.com