

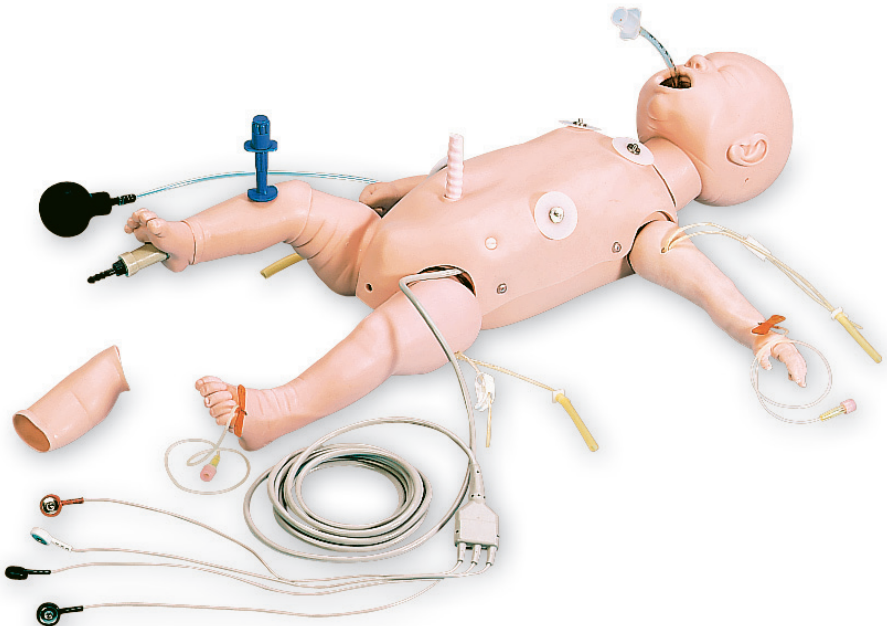
Dedicated to Delivery  
*Nasco*  
**Life/form**®



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# Infant **CRiSis**™ Manikin LF03709U Instruction Manual

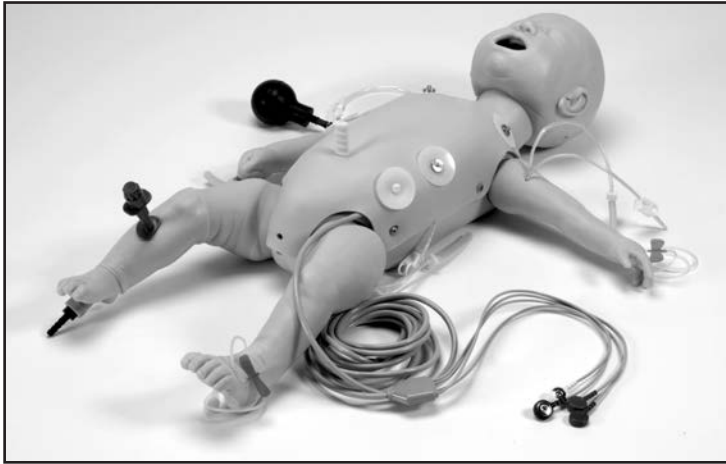
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CAUTION: PRODUCT CONTAINS DRY NATURAL RUBBER!

**Life/form**® Products by Nasco

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The **Life/form**® Infant **CRiSis**™ Manikin allows you to create a training simulator to suit your needs. The manikin features an Airway Management Head, IV Arm, Brachial Pulse Arm, IV Leg, Intraosseous Infusion Leg, and the Infant Chest Skin with Umbilicus and Four-Lead ECG Monitoring Capabilities. This instruction book has been divided into six sections. Each section covers a different component of the Infant **CRiSis**™ Manikin.

The Infant **CRiSis**™ Manikin allows you to simulate resuscitation and ECG monitoring, along with the ability to start IVs, check for a pulse, and practice airway management skills including intubation and suctioning. You can also perform intraosseous infusion and practice umbilical clamping, cutting, and cannulation.

### **Cleaning the Simulator**

Normal soil can be removed with mild soapy water. Nasco Cleaner (LF09919U) will remove stubborn stains. Simply apply Nasco Cleaner to the soiled area and wipe clean with a soft cloth or paper towel.

**Note:** Avoid using cleaner around the mouth and nose area if students will be applying direct mouth-to-mouth resuscitation techniques, as the cleaner may be toxic if ingested. NEVER place the trainer on any kind of printed paper or plastic. These materials, as well as ball-point pens, will transfer indelible stains. Do not use any cosmetics.

### **List of Components**

- Infant **CRiSis**™ Manikin
- 5 IV Bags w/clamps
- **Life/form**® Blood — 4 Pints
- Winged Infusion Sets (2 each)
- 3 cc Syringe (3 each)
- 22-Gauge Needle (2 each)
- 2 Mini Clamps
- 1 Ramp Clamp
- 6 Disposable Umbilical Cord Clamps
- 1 Bottle of Pump Spray Lubricant
- 1 60 cc Syringe Set
- 1 Tube K-Y Jelly
- 1 Complete Intraosseous Bone Kit
- 8 Towels



**Figure 1**

## **The Infant Airway Management Trainer Head (See figure 1.)**

### **About the Simulator**

The **Life/form**® Infant Airway Management Trainer is the most realistic simulator available for the training of intubation skills. Nasco has taken great care to create an airway management trainer that is anatomically correct in respect to both size and detail.

Landmarks include gum line, tongue, oral and nasal pharynx, larynx, epiglottis, arytenoids, false and true vocal cords, cricoid ring, tracheal rings, trachea, and esophagus. Nasco's Infant Airway Management Trainer allows you to practice oral intubation. Suction techniques can also be performed and evaluated. The simulator was designed to use an uncuffed endotracheal tube measuring up to 4.0 mm I.D.



**Figure 2**

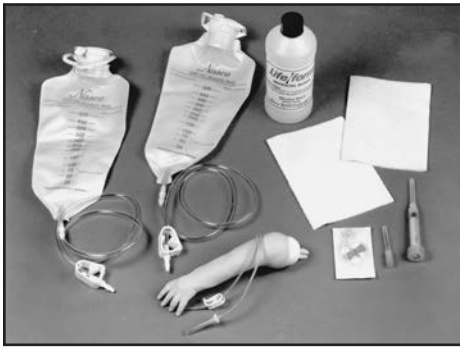
### **Lubrication**

Before using the Infant Airway Management Trainer, lubricate both the oral cavity and the endotracheal tube you plan to use with the pump spray lubricant provided. (**See figure 2.**)

**Note:** Nasco recommends the use of the provided lubricant or a similar vegetable-based lubricant for the Infant Airway Management Trainer. The use of a silicone-based or similar lubricant may cause damage to the simulator, thus voiding Nasco's warranty on the trainer.

### **Supplies/Replacement Parts for the Infant Airway Management Trainer**

**LF03644U** Pump Spray Lubricant  
**LF09919U** Nasco Cleaner



**Figure 1**

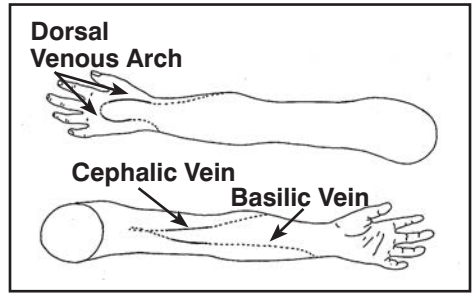
## The Infant Injectable Training Arm

### About the Simulator

The **Life/form**® Infant Injectable Training Arm Simulator is a dramatic and exciting training aid for practicing and demonstrating intravenous therapy of an infant. (See **figure 1.**) Visual and tactile realism are combined in this simulator to provide students with the most realistic training possible for infant venipuncture. A special, extremely thin synthetic skin, and rubber tubing with appropriately small lumen and thin walls, make the use of the **Life/form**® Infant Injectable Training Arm Simulator a realistic training exercise.

### Internal Structure

The following diagram shows the position of tubing embedded within the arm to simulate veins. (See **figure 2.**) The tubing is not accessible for its full length, offering only four injection sites. Careful palpation will allow the student to locate the veins.



**Figure 2**

### General Instructions for Use

#### A. Preparing the Synthetic Blood

Concentrated blood colorant is provided. Fill the 16-oz. container with tap water for the proper dilution. (See **figure 3.**)

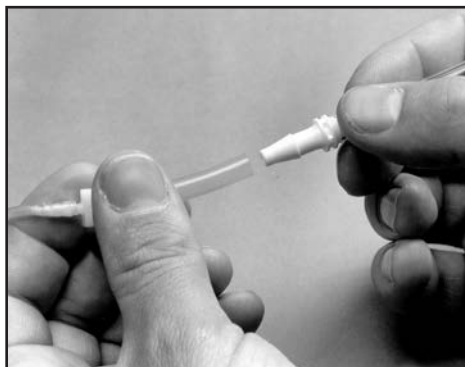
#### B. Filling the IV Supply Bag

Pour diluted **Life/form**® Blood into the IV bag. (See **figure 4.**) Hang the bag at an 18" height. Be certain the clamp on the IV tubing is closed.



**Figure 3**

**Figure 4**



**Figure 5**

### C. Connecting to the Arm

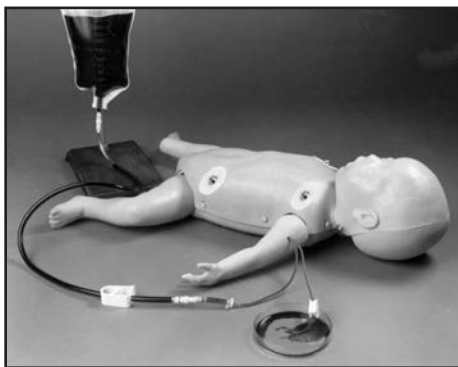
Insert the connector from the IV tubing into one line of the tubing coming from the arm. Connect as shown. **(See figure 5.)**



**Figure 6**

### D. Filling the Venous System

1. Slide the pinch clamp over the free tubing end and place the tubing end over an empty container.
2. Open the IV bag clamp and allow the **Life/form**® Blood to flow through the system until a steady stream exits through the open tubing end. **(See figure 6.)**
3. Close the pinch clamp on the open tubing end.



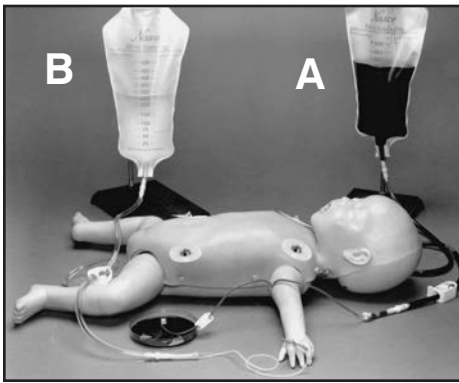
**Figure 7**



**Figure 8**

### E. Ready for Use

The **Life/form**® Infant Injectable Training Arm is now ready for use. **(See figure 7.)** The pinch clamp on the IV bag should be left open during use. Venous pressure is altered by varying the height of the IV bag. A height of 18" is a good starting point. Excessive height may cause leakage through previous puncture sites. Needle size should be kept as small as possible to minimize damage to the skin and tubing. Refer to page 4 for identification of the vein sites. The **Life/form**® Infant Injectable Training Arm is now pressurized and ready for venipuncture practice. **(See figure 8.)**

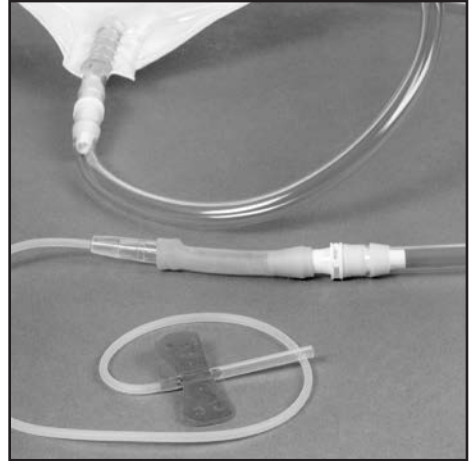


**Figure 9**

## F. Preparing the Arm for Intravenous Infusions

1. Hang both IV bags and close the clamps at the end of both IV bags. Fill bag A with synthetic blood and bag B with distilled water (infusion). (**See figure 9.**)
2. Appropriate intravenous infusion needles (or butterflies) should be used.
3. The self-sealing simulated veins lend themselves very well to the practice of starting IV infusions, and IVs can be started where indicated. (**See figure 2.**) Cleanse the sites with distilled water only.
4. Attach the adapter end of the IV bag A tubing into the shoulder tubing connector.
5. Place the other shoulder tubing end in an empty basin or jar, and “flush” the vascular system by opening the clamp. Allow the “blood” to pass through the system until the air bubbles are eliminated. Shut off the flow at the shoulder tubing with a pinch clamp. The venous system is now full and pressurized.

6. Insert an IV needle (or butterfly) into the vein. “Flashback” will indicate a proper insertion.
7. Close the clamp on IV bag A and open the pinch clamp on the shoulder tubing at the basin.



**Figure 10**

8. Attach the latex needle adapter to the IV needle (or butterfly) and IV bag B. Open the clamp on IV bag B. (**Figure 10** shows only the correct attachment of the latex needle adapter. During the actual procedure, the butterfly needle would have already been inserted into the vein at this point.)

Proof of proper procedure will be evidenced by the flow of fluid from IV bag B. Control the flow rate with the clamp on IV bag B. This fluid can be reused.

## G. Recommended Procedures for Simultaneous Blood Drawing and IV Infusions

Use two IV bags. Hook up and install IV bag A. (See figure 11.)

1. Blood Drawing — Begin with synthetic blood (or distilled water) in IV bag A. Do not hang IV bag A more than 18" higher than the simulator. "Flush" the system by allowing the fluid to flow into a collection dish until all the bubbles in the tubing are gone. Close the mini clamp on the tubing running to the dish. The system is now full of "blood" and pressurized. "Blood" can now be drawn anywhere along the pathway of the vein.
2. Intravenous Infusion — Insert the butterfly needle into the lumen of the vein. Proof of a correct insertion is evidenced by a flashback of "blood." Now close the clamp on IV bag A, remove it, and reattach it to the butterfly using the 2" latex adapter. Take IV bag B (empty), attach it to where IV bag A had been connected, and lay it by the simulator. At this point, make sure the mini clamp is closed and both IV bag clamps are

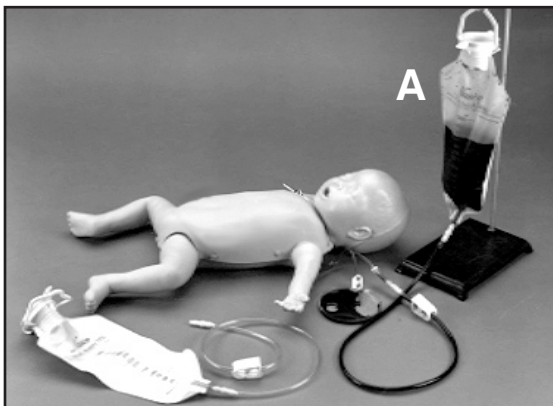


Figure 11

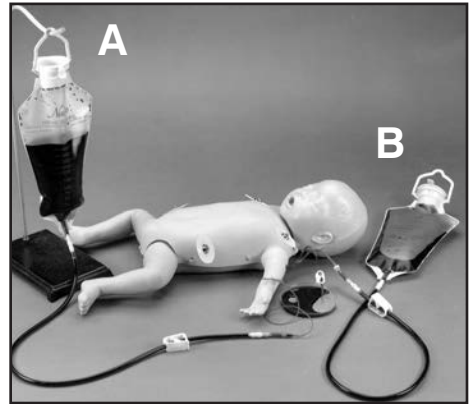


Figure 12

open. Adjust the infusion rate with the clamp on IV bag A. Should IV bag B fill, simply close the clamps on both IV bags, unhook them (be alert for some leakage) and switch each to the other's position. (See figure 12.) Hook them up and open both clamps. IV bag B is now the supply bag. This switch can be done as often as desired.

**Note:** Always regulate the flow of "blood" from the IV bag on the stand, and open the other IV bag clamp. To draw "blood" again, simply close the clamp on the IV bag that is lying down.



## Causes for Failure in Function

If “blood” cannot be aspirated during the blood drawing procedure:

- A. The clamp on the IV tubing of the infusion bag may not be opened.
- B. Air could be trapped in the venous system. Simply flush the system slowly, draining some “blood” or distilled water, whichever you are using, until all air bubbles are eliminated.
- C. If these measures do not unclog the venous system, try using a large (50 cc) syringe to force fluid through the tubing.
- D. If none of these measures work, peel off the skin to the knuckles. **DO NOT REMOVE THE SKIN FROM THE FINGERS.** Examine all the tubing for possible kinks. After checking the tubing, return the skin to its normal position by covering the inside of the arm generously with baby powder and pulling the skin back up over the arm.

## Care of the Simulator

This training simulator has been designed to provide the greatest possible durability and lowest maintenance without compromising the realism of use. The following are some suggestions for helping you yield the maximum life from this unique simulator.

### A. Before Storing the Arm

1. Disconnect the IV bag and pour the fluid back into the container.
2. Rinse the IV bag.
3. Drain the arm. Open the pinch clamp and tip the hand up until the fluid has drained. Flush the arm with water. Rinse off the exterior of the arm and dry.

## B. Needles

Puncturing the skin and vein with needles results in small cuts or slits that will eventually lead to deterioration. The larger the needles, the larger the cuts made in the skin, and the shorter the life of the simulator. It is recommended that 22-gauge or smaller needles be used. Always use sharp needles. Dull or bent needles cause excessive tearing.

## C. Tubing Sealant

A Vein Tubing Sealant Kit (LF01099U) has been developed for use with **Life/form®** Injectable Simulators. It will effectively seal punctures in the tubing.

## D. Skin and Vein Replacement

After prolonged use, the skin and veins on your training arm will wear out and need replacing with the Infant IV Arm Replacement Skin/ Veins (LF03641U).

## Supplies/Replacement Parts for the Infant Injectable Training Arm

**LF00845U** **Life/form®** Venous Blood, 1 quart

**LF00846U** **Life/form®** Venous Blood, 1 gallon

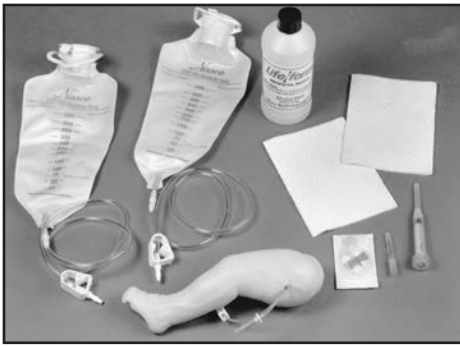
**LF01022U** Fluid Supply Stand

**LF01099U** Vein Tubing Sealant Kit

**LF01130U** Fluid Supply Bag

**LF03641U** Infant IV Arm Replacement Skin/Veins

**LF09919U** Nasco Cleaner



## The Infant Injectable Training Leg

### About the Simulator

The **Life/form**® Infant Injectable Training Leg is an exciting training aid for practicing and demonstrating intravenous puncture of the newborn. Visual, as well as tactile, realism has been designed into this training aid to provide students with the most realistic training possible in developing skills for infant venipuncture. A special, extremely thin synthetic skin is paired with rubber tubing with a small lumen and thin walls to make the **Life/form**® Infant Injectable Training Leg the most realistic means of training medical personnel available.

With proper care, this simulator will provide years of reliable service. Please read the instructions carefully.

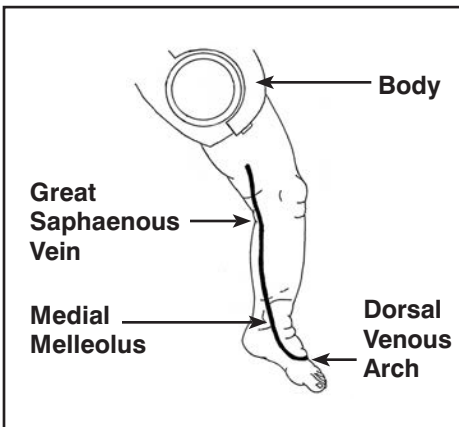


Figure 1

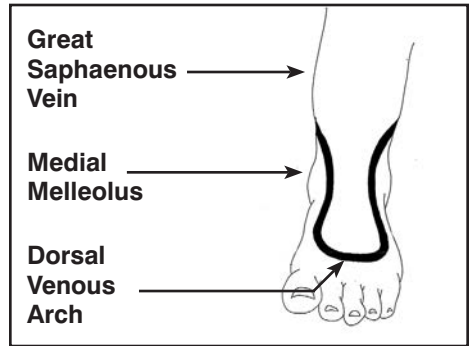


Figure 2

### Internal Structure

**Figures 1 & 2** on this page show the position of the tubing embedded within the leg to simulate veins. The tubing is superficial in its full length, offering a selection of injection sites. Careful palpation will allow the student to locate the veins.



Figure 3

### General Instructions for Use

#### A. Preparing the Synthetic Blood

Concentrated blood colorant is provided. Fill the 16-oz. container with tap water for the proper dilution. (**See figure 3.**)



Figure 4

### B. Filling the IV Supply Bag

Pour the diluted **Life/form**® Blood into the IV bag. (See figure 4.) Hang the bag at an 18" height. Be certain the clamp on the IV bag is closed before filling.

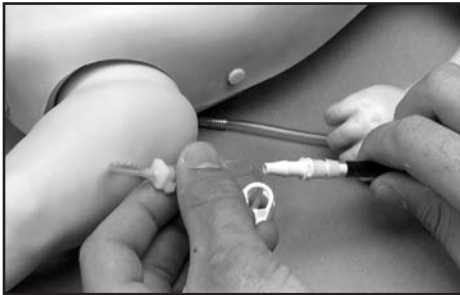


Figure 5

### C. Connecting the Leg to the Supply Bag

The IV leg is supplied with a special connector that fits the leg tubing and IV tubing. Insert the IV tubing into the tubing coming from the leg as shown. (See figure 5.)

### D. Filling the Venous System

1. Slide the pinch clamp over the free tubing end and place the tubing end over a container.

2. Open the IV bag clamp and allow **Life/form**® Blood to flow through the system until a steady stream exits without bubbles through the open tubing end. (See figure 6.)

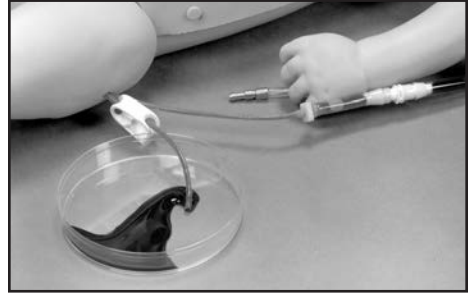


Figure 6

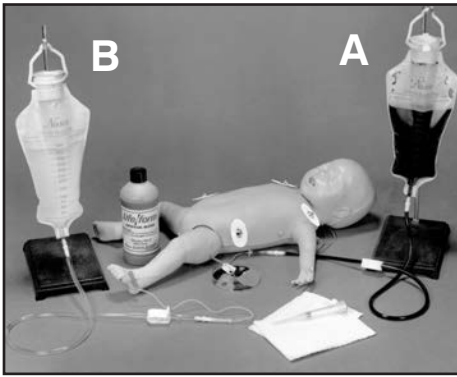
3. Close the pinch clamp on the open tubing end.



Figure 7

### E. Performing Venipuncture

The **Life/form**® Infant Injectable Training Leg is now pressurized and ready for venipuncture practice. (See figure 7.) Venous pressure is altered by varying the height of the IV bag. A height of 18" is a good starting point. Excessive height may cause leakage through previous puncture sites. Needle sizes should be kept as small as possible to minimize damage to the leg skin and tubing. Refer to page 9 for identification of vein sites.

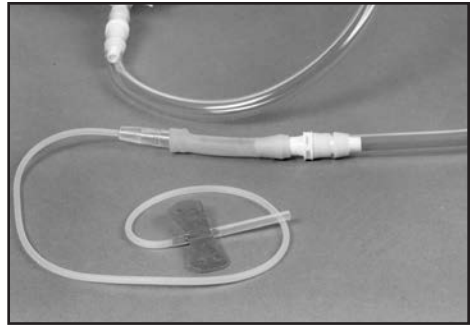


**Figure 8**

### G. Preparing the Leg for Intravenous Infusions

1. Hang both IV bags and close the clamps at the ends of both IV bags. Fill IV bag A with synthetic blood and IV bag B with distilled water (infusion). (*See figure 8.*)
2. Appropriate intravenous infusion needles (or butterfly) should be used, and distilled water is recommended as an infusion.
3. The self-sealing simulated veins lend themselves very well to the practice of starting IV infusions, and IVs can be started where indicated. (*See figures 1 & 2.*) Cleanse the sites with distilled water only.
4. Attach the adapter end of IV bag A into the leg tubing connector.
5. Place the other leg tubing end in a basin or jar, and “flush” the vascular system by opening the clamp. Allow the infusion to pass through the system until air bubbles are eliminated. Shut off the flow at the leg tubing with a pinch clamp.
6. Insert an IV needle (or butterfly) into the vein. “Flashback” will indicate a proper insertion.

7. Close the clamp on IV bag A and open the pinch clamp on the leg tubing at the basin.



**Figure 9**

8. Attach the latex needle adapter to the IV needle (or butterfly) and IV bag B. (*Figure 9* shows the correct attachment of the latex needle adapter. During the actual procedure, the butterfly needle would have already been inserted into the vein at this point.) Proof of proper procedure will then be evidenced by the flow of fluid from IV bag B. Control the flow rate with the clamp on IV bag B. This fluid can be reused.

### H. Recommended Procedures for Simultaneous Blood Drawing and IV Infusions

Use two IV bags. Hook up and install IV bag A. (*See figure 10.*)

1. Blood Drawing — Begin with synthetic blood (or distilled water) in IV bag A. “Flush” the system by allowing the fluid to flow into a collection dish until all the bubbles in the tubing are gone. Close the mini clamp on the tubing running to the dish. The system is now full of fluid and pressurized. “Blood” can now be drawn anywhere along the pathway of the vein.

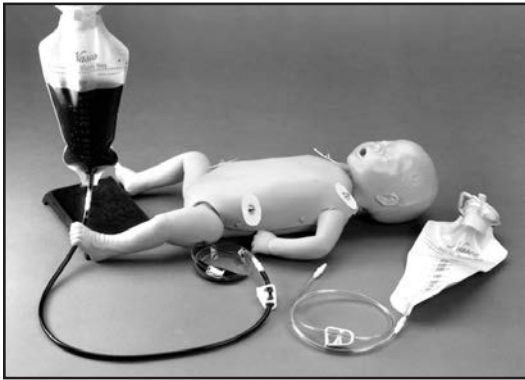


Figure 10

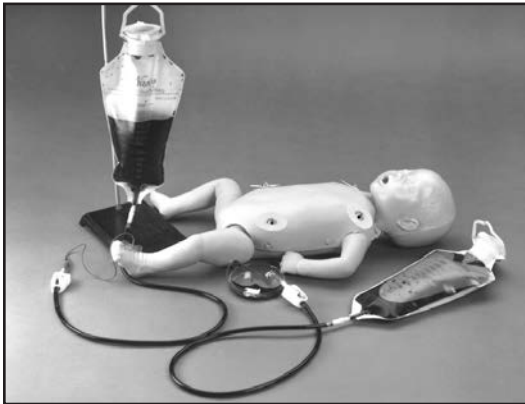


Figure 11

2. Intravenous Infusion — Insert the butterfly needle into the lumen of the vein. Proof of a correct insertion is evidenced by a flashback of “blood.” Now close the clamp on IV bag A, remove it, and reattach it to the butterfly using the 2" latex adapter. Take IV bag B (empty), attach it where IV bag A had been connected, and lay it by the simulator. At this point, make sure the mini clamp is closed and both IV bag clamps are open. Adjust the infusion rate with the clamp on IV bag A. Should IV bag B fill, simply close the clamps on both bags, unhook them (be alert for some leakage) and switch each to the other's position. Hook them up and open both clamps. IV bag B is now the

supply bag. (**See figure 11.**) This switch can be done as often as desired.

**Note:** Always regulate the flow of “blood” from the IV bag on the stand, and open the other IV bag clamp. To draw “blood” again, simply close the clamp on the IV bag that is lying down.

### Causes for Failure in Function

If “blood” cannot be aspirated during the blood drawing procedure:

- A. The clamp on the IV tubing of the infusion bag may not be opened.
- B. Air could be trapped in the venous system. Simply flush the system slowly, draining some “blood” or distilled water, whichever you are using, until all air bubbles are eliminated.
- C. If these measures do not unclog the venous system, try using a large (50 cc) syringe to force fluid through the tubing.
- D. If none of these measures work, peel off the skin to the ankle. **DO NOT REMOVE IT FROM THE TOES.** Examine all the tubing for possible kinks. Generously cover the inside of the leg with baby powder and pull the skin powder over the leg core.

## Care of the Simulator

This training simulator has been designed to provide the greatest possible durability and lowest maintenance without compromising the realism of use. The following are some suggestions for helping you yield the maximum life from this unique simulator.

### A. Before Storing the Leg

1. Disconnect the IV bag and pour the fluid back into the container.
2. Rinse the IV bag.
3. Drain the leg. Open the pinch clamp and tip the leg up until the fluid is removed. Flush the leg with water. Rinse off the exterior of the leg and dry.

### B. Needles

Puncturing the skin and vein with needles results in small cuts or slits that will eventually lead to deterioration. The larger the needles, the larger the cuts made in the skin, and the shorter the life of the simulator. It is recommended that 22-gauge or smaller needles be used. Always use sharp needles. Dull or bent needles cause excessive tearing.

### C. Distribution of Punctures

The vein is in contact with the skin from the point it enters the leg to the point of exit. If the injections are distributed along the length of the vein, without deviation from acceptable practice, the product will last longer.

### D. Tubing Sealant

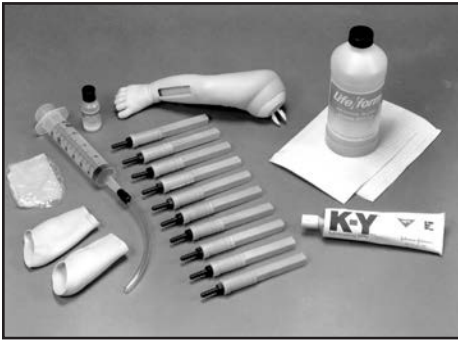
A Vein Tubing Sealant Kit (LF01099U) has been developed for use with *Life/form*® Injectable Simulators. It will effectively seal punctures in the tubing.

### E. Skin and Vein Replacement

After prolonged use, the skin and veins on your IV training leg will wear out and need replacing with the Infant IV Leg Replacement Skin/Veins (LF03639U).

### Supplies/Replacement Parts for the Infant Injectable Training Leg

- LF00845U** *Life/form*® Venous Blood, 1 quart
- LF00846U** *Life/form*® Venous Blood, 1 gallon
- LF01022U** Fluid Supply Stand
- LF01099U** Vein Tubing Sealant Kit
- LF01130U** Fluid Supply Bag
- LF03639U** Infant IV Leg Replacement Skin/Veins
- LF03640U** Infant IV Leg Replacement Veins
- LF09919U** Nasco Cleaner



## The Intraosseous Infusion Leg About the Simulator

The **Life/form**® Intraosseous Infusion Leg is a dramatic and exciting training aid designed to demonstrate and simulate the intraosseous infusion procedure. The Intraosseous Infusion Leg enables students to learn and practice, with incredible accuracy and realism, a procedure that has been very difficult to simulate in the past. The specially designed simulator allows the student to practice the procedure several times without replacing the bone structure. This special structure, combined with traditional **Life/form**® realism, makes for a very accurate simulation of the procedure. The simulator is a right leg.



**Figure 1**

1. Combine the red coloring, 1 full tube of K-Y Jelly, and 1<sup>1</sup>/<sub>4</sub> cups of tap water in the pint bottle provided. **(See figure 1.)** Shake it vigorously for 30 seconds until the contents are mixed completely.

The syringe is provided with the tubing already attached. Fill the syringe by placing the tubing end into the blood mixture and drawing back on the plunger until the syringe is full.



**Figure 2**



**Figure 3**

2. Slightly lubricate the inside of the leg skin with liquid lubricant and slide the leg skin over the foot into position. **(See figures 2 & 3.)**
3. Connect the end of the tubing on the syringe to the bone piece. Apply liquid lubricant to the entire bone, including the two locking grooves, and slide it into position in the leg. **(See figure 4.)** Lay towels under the leg to absorb any overflow of "blood."



Figure 4

**\* IMPORTANT \***

4. Make your first needle insertion and remove the needle stylus. Proper insertion and pressure applied to the syringe will allow “blood” to flow through the tubing and fill the bone. When you observe “blood” flowing up through the needle, the bone is completely charged. **Each new bone will need to be charged in this same manner.** Correct subsequent insertions will produce an immediate flow of fluid through the needle. To reduce the pressure being placed on the bone, pull the plunger on the syringe back once for verification of placement. This will decrease the amount of “blood” that may leak from the bone.

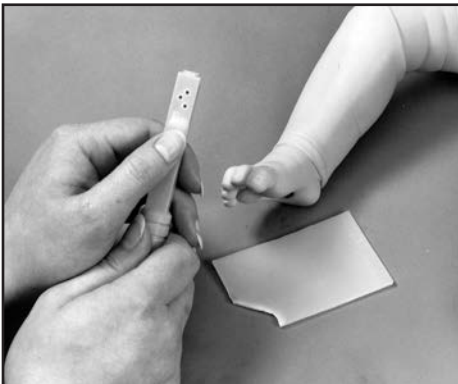


Figure 5

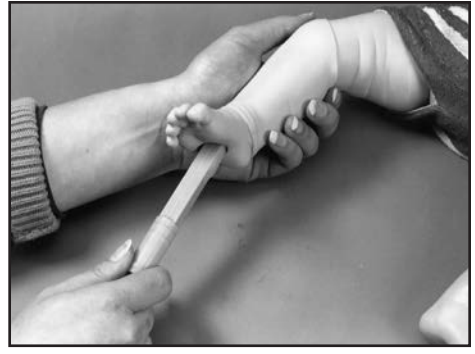


Figure 6

5. The bones have been designed so all four sides can be punctured. Carefully remove the bone from the leg and wipe it clean. Remove a small piece of the wax provided and work it with your fingers until soft. Rub the wax piece back and forth across the bone holes until they are sealed. **(See figure 5.)** A thin layer of wax left on the bone surface over the holes will help in sealing. Finish by applying a thin film of Nasco Lubricant over the entire bone. Turn the bone 90° and reinsert into the leg. **(See figure 6.)** Do this until all four sides of the bone structure have been punctured, at which time the bone can be discarded.

**Note:** The Intraosseous Infusion Leg duplicates a procedure that requires a great deal of pressure to be placed on both the simulator and the needle being used. Extreme caution should be taken to avoid pushing the needle completely through the simulator, injuring the person performing the procedure. Nasco cannot be responsible for injuries resulting from improper use of the simulator.



## Cleanup Procedures

1. Remove and discard any bones that have been charged with the blood mixture.
2. Remove the leg skin. Use paper towels to completely wipe the simulator and remove any “blood” or lubricating agent.
3. Drain the syringe and discard any of the unused blood mixture.
4. Use clean tap water to flush and clean the syringe and tubing. Allow it to dry.
5. The leg can be left on the body or removed and stored with the other items in the shipping box.

## Supplies/Replacement Parts for the Intraosseous Infusion Leg

- LF01109U** Intraosseous Infusion Bone Replacement Kit
- LF01111U** Intraosseous Infusion Simulated Blood Mixture
- LF03624U** Leg Skin Replacement Kit (4 ea.)
- LF03625U** Intraosseous Leg Replacement Skin and Bones



**Figure 1**

## Infant Chest Skin with Umbilicus and ECG Monitoring Sites (See figure 1.)

### About the Simulator

The **Life/form**® Infant Chest Skin with Injectable Umbilicus is an exciting training aid for practicing and demonstrating umbilical clamping, cutting, and cannulation of the newborn. Visual and tactile realism are combined in this simulator to provide students with the most realistic training possible. The umbilicus allows students to practice clamping, cutting, and aspirating “blood,” making the use of the **Life/form**® Infant Chest Skin with Umbilicus Simulator a realistic training exercise.

The four-lead ECG Monitoring System allows rhythms to be detected with the addition of the handheld Interactive ECG Simulator.



**Figure 2**

## General Instructions for Use

### A. Preparing the Synthetic Blood

Concentrated blood colorant is provided. Fill the 16-oz. container with tap water for the proper dilution. (See figure 2.)

### B. Hanging the IV Bag

Hang the bag no higher than 18".



**Figure 3**

### C. Filling the IV Supply Bag

Pour the diluted **Life/form**® Blood into the IV bag. (See figure 3.) Distilled water can be used in place of synthetic blood. Be certain the clamp on the tubing is closed before filling.

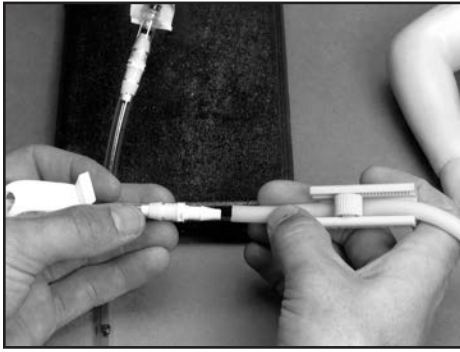


Figure 4

#### D. Connecting the IV Bag to the Umbilicus

The umbilicus is supplied with a special connector that fits the umbilicus tubing and the IV bag. (See figure 4.) Insert the connector from the IV bag into the tubing coming from the umbilicus as shown.



Figure 5

#### E. Filling the Umbilicus System

1. Hold a towel or container near the open end of the umbilicus.
2. Carefully open the clamp and allow the liquid to slowly flow through the system until a steady stream exits all three holes at the umbilicus end.

**Note:** Careful adjustment of the ramp clamp is needed to supply a steady stream of “blood” during the aspiration procedures. (See figure 5.)

## Procedures That Can Be Performed on This Simulator

### A. “Blood” Aspiration

The **Life/form**® Infant Chest Skin with Umbilicus is now ready for aspiration practice. The “blood” flow is controlled by careful adjustment of the ramp clamp.

### B. Cutting and Clamping the Umbilicus

The **Life/form**® Infant Chest Skin with Umbilicus Simulator allows the student to practice clamping and cutting the umbilicus. The umbilicus may be drawn out of the body to the desired length for trimming and is perfect for practicing umbilicus clamping and clamp removal.

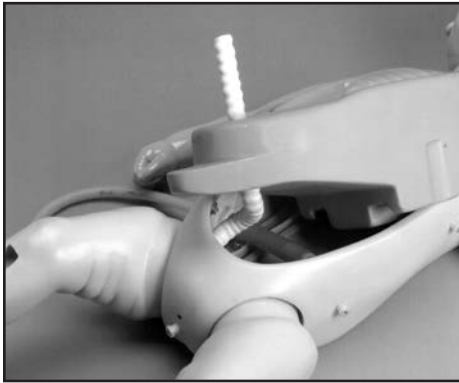
**Note:** When the umbilici are used up, order the Umbilical Cannulation Replacement Cords (LF03642U) on page 20.

### Causes for Failure in Function

IV infusion may not flow if the IV bag isn’t high enough, if the clamp isn’t open, or if the latex tubing is kinked or pinched.

#### A. If “Blood” Cannot be Aspirated During the Blood Drawing Procedure:

1. The clamp on the IV bag may not be open.
2. Air could be trapped in the umbilicus system. Simply flush the system slowly, draining some “blood” or distilled water, whichever you are using, until all the air bubbles are eliminated.
3. Check for possible kinks in the system.



**Figure 6**

### **Installing a New Umbilicus**

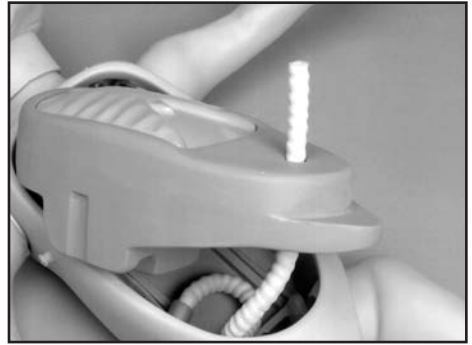
The simulator comes with an umbilicus installed. When necessary, replace it using the following instructions.

Remove the chest skin by unhooking it at the buttons. Lift out the lung plate and chest foam assembly.

Once the lung plate and chest foam assembly have been removed, take out the old umbilicus and discard it. Thread the new umbilicus up through the chest foam assembly so only 2" are protruding. **(See figure 6.)**

Next, connect the umbilicus to the latex adapter and coil the extra umbilicus under the chest foam assembly.

Now install the lung plate and chest plate assembly back into the body. **(See figure 7.)**



**Figure 7**

Finally, reattach the chest skin onto the manikin using the top four buttons on the torso, thread the umbilicus through the hole in the chest skin, and finish attaching the skin. **(See figure 8.)** Push the umbilicus down so only about 1" is protruding.



**Figure 8**

## Care of the Simulator

This training simulator has been designed to provide the greatest possible durability and lowest maintenance without compromising the realism of use. Following are some suggestions for helping you yield the maximum life from this unique simulator.

### A. Before Storing the ECG Chest Skin with Umbilicus

1. Drain the umbilicus by raising the body over the height of the IV bag and then opening the ramp clamp. Allow the “blood” to flow back past the bag clamp, then close the clamp.
2. Disconnect the IV bag and pour the fluid back into the container.
3. If synthetic blood was used, flush out both the bag and umbilicus with clean water and allow them to dry.

## The ECG Chest Skin

### Connecting Your Patient Simulator

Nasco has designed the **CRiSis™** System to be compatible with a variety of patient simulators. This is possible via the standard four-lead snap cable. If your patient simulator has only two output posts, the red and black leads must be connected to the patient simulator.

Once your manikin is connected to your patient simulator, you will be able to pick up the ECG waves through the monitor hook-ups on the skin.

## Troubleshooting

**Problem** ECG wave is not being picked up from the manikin.

### Solution

1. Check your connections on the patient simulator; one or more may be disconnected.
2. Check to make sure your patient simulator is plugged in and working properly.

**Problem** ECG wave is inverted.

### Solution

Recheck the position of the red and black lead snaps on the patient simulator.

### Supplies/Replacement Parts for the Infant Chest Skin with Umbilicus and ECG Monitoring

**LF00845U** **Life/form®** Venous Blood, 1 quart

**LF00846U** **Life/form®** Venous Blood, 1 gallon

**LF01022U** Fluid Supply Stand

**LF01130U** Fluid Supply Bag

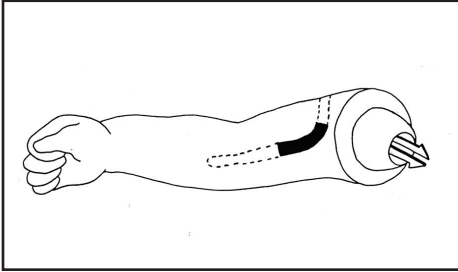
**LF03642U** Umbilical Cannulation Replacement Cords (10 pk.)

**LF03710U** ECG/Umbilical Cannulation Skin

**LF09919U** Nasco Cleaner

## The Infant Brachial Pulse Arm

The **Life/form**® Infant Brachial Pulse Arm is an exciting training aid for taking newborn pulses. A series of contractions on the squeeze bulb will create a pulse in the antecubital region. With practice, a very realistic pulse can be created.



**Figure 1**

**Note:** This arm is not designed for injections and should not be penetrated by a needle. The above diagram shows the position of the tubing embedded in the arm to simulate an artery. (**See figure 1.**)

## 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

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