Nasco Dedicated to Delivery Life/form®

Infant IV Arm
LF03637U
Instruction Manual

WARNING: Product contains dry natural rubber.

ISO 9001 and ISO 13485
Nasco Plastics
ISO 9001 and ISO 13485
Products are manufactured using a quality management system certified as being in conformity with ISO 9001 and ISO 13485.

Life/form® 5 Year Warranty

Life/form® Products by Nasco

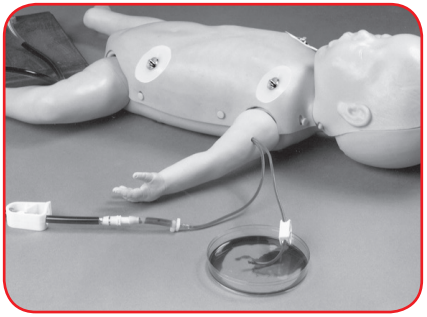

Figure 1

The Infant IV Arm

About the Simulator

Visual and tactile realism are combined in this simulator to provide students with realistic training for infant venipuncture. Use as a stand alone trainer or connect to any ***Life/form***® Infant ***CRiSis***™ Manikin. ***(See figure 1.)*** A special, extremely thin, synthetic skin and rubber tubing with appropriately small lumen and thin walls, make the use of the ***Life/form***® Infant IV Arm simulator a realistic training exercise.

List of Components

- 3 cc Syringe with Needle
- 22-ga. Needle
- 2 Small Towels
- Latex Connector
- Butterfly Needle
- 2 IV Bags
- 1-pint Bottle w/Blood Powder

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.

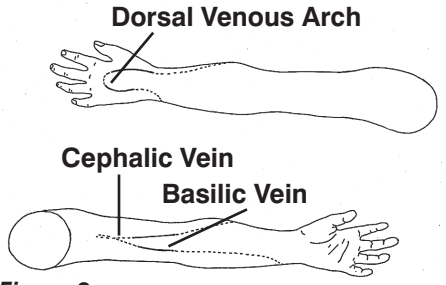

Figure 2

General Instructions for Use

Figure 3

A. Preparing the Synthetic Blood
Concentrated blood colorant is provided. Fill the 16-oz. container with distilled water for the proper dilution. ***(See figure 3.)***

Figure 4

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 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.)***

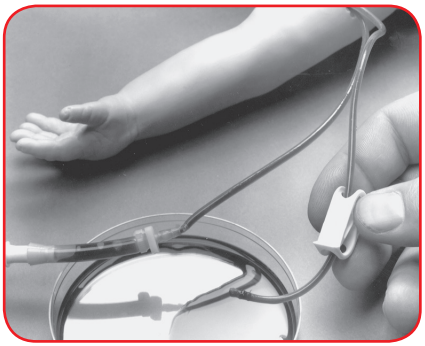

Figure 6

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.

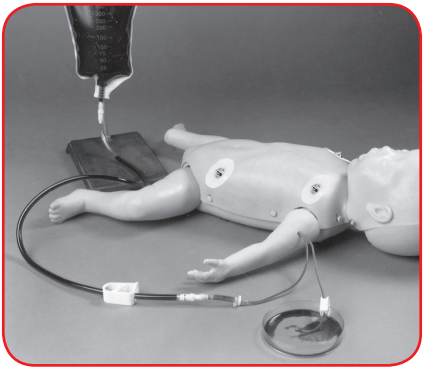

Figure 7

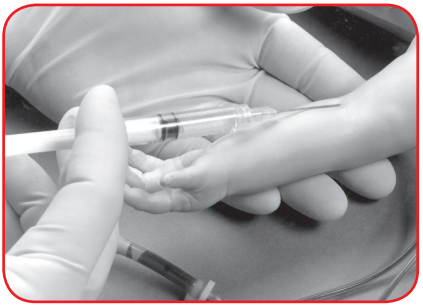

Figure 8

E. Ready for Use

The ***Life/form***® Infant IV 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 1 for identification of vein sites. The ***Life/form***® Infant IV Arm is now pressurized and ready for venipuncture practice. ***(See figure 8.)***

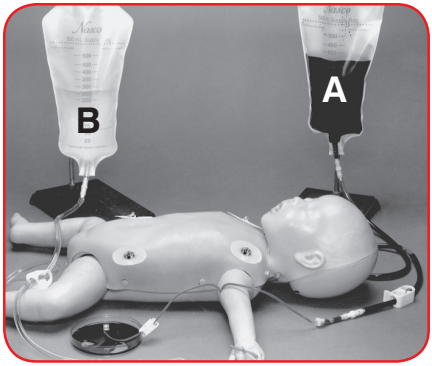

Figure 9

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.

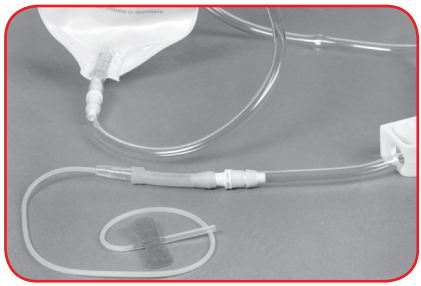

Figure 10

8. Attach the latex needle adapter to the IV needle (or butterfly) and IV bag B. Open the clamp on IV bag B. ***(See figure 10.)*** This figure 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 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.

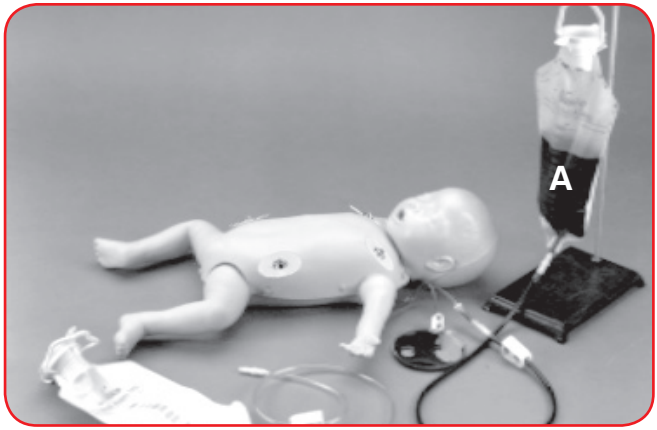

Figure 11

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

Use two IV bags. Hook up and install IV bag A as shown. ***(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 open.

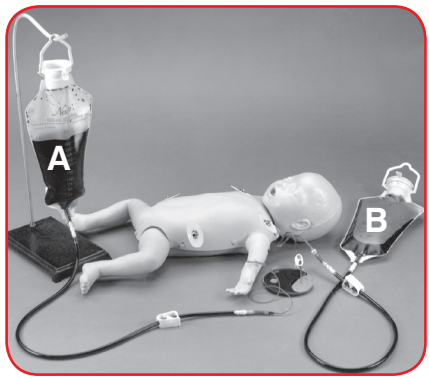

Figure 12

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 aware of 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. Raise the supply bag 1"-2".

D. If these measures do not unclog the venous system, try using a large (50 cc) syringe to force fluid through the tubing.

E. 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 while not 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
LF01130U	Fluid Supply Bag
LF01099U	Vein Tubing Sealant Kit
LF03641U	Replacement Skin/Veins
LF09919U	Nasco Cleaner

Other Available Life/form® Simulators

LF00698U Adult Injectable Arm (Light)
LF00958U Pediatric Injectable Arm
LF00995U Arterial Puncture Arm
LF00999U Pediatric Injectable Head
LF01008U Intradermal Injection Arm
LF01037U Hemodialysis Practice Arm
LF01108U Infant Intraosseous Infusion
LF01121U Advanced IV Arm
LF01131U Venipuncture and Injection Arm
LF01139U Advanced IV Hand
LF01162U Venatech IV Trainer
LF01184U Venatech IM & Sub Q
LF03616U Child *CRiSis*™ Manikin
LF03617U Deluxe Child *CRiSis*™ Manikin with Arrhythmia Tutor
LF03709U Infant *CRiSis*™ Manikin
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
LF06001U CPR Prompt® Adult/Child Manikin
LF06012U CPR Prompt® Infant Manikin

LF00698U

LF00999U

LF00958U

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