Nasco
Life/form®

INFANT INJECTABLE TRAINING ARM LF03637U INSTRUCTION MANUAL

Life/form® Products by NASCO

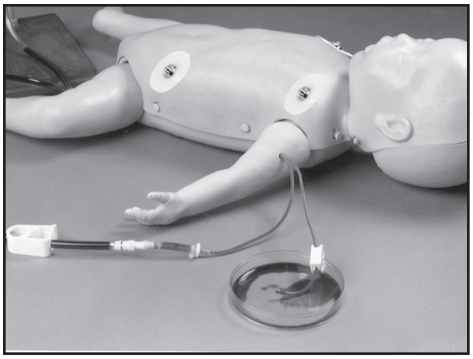

Figure 1

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 (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 (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.

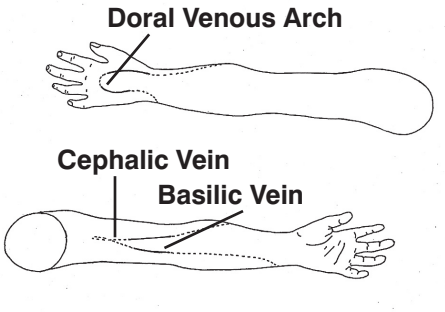

Figure 2

Set Up:

The ***Life/form***® Infant Injectable Training Arm has been designed to replace the standard arm on the Resusci® Baby* brand CPR Manikins.

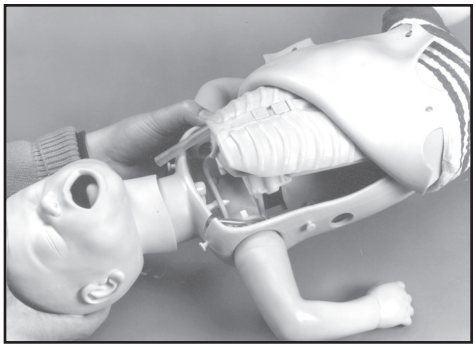

Figure 3

General Instructions for Use

A. Preparing the Resusci® Baby*:

Place the baby on a flat surface such as a tabletop. Remove the baby's clothing and unhook the body skin at the four points along the upper chest. Roll the skin back over the torso (Figure 3). Now lift up on the inner cover just enough to get in and snap out the standard left arm. When this is done, simply snap the IV arm into place. Lower the inner cover and replace the skin and clothing.

Figure 4

B. Preparing the Synthetic Blood:

Concentrated blood colorant is provided. Fill the 16 oz. container with tap water for the proper dilution (Figure 4).

Figure 5

C. Filling the IV Supply Bag:

Pour diluted ***Life/form***® Blood into the IV bag (Figure 5). Hang the bag at 18" height. Be certain the clamp on the IV tubing is closed.

Figure 6

D. Connecting to the Arm:

Insert the connector from the IV tubing into one line of the tubing coming from the arm. Connect as shown (Figure 6).

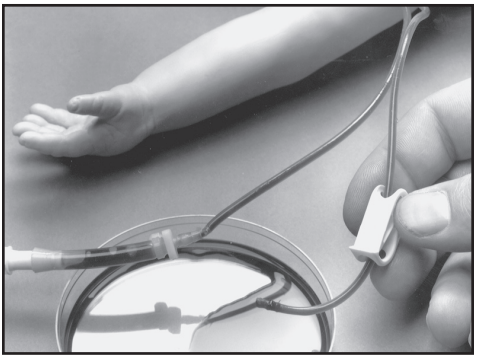

Figure 7

E. 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 (Figure 7).
3. Close the pinch clamp on the open tubing end.

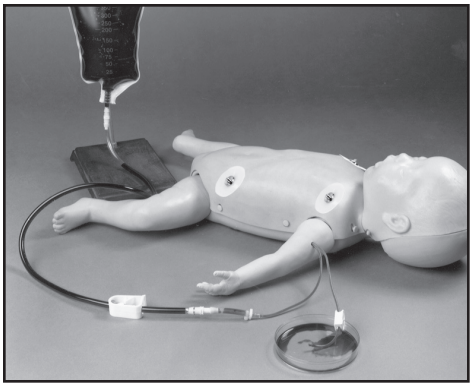

Figure 8

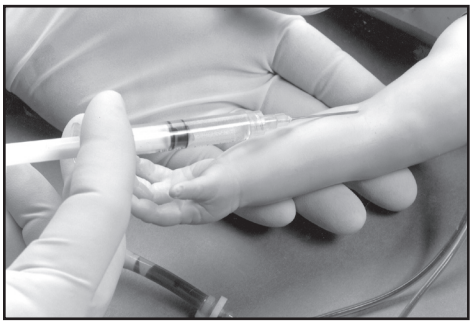

Figure 9

F. Ready for Use:

The ***Life/form***® Infant Injectable Training Arm is now ready for use (Figure 8). 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 5 for identification of vein sites. The ***Life/form***® Infant Injectable Training Arm is now pressurized and ready for venipuncture practice (Figure 9).

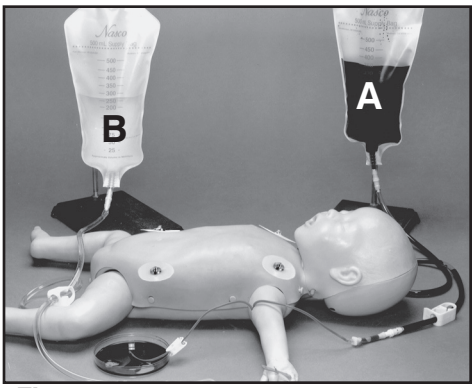

Figure 10

G. 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) (Figure 10).
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 in 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.

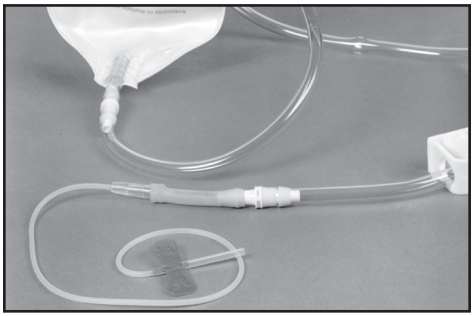

Figure 11

8. Attach the latex needle adapter to the IV needle (or butterfly) and IV bag B. Open the clamp on IV bag B. (Figure 11 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.

H. Recommended Procedures for Simultaneous Blood Drawing and IV infusions:

Use two IV bags:

Hook up and install IV bag A as shown in Figure 12.

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) and 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

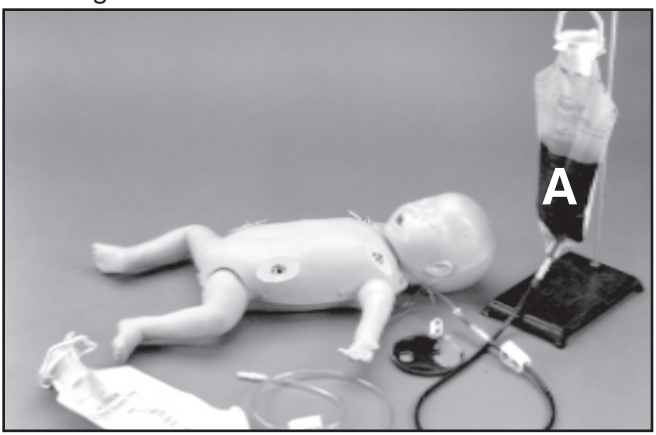

Figure 12

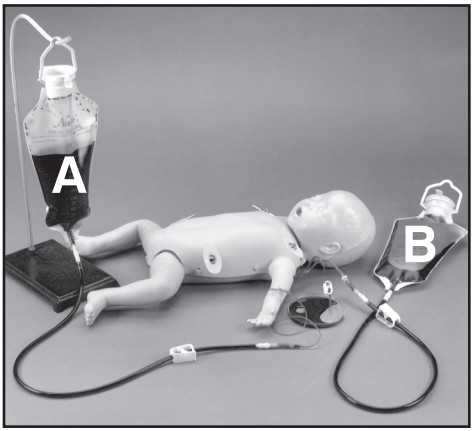

Figure 13

bag clamps are open. Adjust the infusion rate with the clamp on IV bag A. Should IV bag B fill (Figure 13), simply close the clamps on both IV bags, unhook them (be aware of some leakage) and switch each to the others position. 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 which 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 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 which 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 Arm Skin and Vein Replacement Kit (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 Intravenous Fluid Bag

LF01099U Vein Tubing Sealant Kit

LF03641U Skin and Vein Replacement Kit

W09919U REN Cleaner

Other Available *Life/form*® Simulators

LF00698U Adult Injectable Arm (White)
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
LF00997U Adult Injectable Arm (Black)
LF00999U Pediatric Injectable Head
LF01008U Intradermal Injection Arm
LF01012U Heart Catheterization (TPN)
LF01019U Ear Examination
LF01020U Supplementary Ear Set
LF01025U Male Cath-Ed I
LF01026U Female Cath-Ed II
LF01027U Peritoneal Dialysis
LF01028U Suture Practice Arm
LF01036U Spinal Injection
LF01037U Hemodialysis Arm
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 Intraosseous Infusion Simulator
LF01121U Advanced IV Arm
LF01139U Advanced IV Hand
LF01142U Auscultation Trainer
LF01162U Venatech IV Trainer
LF03000U **CPARLENE®** Series
LF03601U Adult Airway Management Trainer
LF03602U Adult Airway Management on Manikin
LF03603U Adult Airway Management Head Only
LF03609U Child Airway Management Trainer
LF03610U Child Airway Management Trainer Head Only
LF03611U Child Defibrillation Chest Skin
LF03612U Child IV Arm
LF03613U Child Blood Pressure Arm
LF03614U Child Intraosseous Infusion/ Femoral Access Leg Only
LF03615U Complete Child ***CRiSis™*** Update Kit
LF03616U Child ***CRiSis™*** Manikin
LF03617U Deluxe Child ***CRiSis™*** Manikin with Arrhythmia Tutor
LF03620U PALS Update Kit
LF03621U Infant Airway Management Trainer Head Only
LF03622U Intraosseous Infusion Right Leg
LF03623U Infant Airway Management Trainer
LF03626U Child Femoral Access Injection Pad Replacement
LF03632U Child Intraosseous Infusion/ Femoral Access Leg on a Stand
LF03633U Child Airway Management Trainer with Torso
LF03693U **Basic Buddy** CPR Manikin
LF03699U "Airway Larry" Airway Management Trainer
LF03720U **Baby Buddy** Infant CPR Manikin
LF03953U ***CRiSis™*** Manikin
LF03955U Deluxe ***CRiSis™*** Manikin
LF03965U Deluxe "Plus" ***CRiSis™*** Manikin
LF04001U ***GERi™*** Nursing Manikin
LF04020U ***KERi™*** Nursing Manikin
LF04021U ***KERi™*** Basic Manikin
LF04022U ***KERi™*** Advanced Manikin
LF04030U ***GERi™*** Advanced Manikin
LF04040U ***GERi™*** Basic Manikin
LF06001U **CPR Prompt™** Adult/Child Manikin
LF06012U **CPR Prompt™** Infant Manikin
LF06200U **CPR Prompt™** Keychain Rescue Aid
LF06200U **CPR Prompt™** Rescue and Practice Aid

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