

INSTRUCTION MANUAL

Pediatric Injection Training Arm Simulator

LF00958



DO NOT REMOVE FILM FROM TUBING!
THIS PRODUCT CONTAINS DRY NATURAL RUBBER!

Nasco
HEALTHCARE

About the Simulator

The Nasco Healthcare Pediatric Injectable Training Arm Simulator is a dramatic and exciting training aid for practicing and demonstrating intramuscular and intravenous puncture of young children.

Visual as well as tactile realism have been designed into this training aid to provide students with the most realistic training possible in developing skills for pediatric IM and venipuncture.

A special, extremely thin synthetic skin is paired with rubber tubing with small lumen and thin walls to make the Nasco Healthcare Pediatric Injectable Training Arm Simulator the most realistic means of training medical personnel available.

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

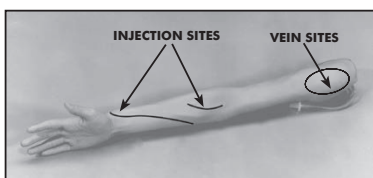
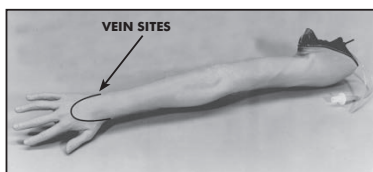
List of Components

- Arm with White Skin
- Blood Donor Set
- 3 cc Syringe
- Life/form® Venous Blood – 1 Pint
- IV Bag

Internal Structure

The photos on the lower left show the position of tubing embedded within the arm to simulate veins. The tubing is superficial in its full length, offering a wide selection of injection sites.

Careful palpation should allow the student to locate the veins.



General Instructions for Use

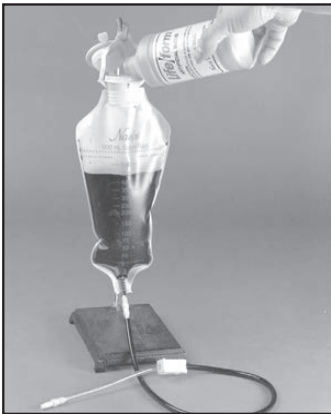
A. Prepare Synthetic Blood

Concentrated blood colorant is provided. Fill the 16-oz. container with water for proper dilution.



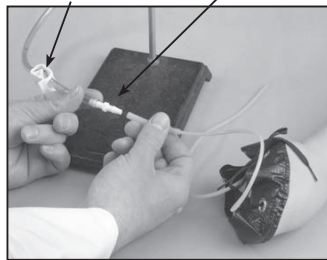
B. Fill and Prepare IV Supply Bag

Pour diluted blood into IV container



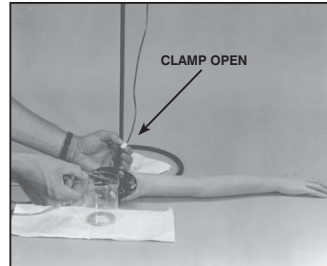
C. IV Bag

Hang bag at 18" height. Be certain clamp on administration set is closed before hanging.



D. Connect to Arm

The arm is supplied with a special connector that fits arm tubing and IV tubing. Insert connector from IV tubing into tubing coming from arm as shown.

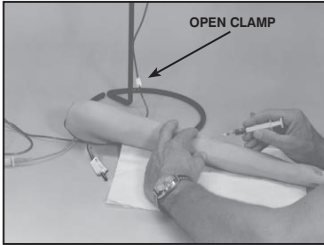


E. Fill Venous System

1. Hold open end of shoulder tubing over container.
2. Open clamp and allow Nasco Healthcare Blood to flow through system until steady stream exits through the open tubing end.
3. Place pinch clamp on open tubing end.

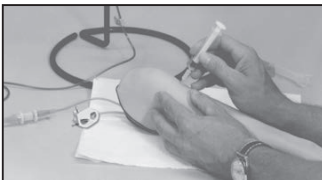
Set Up

Procedures That Can Be Performed on This Simulator



A. Venipuncture

The Nasco Healthcare Pediatric Injectable Training Arm Simulator is now pressurized and ready for venipuncture practice. 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 arm skin and tubing. Refer to pg. 1 for identification of vein sites.



B. Intramuscular Injections

The Nasco Healthcare Pediatric Injectable Training Arm Simulator has been designed to include a soft foam area in the shoulder to simulate the deltoid muscle and allow practice for intramuscular

injections. The injection area can be easily located by palpation. Although fluids may be used for IM injections in this arm, it is recommended that air be used when possible to prevent build-up of fluids in the arm. If fluid is to be used, distilled water is recommended, and the arm 2 should be allowed to drain before storing.

Causes for Failure in Function

- A. IV infusion may not flow if there is air in the venous system. Simply flush the system slowly with more synthetic blood or distilled water, whichever you are using. Be sure to check the IV bag clamp; it might have been overlooked and not opened.
- B. During procedure of drawing blood, if blood cannot be aspirated:
 1. The clamp on the IV tubing of the synthetic blood might not be opened.
 2. Air could be trapped in the venous system. Simply flush the system slowly, draining some blood or distilled water, whichever you are using, wait until all air bubbles are eliminated.
 3. If blood flow is weak, the pressure can be increased by raising the supply bag to a higher level. Only raise the bag enough to achieve desired flow.

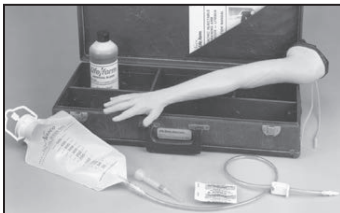
Set up

4. If these measures do not unclog the venous system, try using a large (50 cc) syringe to force fluid through the tubing.
5. If none of these measures work, peel off the skin to the knuckles.

DO NOT REMOVE FROM FINGERS. Examine all tubing for possible kinks that occasionally occur during assembly. Soap up outside of arm core generously with Ivory® liquid detergent and pull skin over arm core.

Care of Simulator

This training simulator has been designed to provide the greatest possible durability and lowest maintenance while not compromising the realism of use. Following are some suggestions for helping you yield the maximum life from this unique simulator.



A. Before Storing Arm

1. Disconnect IV bag and pour fluid back into container.
2. Rinse IV bag.
3. Drain arm. Open pinch clamp and tip hand up

until fluid is removed. Flush arm with water. Rinse off exterior of arm, dry, and return arm to storage bag.

4. Return all components to case.

B. Needles

Hypodermic needles are actually small cutting tools. 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 24-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 arm 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

Tubing Sealing (LF01099) has been developed for use with Nasco Healthcare Injectable Simulators. It will effectively seal punctures in tubing.

Set Up

E. Skin Replacement

After prolonged use for injections, the skin on your training arm will show track marks and need replacing with Replacement Skin and Vein Kit (LF00986).



1. Remove used skin from arm.
 - a. Untie lace at shoulder.
 - b. Lubricate exterior of skin with Ivory® liquid detergent.
 - c. Peel skin off by turning inside out.
 - d. Remove old tubing.



2. Install new tubing.

Place new section of tubing in channel of arm core. Be certain equal portions of tubing protrude at shoulder.



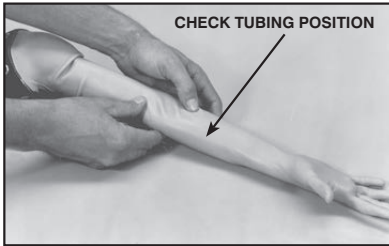
3. Lubricate skin.

Pour contents of the bottle of Nasco Healthcare Simulator Lubricant provided inside arm skin and swish around to coat all inside surfaces.



4. Install new skin.
 - a. Slide shoulder of skin over head of core. Be certain to align palm of core and skin.
 - b. Grasp the skin with both hands and slide over core until fingers of core approach finger holes of skin.

Set Up



CAUTION: The thin Nasco Healthcare Skin used to provide realism is tender and care must be taken not to stretch or tear the material when installing.

- c. Check tubing location.
If tubing has moved from channel, try to work into place by palpating through skin. If unsuccessful, peel skin back (invert) until tubing can be replaced properly, then roll skin over core.
- d. Work fingers into place.
- e. Draw skin snugly into place.



5. Install lace.
Thread lace through eyelets in alternating pattern, as illustrated, and tie snugly. Be certain tubing is protruding and not pinched by blowing

- through tubing.
6. Rinse. Wash excess lubricant from exterior of arm skin. The Nasco Healthcare Pediatric Injectable Training Arm Simulator is now fully reconditioned and ready to train hundreds of new medical personnel.

**Supplies/Replacement
Parts for Nasco Healthcare
Pediatric Injectable Training
Arm Simulator**

LF00986 Replacement Skin
and Vein Kit

LF01099 Tubing Sealant

LF00845 Venous Blood
– 1 Quart

LF00846 Venous Blood
– 1 Gallon

LF09919 Nasco Cleaner



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