

*Nasco* **Life/form**®

**Newborn Nursing Skills  
and ALS Simulator  
LF01400U  
Instruction Manual**



**Life/form**®  
**5**  
Year  
Warranty

**Life/form**® **Products by Nasco**

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.

## About the Simulator

Meeting your neonatal resuscitation program course curriculum, the **Life/form®** Newborn Nursing Skills and ALS Simulator replicates a full-term infant. This non-sexed simulator measures 19" from crown to heel and weighs approximately 7½ lbs. Practice all of the essentials of neonatal resuscitation utilizing the replaceable airway, bilateral or collapsed lung, patent umbilicus, and hand or foot IV sites. Add this simple simulator to any birthing scenario!

## Features

- Airway, Breathing, & Ventilation
  - Auscultation of lung sounds during ventilation
  - Bilateral lung expansion or collapsed lung
  - ET Tube Insertion, size 3.5 with a #1 Miller blade
  - Practice chest tube insertion and care of chest tube site
  - Sellick Maneuver
  - BVM
- Birth Anomalies
  - Neural tube defect
  - Omphalocele
- CPR
  - Anatomical landmarks
  - Realistic chest compressions
- Gastrointestinal (GI)
  - Accepts OG/NG tube, 8 FR
- Umbilicus
  - Patent umbilicus with arteries and vein sites for cannulation or infusion
  - Umbilical reservoir will hold 5 ml
- Venous Access
  - Access in the right hand and foot
  - Achieve realistic flashback with pressurized system



## List of Components

- A. Full Term Simulator
- B. Replaceable Airway (2)(one installed in image)
- C. Bilateral Lung
- D. Unilateral Lung
- E. Patent Umbilicus
- F. Omphalocele
- G. Myelomeningocele
- H. Hand Skins (2)
  - Vein System for Hand (installed in image)
- I. Foot Skins (2)
  - Vein System for Foot (installed in image)
- J. 500 ml Fluid Supply Bag (2)
- K. 3 cc Syringe with Needle
- L. 25 ga. Infusion Butterfly
- M. 25 ml Syringe
- N. Pint Bottle with Artificial Blood Powder
- O. ½ oz. Lubricant
- P. Baby Powder
- Q. Hard Carry Case



Figure 1



Figure 3



Figure 2



Figure 4



Figure 5

## Setup

### A. Installing the Airway

1. Remove the lung plate from the baby's chest. **(See figure 1.)**
2. Thoroughly lubricate all outside surfaces of the airway and around the baby's mouth. **(See figure 2.)**
3. Gently insert your lubricated finger into the airway, over the tongue and epiglottis.
4. Push the tube end of the airway into the baby's mouth. Slide the airway down into the head, making sure to free the baby's lips as it slides into place. **(See Figure 3.)**
5. Work your fingers around the inside of the mouth to be sure the airway is correctly seated.
6. Check that the tubing section of the airway is projecting into the chest cavity. **(See Figure 4.)**
7. Lubricate the tubing section of the airway and replace the lung plate, ensuring the tube from the airway inserts into the hole on the top. **(See Figure 5.)**

### B. Lungs

Two different lung plates have been provided: a normal plate simulating bilateral expansion of the lungs, and a second plate simulating a collapsed left lung. The two plates may be identified by the molded diagram on the back side.

1. To install either lung plate, first check that the airway is already in place (See "Installing the Airway" if simulator is without).
2. Apply a little lubricant to the short tube section of the airway that projects into the chest cavity.
3. Insert the tubing section of the airway into the hole at the top of the lung plate. **(See figure 5.)**
4. Work the lung plate into position in the chest cavity.



Figure 6



Figure 7

### C. IV Hand and Foot

Both the right hand and foot are equipped with functional IV access and infusion practice.

1. Dip the non-fitting end of the vein tubing in lubricant. **(See figure 6.)**
2. Feed the tubing through the lateral hole just above the hand.
3. Form a loop over the vein channel. The loop should be approximately in the middle of the vein tubing section.
4. From the medial side of the vein channel, feed the tubing through the remaining hole. **(See figure 7.)**
5. Adjust the tubing so that it lies securely in the vein channel.
6. Attach the Luer fitting to the open end. **(See figure 8.)**
7. Generously powder the inside of the hand skin. **(See figure 9.)**
8. Carefully pull the skin over the hand, taking care not to dislodge the vein tubing. **(See figure 10.)**
9. Follow the same procedure for the foot. **(See figure 11.)**



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12

10. Connect the hand tubing to the foot tubing as shown. (See figure 12.)
11. Connect the free ends of the hand and foot tubing to the fluid supply bags as shown. (See figure 13.)

#### D. Patent Umbilicus

The umbilical stump functions like a stopper, plugging into the small reservoir within the abdomen. The reservoir has a maximum capacity of 5 ml.

#### E. GI

The left nostril will accept an 8 FR NG tube that will pass into a small tube embedded in the chest cavity of the baby.

### General Instructions for Use

#### A. Performing IV Injection and Withdrawals

1. Make sure all clamps are closed.
2. Add 1 pint of distilled water to the pint bottle with blood powder; shake it to mix.
3. Hang one bag (A) and fill with 100-500 cc of prepared blood mixture. Hang no higher than 18" above the surface of the arm (fluid supply stand shown sold separately, LF01022U).
4. Close the cap tightly and lay the other bag (B) on the table.
5. Make sure all connections are secure. Open both clamps and let the blood run through until all the air has been displaced from the tubing. (See figure 14.)
6. For blood sampling, close the clamp on Bag B, leaving the Bag A clamp open. (See figure 15.)
7. For injections, close the Bag A clamp and open the Bag B clamp. (See figure 16.)



Figure 13



Figure 14

8. The position of the bags may be switched when Bag B is full.
9. Always drain the blood and run clear water through the system at the end of training. Allow to air dry.

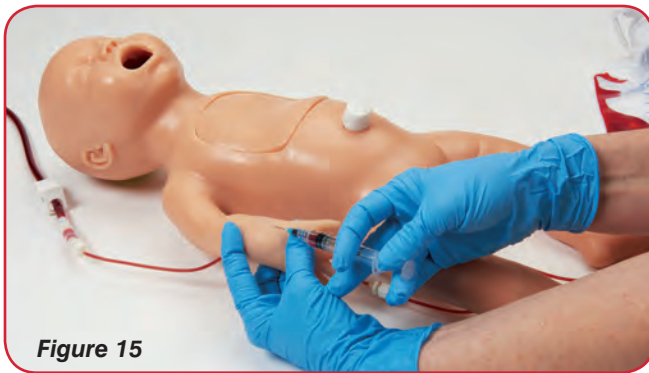


Figure 15



Figure 16

## B. Performing IV Infusions

1. Procure a 3<sup>rd</sup> IV bag (sold separately, LF01130U).
2. Begin with a fully pressurized system.
3. Insert the IV needle or butterfly into a vein. Flashback will indicate a proper insertion.
4. Attach the needle or butterfly to the tubing from the infusion solution or fluid supply bag C.
5. Open the clamp on fluid supply Bag B.
6. Open the clamp from the infusion solution. Proof of proper procedure will be evidenced by the flow of fluid from the infusion solution or fluid supply bag C.

**Note:** Simulate cleansing IV, injection, and withdrawal sites using distilled water. Multiple or prolonged exposure to harsh antiseptics such as alcohol or iodine could damage or stain the simulator. Performing infusions can dilute your simulated blood solution; ensure bag B is mostly empty before infusing.

## C. Intubation

1. Nasco recommends a standard 3.5 mm ET tube and a #1 Miller blade.
2. Always thoroughly lubricate all equipment before use with the supplied lubricant.



Figure 17



Figure 18

3. The airway may be removed for cleaning if necessary.
4. Adhesive tape will not adhere to the material of the face. Use an alternative method to secure the ET tube.
5. The baby may also be ventilated with a bag valve mask.

## D. Chest Tube

A chest tube may be inserted into the site in the left mid-axial line. This is a nonfunctioning site that may be used for practice in chest tube care.

## E. Umbilicus

The umbilicus may be catheterized through the vein or the two arteries.

1. To take blood samples, pull out the umbilicus, fill the reservoir with approximately 2-4 cc of blood mixture, and replace umbilicus. (**See figures 17 & 18.**)
2. To infuse fluids, leave the reservoir empty. Maximum capacity is approximately 5 cc.
3. When finished training, remove the umbilicus and empty the reservoir with the syringe. Wipe out remaining fluid with a paper towel. Leave open to air dry.



Figure 19

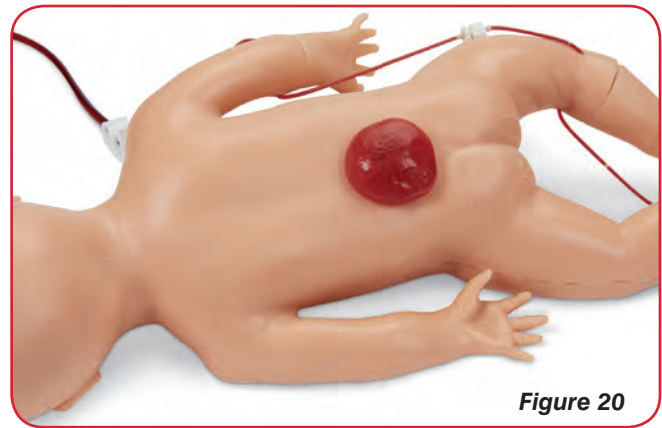


Figure 20

### F. NG Tube

1. The patent left nostril may be used for practice in NG tube insertion and care, including suction.
2. An embedded tube in the simulator simulates a small stomach reservoir. The reservoir can hold approximately 2-4 cc of fluid; administration of larger amounts of fluids is not recommended.
3. Any fluids added to the simulator will need to be suctioned out.
4. Following practice with fluids, remove the airway and dry any remaining fluid from the chest and head cavity. With paper toweling in the head cavity, tip the simulator up, raising the feet over the head to drain any remaining liquid left behind from suctioning.
5. Allow simulator and airway to air dry completely before storing.

### G. Omphalocele and Myelomeningocele

1. The omphalocele may be attached to the baby's abdomen by removing the umbilicus and inserting the peg into the hole. (See figure 19.)
2. The myelomeningocele may be attached to the baby's back by inserting the peg into the molded hole. (See figure 20.)

### Care and Maintenance

The newborn simulator and its components are completely washable and may be immersed in water.

1. Remove all components (hand and foot skins, umbilicus, birth defects, lung plate, and airway).
2. Wash the simulator and components gently in warm soapy water. Rinse and dry thoroughly.
3. Position the simulator so that any water that may have entered through the nose can drain out.

4. Allow all components to air dry fully before storage.
5. Store the simulator and the components in a clear plastic bag, when fully dry, to discourage dust or other materials from settling on the clean simulator.
6. Certain surfaces can become damaged from prolonged exposure to the simulator and its components.
7. Printed paper, plastic, ballpoint pen, and many other types of ink can cause an indelible stain to the simulator.
8. Stubborn dirt or grime may be removed by using Nasco cleaner (sold separately, LF09919U). Simply apply the Nasco Cleaner to the soiled surface and wipe clean with a cloth.
9. A dusting of baby powder will give a more life-like quality to the skin.
10. Actual product may vary slightly from photo. Nasco reserves the right to change product color, materials, supplies, or function as needed.

### Supplies/Replacement Parts

- LF01401U** Replacement Bilateral Chest Rise Plate
- LF01402U** Replacement Unilateral Chest Rise Plate
- LF01403U** Replacement Airway
- LF01404U** Replacement IV Hand Skin and Vein
- LF01405U** Replacement IV Foot Skin and Vein
- LF01406U** Replacement Umbilicus
- LF01407U** Birth Defects, set of 2
- LF01130U** Fluid Supply Bag
- LF00845U** Blood, Quart
- LF00846U** Blood, Gallon
- LF01022U** Fluid Supply Stand
- LF00985U** Lubricant, six 2-oz. bottles
- LF09919U** Nasco Cleaner

## Other Available *Life/form*® Simulators

- LF01280U** Micro-Premie, Light
- LF01281U** Micro-Premie, Dark
- LF00714U** Clots and Hemorrhages Set
- LF00860U** Inverted Nipple Replica
- LF00861U** Mastitis Breast Replica
- LF00862U** Flat Nipple Replica
- LF00863U** Lactating Breast Simulator
- LF00864U** Common Breast Conditions Set



**LF01280U**



**LF00864U**



**LF00714U**

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