

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

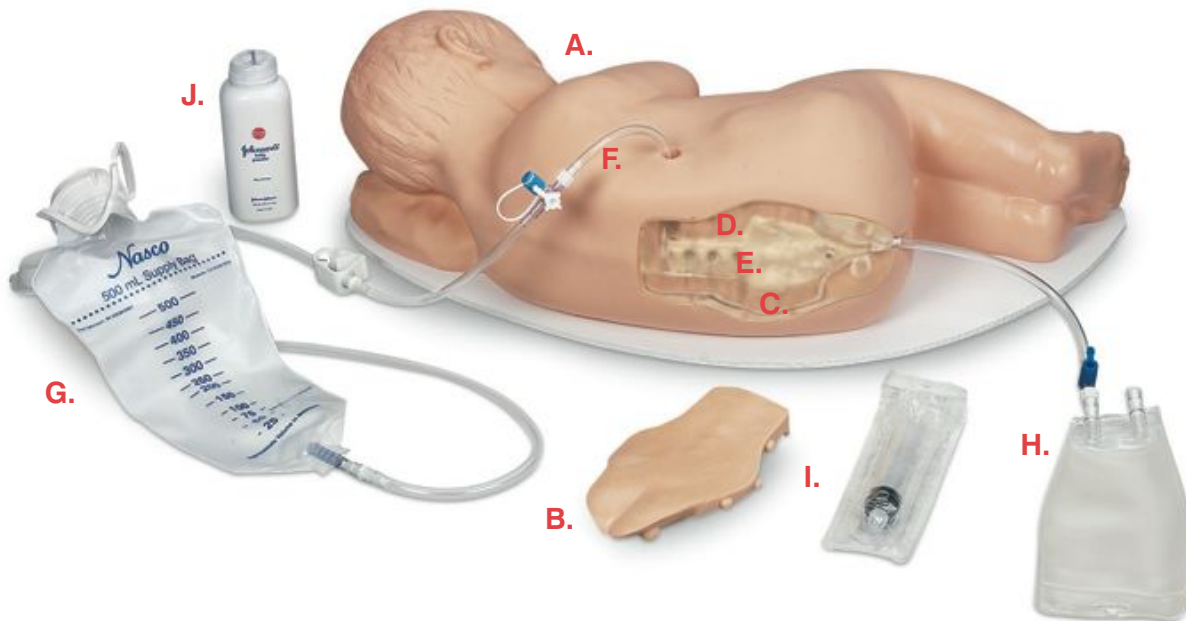
# Pediatric Caudal Injection Simulator LF01006U Instruction Manual



CAUTION: PRODUCT CONTAINS DRY NATURAL RUBBER!

**Life/form**® Products by Nasco





## About the Simulator

Developed to have a unique dual purpose, the **Life/form®** Pediatric Caudal Injection Simulator will allow for both lumbar puncture and caudal injection. Anatomically correct, this simulator represents a 12-month old infant in the left lateral decubitus position with neck and knees flexed.

## Benefits

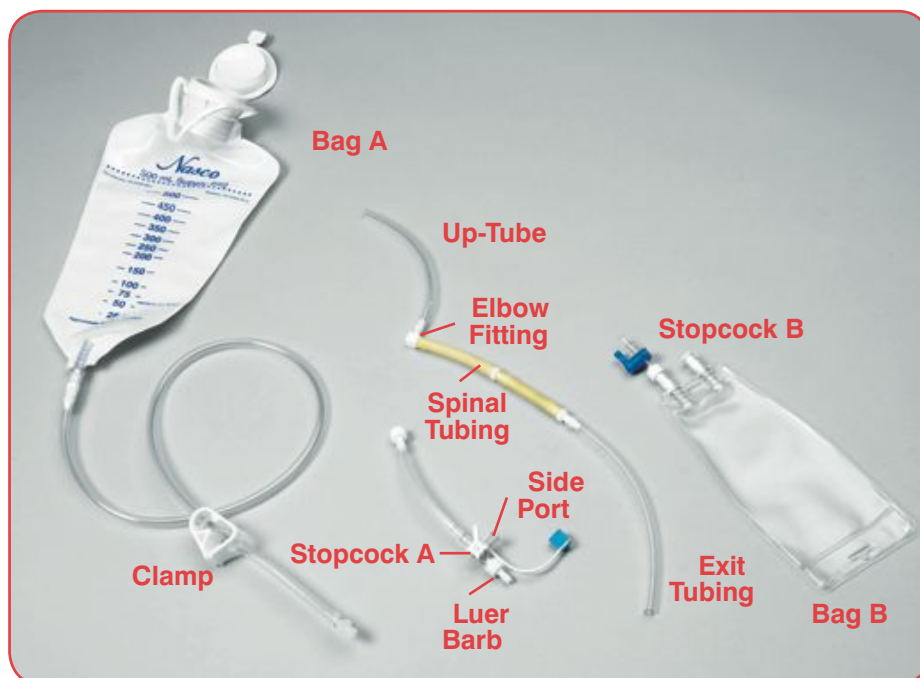
- Targets key skills specific to pediatric lumbar puncture and caudal injection
- Palpation of landmarks
- Needle positioning and insertion
- Cerebrospinal fluid collection
- Measure cerebrospinal fluid pressure
- Intrathecal injections

## Features

- Anatomically correct, palpable features
- Correct body positioning
- Replaceable parts
- Realistic resistance
- Simulated CSF flows with successful puncture
- Transparent skin pad allows for visual identification of landmarks
- Visual feedback of proper needle placement

## List of Components

- A. Pediatric Caudal Injection Simulator on Board
- B. Opaque Skin Pad
- C. Clear Skin Pad
- D. Tissue Block
- E. Spine
- F. Spinal Tubing Assembly
- G. 500 ml Fluid Supply Bag
- H. 100 ml Fluid Supply Bag
- I. 20 cc Syringe
- J. Baby Powder, 4 oz.  
Hard Carry Case (Not Pictured)



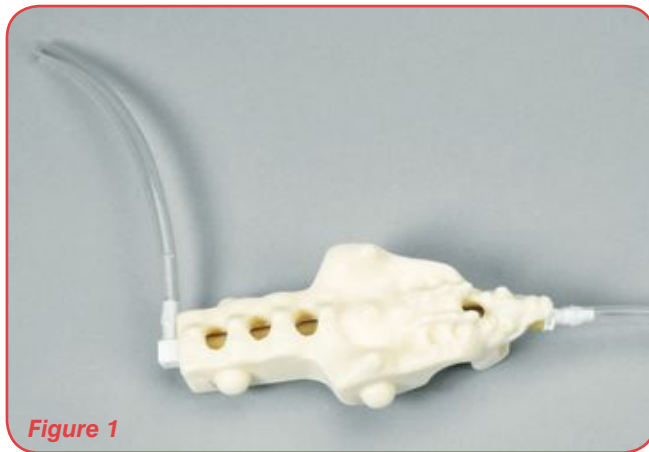


Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

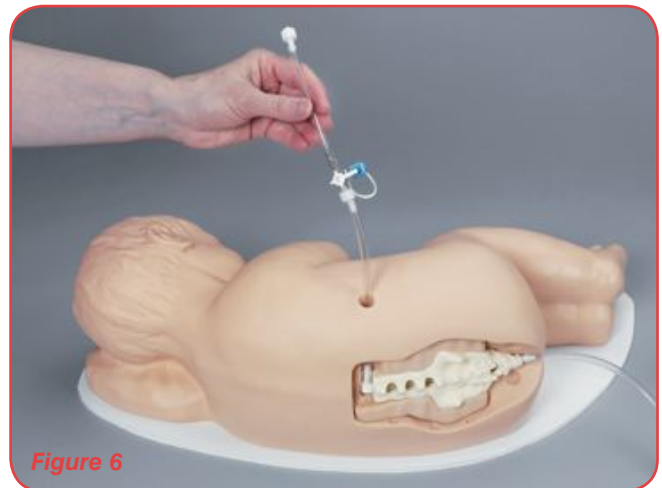


Figure 6



Figure 7

## Setup

1. Position the latex spinal tubing in the spine by sliding the exit tubing and spinal tubing through the top of the spine and out through the bottom. **(See figure 1.)**
2. Snap the spine into the tissue block. **(See figure 2.)**
3. Feed the clear up-tube through the flange in the upper left corner of the back cavity. **(See figure 3.)**
4. Position tissue block/spine inside the back cavity by first inserting tab on base of spine into slot on body and pushing the rest of the tissue block into place. **(See figure 4.)**
5. Attach 100 ml Fluid Supply Bag (Bag B) by connecting Stopcock B to the exit tubing. **(See figure 5.)** The system will also work without the bag; fluids can be drained into a small container or onto a towel.
6. Attach the up-tube to the Luer barb of Stopcock A. **(See figure 6.)**
7. Snap one of the skin pads onto the body. **(See figure 7.)** The clear skin pad enables students to visualize the underlying anatomy while palpating landmarks. *Due to the nature of the clear material, injections will leave visible needle tracks.* The opaque skin pad can be used for more realistic hands-on training, including injections.
8. A light dusting of baby powder will give the skin a more realistic feel.

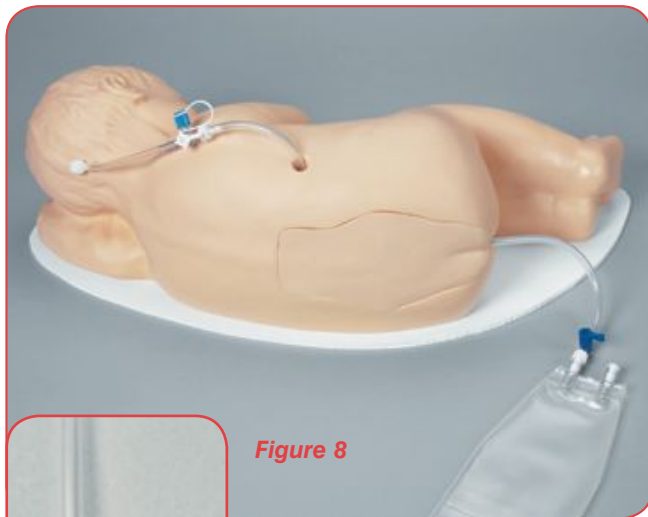


Figure 8



**Stopcock A:**  
Side Port Capped  
Bottom Port Closed



**Stopcock B:**  
Open



Figure 9



**Stopcock A:**  
Side Port Uncapped  
Top Port Closed

## General Instructions for Use

### To perform a caudal injection:

**Note:** Spinal fluid is not normally encountered when performing a caudal block. The instructions below are for a water-free system. If you wish to introduce water in the spinal canal, follow setup instructions for lumbar puncture at right.

1. Cap the **side port** and close the bottom port of Stopcock A.
2. Open Stopcock B. (See figure 8 & insets.)

**Note:** Nasco recommends plain water to simulate preparation of the injection site. Some antiseptic solutions may permanently stain the plastic.

3. Perform the injection procedure in the sacral hiatus.

**Note:** Nasco recommends plain distilled water as the injectate. Fluid injected into the spinal space will be visible as it travels down the exit tube.

4. To clear injected fluid from the system between procedures, close the **top port** of Stopcock A, uncap the **side port**, open Stopcock B, and inject air with the syringe via side port. (See figure 9 & inset.)
5. Occasionally disconnect Bag B to remove excess air and/or fluid.
6. When finished training, drain all bags and tubing; allow to air dry. Remove spine and tissue block from body. To avoid damage, do not allow latex spinal tubing to remain in contact with any soft plastic components of the trainer for extended periods of time.



Figure 10

### To perform a lumbar puncture:

1. Connect the 500 ml Fluid Supply Bag (Bag A) to the tubing section of Stopcock A. Close the tubing clamp on the 500 ml Fluid Supply Bag.
2. Cap the side port AND close the side port of Stopcock A.
3. Close Stopcock B.
4. Fill Bag A with approximately 225 ml of water and hang it 16" from the work surface. (Hanging height will determine fluid pressure in the spinal tubing, and may be adjusted as required.) Fluid supply stand (LF01022U) sold separately.
5. Open the Bag A clamp and Stopcock A.
6. Briefly open Stopcock B to allow water to displace the air in the tubing. The spinal column is charged when water fills the exit tubing.
7. Close Stopcock B; the clamp on Bag A remains open. (**See figure 10.**)
8. Perform the lumbar puncture procedure in the L3-L4 or L4-L5 space.
9. When finished training, drain all bags and tubing; allow to air dry. Remove spine and tissue block from body. To avoid damage, do not allow latex spinal tubing to remain in contact with any soft plastic components of the trainer for extended periods of time.

## Care and Maintenance

### Replacing the spinal tubing:

Tubing and skin pads will eventually need to be replaced. Using the smallest needle gauge possible will extend the life of the tubing and skin pads. Dull, burred, or large gauge needles will cause leakage and premature wear. Rotating the spinal tubing and turning it end-for-end will also give you added puncture sites.

1. Disconnect Bag A and drain all fluids from the trainer by opening Stopcocks A and B.
2. Disconnect Stopcock B from the exit tubing.
3. Disconnect the up-tube from the Luer barb fitting on Stopcock A.
4. Remove the spine/block assembly from the Pediatric Caudal Injection Simulator.
5. Remove and discard up-tube, spinal tubing, and exit tube. Save Bag A and clamp, Stopcock A with tubing assembly, and Bag B with Stopcock B.

### Cleaning and storage:

1. Always drain all fluids before storing the unit.
2. The tissue block and skin pads may be washed with warm soapy water to remove dirt and oils. Printed material, inks, markers, and some antiseptic solutions may permanently stain the plastic.
3. The body may be cleaned with mild soap detergent and a damp cloth, or with Nasco Cleaner (LF09919U).
4. *Do not submerge the body in water.*
5. Never store the latex spinal tubing in contact with any soft plastic components. Remove it from the body and store separately in a plastic bag.

### Available Supplies and Replacement Parts

- LF01006AU** Replacement Kit: 1 clear skin pad, 1 opaque skin pad, and 1 spinal tubing assembly
- LF01022U** Fluid Supply Stand
- LF09919U** Nasco Cleaner

Actual product may vary slightly from photo. Nasco reserves the right to change product color, materials, supplies, or function as needed.

## Other Available *Life/form*® Simulators

- |                 |   |                 |                                   |
|-----------------|---|-----------------|-----------------------------------|
| <b>LF00999U</b> | Infant IV Head  | <b>LF01206U</b> | White Micro-Preemie Simulator     |
| <b>LF01000U</b> | Pediatric Lumbar Puncture Simulator                           | <b>LF01212U</b> | Black Micro-Preemie Simulator     |
| <b>LF01035U</b> | Infant Catheterization Trainer                                | <b>LF01213U</b> | Brown Female Special Needs Infant |
| <b>LF01193U</b> | White Female Special Needs Infant                             | <b>LF01216U</b> | Brown Male Special Needs Infant   |
| <b>LF01194U</b> | White Male Special Needs Infant                               | <b>LF01215U</b> | Asian Female Special Needs Infant |
| <b>LF01195U</b> | Black Female Special Needs Infant                             | <b>LF01214U</b> | Asian Male Special Needs Infant   |
| <b>LF01196U</b> | Black Male Special Needs Infant                               | <b>LF03636U</b> | Infant IV Leg                     |
| <b>LF01201U</b> | Complete Infant Auscultation Simulator with Airway Management | <b>LF03673U</b> | Infant IV Arm                     |



**LF00999U**



**LF01035U**



**LF01206U**

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