

## Arrow EZ-IO Intraosseous Vascular Access System

### Distal Tibia Insertion Site Identification and Technique - Infant/Child

#### EZ-IO Distal Tibia System Insertion Site Identification – Infant/Child

Insertion site is located approximately 1-2cm (1 finger width) proximal to the most prominent aspect of the medial malleolus. Palpate the anterior and posterior borders of the tibia to assure that your insertion site is on the flat center aspect of the bone.

#### EZ-IO Distal Tibia System Insertion Technique – Infant/Child

- Prepare the site by using antiseptic of your choice
- Use a clean, “no touch” technique
- Remove the needle set cap
- Stabilize extremity
- Aim the needle set at a 90-degree angle to center of the bone
- Push the needle set tip through the skin until the tip rests against the bone
- The 5mm mark must be visible above the skin for confirmation of adequate needle set length
- Gently drill, **immediately** release the trigger when you feel the “pop” or “give” as the needle set enters the medullary space
  - **Avoid recoil – do NOT pull back on the driver when releasing the trigger**
- Hold the hub in place and pull the driver straight off
- Continue to hold the hub while twisting the stylet off the hub with counter clockwise rotations
  - The catheter should feel firmly seated in the bone (1st confirmation of placement)
- Place the stylet in a sharps container
- Place the EZ-Stabilizer Dressing over the hub
- Attach a **primed** EZ-Connect Extension Set to the hub, firmly secure by twisting clockwise
- Pull the tabs off the EZ-Stabilizer Dressing to expose the adhesive, apply to the skin
- Aspirate for blood/bone marrow (2<sup>nd</sup> confirmation of placement)

#### Recommended Anesthetic for Infant/Child Responsive to Pain:

- Observe recommended cautions/contraindications to using 2% preservative and epinephrine free lidocaine (intravenous lidocaine)
- Confirm lidocaine dose per institutional protocol
  - Usual initial dose is 0.5mg/kg, not to exceed 40mg
- Prime EZ-Connect Extension Set with lidocaine
  - Note that the priming volume of the EZ-Connect Extension Set is approximately 1.0mL
  - For small doses of lidocaine, consider administering by carefully attaching syringe directly to needle hub (prime EZ-Connect Extension Set with normal saline)
- Slowly infuse lidocaine over 120 seconds
  - Allow lidocaine to dwell in IO space 60 seconds
- Flush with 2-5 mL of normal saline
- Slowly administer subsequent lidocaine (half the initial dose) IO over 60 seconds
  - Repeat PRN
- Consider systemic pain control for patients not responding to IO lidocaine

### Infant/Child Unresponsive to Pain

- Prime EZ-Connect Extension Set with normal saline
- Flush the IO catheter with 2-5 mL of normal saline
- Connect fluids if ordered, infusion may need to be pressurized to achieve desired rate
- Assess for any signs of extravasation/complications

If patient develops signs that indicate responsiveness to pain, refer to section “Recommended anesthetic for infant/child responsive to pain”

### EZ-IO System Removal Technique

- Remove EZ-Connect Extension Set and EZ-Stabilizer Dressing
- Stabilize catheter hub and attach a Luer lock syringe to the hub
- Maintaining axial alignment, twist clockwise and pull straight out
  - Do not rock the syringe
- Dispose of catheter with syringe attached into sharps container
- Apply pressure as needed, dress per institutional protocol

Lidocaine dosing recommendations were developed based on the research below. The use of any medication, including lidocaine, given IV or IO is the responsibility of the treating physician, medical director or qualified prescriber and not an official recommendation of Teleflex Incorporated and its subsidiaries. Teleflex is not the manufacturer of lidocaine, and the user should be familiar with the manufacturer’s instructions or directions for use for all indications, side-effects, contraindications, precautions and warnings of lidocaine. Teleflex disclaims all liability for the use, application or interpretation of the use of this information in the medical treatment of any patient.

For additional references, research and dosing charts, please visit [www.eziocomfort.com](http://www.eziocomfort.com)

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