



INTRAOSSEROUS (IO) INFUSION

Adult

Pediatric

Approved Devices

- EZ-IO® Intraosseous Vascular Access System

Indication

Emergency situations when life-saving fluids or drugs should be administered and peripheral IV access is difficult or too time consuming to perform.

Contraindications

- Fracture or suspected vascular compromise of the selected humerus or tibia
- Recent significant orthopedic procedures
- Inability to locate anatomical landmarks for insertion
- Skin infection overlying the area of insertion

ALS

1. Prep the surface with a recognized antiseptic agent and wipe dry with a sterile gauze pad
2. Insert the device according to manufacture specific directions
3. Flush catheter with **NS 10 mL syringe**. Remember, No Flush = No Flow.
4. If the patient responds to painful stimuli, SLOWLY over 1 - 2 minutes administer **2% Lidocaine 0.5 mg/kg** (not to exceed 50 mg) prior to **NS** flush.
5. Utilize a blood pressure cuff or pressure bag to help infuse fluids
6. Dress site, secure tubing

Humeral Insertion Site

- ≥ 15 years of age
- Expose the shoulder and place the patient's arm against the patient's body with the forearm resting on the abdomen.
- Locate the humeral head on the anterior-superior aspect of the upper arm or the anterior-lateral shoulder.
- Palpate and identify the mid-shaft humerus and continue palpating toward the proximal end (humeral head). Near the shoulder feel for the small protrusion, this is the base of the greater tubercle and the insertion site.
- With the opposite hand, pinch the anterior and inferior aspects of the humeral head, while confirming the identification of the greater tubercle. This will help ensure that you have located the midline of the humerus.

Tibial Insertion Site

- In small children 3 – 12 kg, the tibial tuberosity cannot be palpated as a landmark, the insertion site is 2 finger-breadths below the patella in the flat aspect of the medial tibia.
- In larger children 13 – 39 kg the insertion site is located on the flat aspect of the medial tibia 1 finger-breadth below the level of the tibial tuberosity.
- For adults:
 - A. The proximal tibial site is 1 finger-breadth medial to the tibial tuberosity.
 - B. The distal tibial site is 2 finger-breadths above the medial malleolus (inner aspect of ankle) in the midline of the shaft of the tibia.



Yolo County Emergency Medical Services Agency

Procedures

Revised Date: December 14, 2018

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Possible Complications	
<ul style="list-style-type: none">• Local infiltration of fluids/drugs into the subcutaneous tissue due to improper needle placement• Cessation of the infusion due to clotting in the needle or the bevel of the needle is lodged against the posterior cortex• Fluid overload• Fat or bone emboli• Fracture	
Direction	
<ul style="list-style-type: none">• No more than 1 attempt in each site	