

1110 INTRAOSSEUS (IO) CATHETER PLACEMENT

	EMT-IV	AEMT	INTERMEDIATE	PARAMEDIC
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Indications:

1. Rescue or primary vascular access device when peripheral IV access not obtainable in a patient with critical illness defined as any of the following:
 - A. Cardiopulmonary arrest or impending arrest
 - B. Profound shock (systolic BP <80) with poor perfusion (adult patient)
 - C. Decompensated shock based on hypotension for age (pediatric patient)
 - D. Hypoglycemia with severe symptoms (e.g. unresponsive) and no venous access refractory to glucagon
2. Utilization of IO access for all other patients requires base station contact and is **NOT** indicated for EMT-IV
3. Approved sites: proximal tibia and humeral head placement

Complications:

1. Fracture
2. Compartment syndrome
3. Infection

Contraindications:

1. Fracture of target bone
2. Cellulitis (skin infection overlying insertion site)
3. Osteogenesis imperfecta (rare condition predisposing to fractures with minimal trauma)
4. Either a prosthetic or orthopedic procedure near insertion site
5. Excessive tissue at insertion site with the absence of anatomical landmarks.
6. Previous IO within 24 hr in selected bone

Technique:

Needles:

15mm needle (pink) neonate/small infant tibia

25mm needle (blue) 3-39kg

45mm needle (yellow) >40kg, excessive tissue, adult humeral head

Landmarks:

• Proximal tibia (Adult & Peds):

- 1 finger breath below and 1 finger breadth medial to the tibial tuberosity.

• Proximal Humerus (Adult & Peds):

- Place patients hand over umbilicus, elbow flexed at 90°
- Locate greater tubercle of proximal humerus. Place IO just posterior or behind greater tubercle.

Placement:

1. Choose appropriate site and needle size, cleanse with antiseptic agent.
2. Use EZ IO driver to insert needle. Stabilize catheter hub with hands, remove driver needle and dispose of in sharps container.
3. Place stabilizing dressing PRIOR to attaching primed tubing. Prime with saline.
4. Attach tubing, aspirate blood first if possible. Flush line with 20cc saline.

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Side Effects and Special Notes:

1. IO placement may be considered prior to peripheral IV attempts in critical patients without identifiable peripheral veins
2. Do not aspirate marrow fluid/tissue, as it increases the risk of plugging the needle.
3. Expect flow rates to be slower than peripheral IVs. Pressure bags may be needed. Any drug or IV fluid may be infused.
4. If IO is infiltrated/unusable, may be removed by Paramedic. **May not be removed by EMT.**