

Procedural: Adult IO

EMR

EMT

- Not in scope of practice

EMR & EMT STOP

EMT IV

ADVANCED EMT

- An alternative technique for establishing IV access in critical adult patients when peripheral IV access is difficult or time sensitive.
- **Indications**
 - Immediate vascular access in emergencies
 - Intravenous fluids or medications are urgently needed and a peripheral IV cannot be established in 2 attempts or 90 seconds **AND** the patient exhibits one or more of the following:
 - An altered mental status (GCS of 8 or less)
 - Imminent respiratory failure
 - Hemodynamic instability (systolic BP of <90)
 - IO placement maybe considered prior to peripheral IV attempts in cases of cardiopulmonary or traumatic arrest.
- **Contraindications**
 - Fractures of the bone selected for IO infusion
 - Excessive tissue at insertion site with the absence of anatomical landmarks (consider alternate site)
 - Previous significant orthopedic procedure (IO within 24 hours, prosthesis-consider alternate site)
 - Infection at the site selected for insertion (consider alternate site)
- **Procedure**
 - Assemble all necessary equipment
 - Prepare IO driver and needle set (blue)
 - Select proper site
 - Proximal Tibia
 - For patients ≥ 40 kg, the insertion site is approximately one finger width medial to the tibial tuberosity.
 - Distal Tibia
 - For patients ≥ 40 kg, the insertion site is approximately two finger widths proximal to the medial malleolus and positioned midline on the medial shaft.
 - Proximal Humeral

- For all patients, identify the greater tubercle insertion site approximately two finger widths inferior to the coracoid process and the acromion.
- Prep the surface with Betadine
- Stabilize patient's leg and begin insertion from a 90-degree angle to the plane of the tibial plateau. Gently advance the needle set into position-do not force. Stop when you feel the "pop" on smaller patients.
- Remove driver from the needle set
- Remove the stylet from the catheter.
- Confirm placement (catheter is stable at a 90-degree angle to the bone, able to aspirate blood and fluids flow without evidence of extravasation)
- Connect primed tubing
- Flush or bolus the IO catheter rapidly with 10 ml of NS
- Administer the infusion or medication under pressure
- If unsuccessful or subcutaneous swelling occurs:
 - Stop IO, remove needle, cover wound
 - Consider making second attempt in other leg

 **EMT IV / ADVANCED EMT STOP**