



**REGION 11
CHICAGO EMS SYSTEM
PROCEDURE**

Title: Pediatric Intraosseous (IO) Insertion – EZ-IO

Section: Medication Administration/Access

Approved: EMS Medical Directors Consortium

EMS Level: ALS

PEDIATRIC INTRAOSSEOUS (IO) INSERTION – EZ-IO

INDICATIONS:

- Pediatric patients who are in shock, arrest, impending arrest, are unstable, unconscious or when immediate vascular access is needed

APPROVED IO SITES:

- Proximal medial tibia
- Distal tibia (medial malleolus)

CONTRAINDICATIONS

- Infection at the site selected for insertion (*choose alternate site*)
- Fracture of the bone selected for IO infusion (*choose alternate site*)
- Previous significant orthopedic procedures (*IO within 24 hours, prosthesis- choose alternate site*)
- If known history of osteogenesis imperfecta and osteoporosis
- If two attempts are unsuccessful with the EZ IO

EQUIPMENT:

- EZ-IO Driver
- EZ-IO needle set
- 10 ml syringe
- Normal Saline IV solution, regular IV tubing
- Tape
- Gloves
- Dressing
- Skin prep
- Towel roll/blanket

PROCEDURE:

1. Support the leg on a towel roll/blanket. Externally rotate leg.
2. Select appropriate insertion site.
3. Prepare insertion site using aseptic technique.
4. Identify Landmarks:
 - i. **Proximal Tibia:** Palpate tibial tuberosity, move (2) fingers below and medial to it.
 - ii. **Distal Tibia:** Palpate medial malleolus move fingers two (2) finger width above it (*inside ankle bone*).
5. Prepare the EZ IO driver and appropriate needle set.
6. Stabilize site and insert appropriate needle set.
7. Drill until loss of resistance is felt.
8. Remove EZ-IO driver from needle set while stabilizing catheter hub.
9. Remove stylet from catheter.



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10. Confirm placement by attempting to aspirate bone marrow or blood.
11. Flush with 10 ml of normal saline.
12. Connect primed tubing and begin utilizing pressure if IO flushes easily.
13. Dress site, secure tubing.
14. Monitor EZ-IO site for swelling.