

# PEDIATRIC INTRAOSSEOUS INFUSION PROCEDURE

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

## INDICATIONS

- Patient in extremis, cardiac arrest, or profound hypovolemia and in need of immediate delivery of medications or fluids and IV access is not possible in 90 seconds

## CONTRAINDICATIONS

- Absolute:
  - Recent fracture of involved bone (less than 6 weeks)
  - Vascular disruption proximal to insertion site
  - Inability to locate landmarks
- Relative:
  - Infection, scarring or burn overlying the site
  - Congenital deformities of the bone
  - Metabolic bone disease

## EQUIPMENT

- Intraosseous needle or mechanical device
- Betadine swabs/ solution/ gauze
- 5-12 ml syringe
- Saline
- IV NS solution
- IV tubing with 3 way stopcock
- Supplies to secure infusion

## PROCEDURE

- Aseptic technique must be followed at all times
- All approved ALS IV medications may be administered IO
- Position and stabilize leg
- Prepare skin with betadine swabs or solution on gauze
- Air or gauze dry
- Fill 5-12 ml syringe with 5 ml saline
- IV NS solution, flood tubing with a 3 way stopcock
- IO device:
  - Locate primary site 1-2 cm distal to the tibial tuberosity and 1-2 cm medial
  - Locate secondary site according to manufacturer's specification
  - Insert needle through skin at 90 degree angle to the periosteal surface (bone contact)
  - Rotate applying gentle, steady pressure, letting the driver do the work
  - Stop when a change of resistance is felt (indicating entrance into the medullary space)
  - Stabilize hub and remove stylet
  - Confirm placement
  - Attach 5-12 ml syringe with 5 ml saline to needle
  - Syringe bolus with 5 ml saline
- Mechanical device:
  - 1cm medial or distal to tibial tuberosity (0-6years)
  - 1-2 cm medial or distal to tibial tuberosity (6-12 years)

- Choose the desired depth of injection (see packet insert for manufactures instructions)
- Position needle, insert at 90 degrees, and remove devices following manufacture's instructions)
- Confirm placement
- Attach 5-12 ml syringe with 5 ml of saline in needle
- Flush with 5 ml saline
- Aspirate to confirm position, if needle flushes without resistance proceed
- If resistance is met, remove needle and apply pressure to site
- Attach pre-flooded IV tubing
- Stabilize according to manufacturer's direction
- Administer fluid boluses via syringe utilizing the 3 way stopcock

**SPECIAL CONSIDERATIONS**

- Limit attempts for IO access at scene to no more than 2