

**MEHLVILLE FIRE PROTECTION DISTRICT
EMERGENCY MEDICAL SERVICES
GUIDELINES FOR PREHOSPITAL EMERGENCY CARE**

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**SUBJECT: 1000.02
PEDIATRICS:
INTRASOSEOUS INFUSION**

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Overview:

Intraosseous infusion is a fast, safe and effective technique that can be used to deliver fluids, blood and medication to patients in whom standard intravenous access is not available. In the pre-hospital setting, use of this technique will generally be limited to volume resuscitation and code drug administration for infants and small children. Prior approval by Medical Direction is preferred, although not required, before attempting this procedure.

Indications:

1. Any patient in cardiopulmonary arrest in who ready venous access is not available.
2. Hypovolemic pediatric patients with prolonged transport time in which ready venous access is not available.
3. Unsuccessful pediatric IV attempts in a critical patient.

Equipment:

1. Standard IV fluids and tubing.
2. Commercially available bone marrow aspiration needle
3. Betadine and alcohol for skin preparation.
4. Dressing materials.

Site:

1. Proximal tibia - 1-2 fingerbreaths below the tibial tuberosity on the medial (flat) surface of the tibia.
2. Distal tibia - just above the medial malleolus.
3. Distal femur - distal 1/3 of femur on medial aspect above the knee.
4. Each bone is limited to one intraosseous line/attempt.

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Contraindication:

1. Fracture on Proximal Extremity.

Pre-Hospital Actions:

1. Notify Medical Direction, if time permits.
2. Prepare necessary equipment.
3. Select site.
4. Prepare skin surface as you would for starting an IV.
5. Insert IO needle through the skin and perpendicular to the bone surface. Once you hit the outer bone cortex, apply steady firm pressure while making a twisting/boring motion. When marrow cavity is penetrated you will feel a "give".
6. Remove stylet.
7. Confirm position by marrow aspiration.
8. Inject 3-5 ml. of sterile saline using syringe, (to clear any possible bone plugs from the needle).
9. Attach IV tubing.
10. Apply dressing and secure to skin.
11. Monitor the calf and site closely for proper flow and signs of infiltration.

Considerations:

Complications include:

1. Subperiosteal infusion.
2. Osteomyelitis.
3. Sepsis.
4. Fat embolism.
5. Marrow damage.
6. Infiltration.

STANDARD PRECAUTIONS MUST BE OBSERVED.