



Intraosseous Infusion

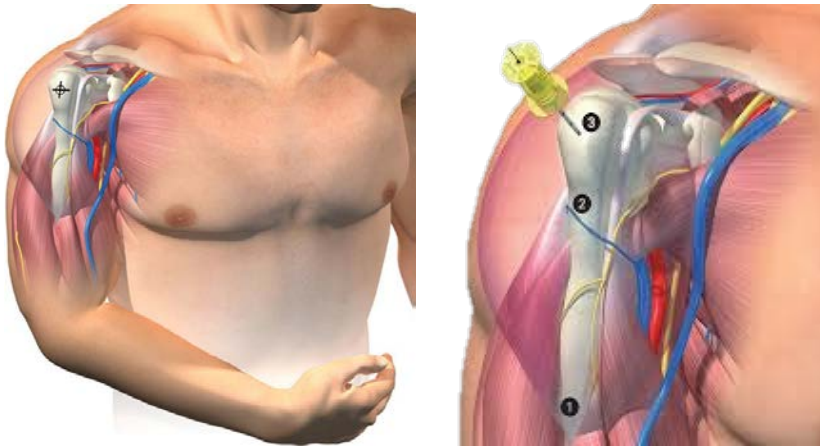
ALS PROCEDURE AP-08

INDICATION	<ul style="list-style-type: none"> • Patients that require rapid circulatory access. • Should be used as an alternative technique for establishing IV access when peripheral IV access is difficult or time sensitive, especially in pediatric patients. • IO placement should be considered prior to peripheral IV attempts in cases of cardiopulmonary or traumatic arrest.
CONTRAINDICATION	<ul style="list-style-type: none"> • Fracture of the bone selected for IO infusion. • Excessive tissue at the insertion site with the absence of anatomical landmarks. • Previous significant orthopedic procedure (IO within last 24 hours). • Infection at the site selected for insertion. • Conscious patient with stable vital signs and peripheral vascular access readily available.
PROCEDURE	<ul style="list-style-type: none"> • Choose appropriate intraosseous site and assemble equipment per the manufacturer's recommendations: <ul style="list-style-type: none"> • EZ-IO 15mm (pink): <ul style="list-style-type: none"> ▪ Proximal Tibia: If the tibial tuberosity is present, the insertion site is located approximately 2 cm medial to the tibial tuberosity along the flat aspect of the tibia. If the tibial tuberosity is not present, the insertion site is located approximately 4 cm below the patella and then medial, along the flat aspect of the tibia. ▪ Distal Tibia: Place one finger directly over the medial malleolus; move approximately 2 cm (depending on patient anatomy) proximal and palpate the anterior and posterior borders of the tibia to assure that the insertion site is on the flat center aspect of the bone. • EZ-IO 25mm (blue) or EZ-IO 45mm (yellow) <ul style="list-style-type: none"> ▪ Proximal Humerus (preferred site): Insertion site is located directly on the most prominent aspect of the greater tubercle. Place patient's hand over the umbilicus. Slide thumb up the anterior shaft of the humerus until you feel the greater tubercle, this is the surgical neck. Approximately 1 cm (depending on patient anatomy) above the surgical neck is the insertion site. ▪ Proximal Tibia: See insertion site description above. ▪ Distal Tibia: See insertion site description above. • Prepare intraosseous site using aseptic technique with chlorhexidine. • Insert EZ-IO needle into the selected site per the manufacturer's recommendations. • After removing Power Driver from needle set, stabilize the catheter hub. • Remove stylet from catheter and dispose in sharps container. • Secure site. • Connect primed EZ-Connect tubing to the catheter and confirm placement by flushing the catheter with:

- Lidocaine:** *Adult:* 40 mg slow IO over 2 minutes. May repeat once at a half dose (20 mg.) for pain control. Max total dose of 60 mg.

Pediatric: IO; push over 2 minutes. May repeat once at a half dose for pain control. Administer according to PediaTape weight calculation and [Pediatric Medication Reference Cards](#).
- Flush with 10 mL of normal saline.
- Assess the IO infusion site for signs of extravasation.
- If clinically indicated, begin infusion of fluids utilizing a pressurized delivery system.
- Place the EZ-IO armband on patient and document date/time of procedure.

- Use caution in patients with severe osteoporosis or other bone disorder/abnormalities.
- Use caution in patients with prosthetic joints near the insertion site (consider alternate site).
- Images of proximal humerus placement:



- Image of tubal tuberosity placement:

