

RESUSCITATION

INTRASOSEOUS ACCESS

Components



Needle sizes

YELLOW	45mm	Humerus/Obesity
BLUE	25mm	>40 kg
PINK	15mm	3-39 kg

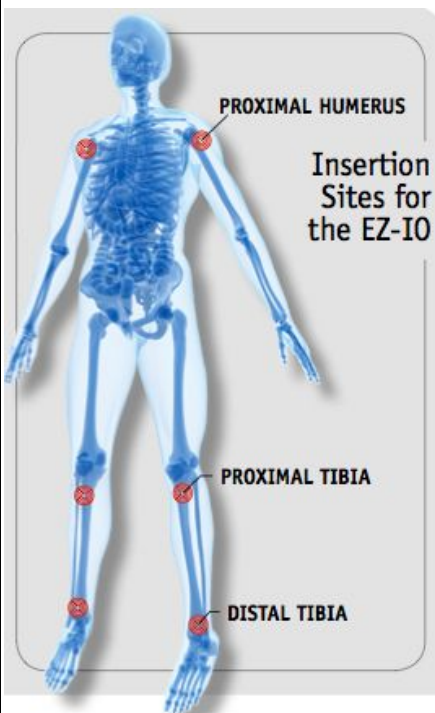
Indications

- Unable to gain IV access in trauma, burns, shock or cardiac arrest
- Failure to gain access in a life-threatening situation within a short period of time eg 2 minutes
- A temporary measure to allow stabilisation and facilitation of definitive, long-term intravenous access

Contraindications

- Infection at entry site
- Burn at entry site
- Ipsilateral fracture of the extremity
- Prosthesis
- Osteogenesis imperfecta
- Osteopenia
- Previous attempt at the same site
- Previous attempt in different location on same bone
- Unable to locate landmarks

Sites



Proximal Humerus

- ~ 1 cm above the surgical neck is the insertion site
- Patient's hand should rest palm down on their abdomen with the elbow adducted

Proximal Tibia

- 2 finger breadths below the patella and 1-2cm medial to the tibial tuberosity in adults

Distal Tibia

- 3 cm proximal to most prominent part of medial malleolus
- Place one finger directly over the medial malleolus then move ~ 2 cm proximally

Method

1. Locate insertion site
2. Clean site with chlorprep and allow to dry
3. Connect appropriate sized needle set to driver
4. Stabilise site & insert EZ IO needle into selected site with the needle perpendicular to the bone surface until needle tip touches bone
5. Confirm that at least one black line is visible (otherwise the needle is too short and larger size should be used)
6. Penetrate the bone cortex by squeezing the driver's trigger and applying gentle, consistent, downward pressure
7. Release trigger when a sudden 'give' is felt upon entry into the medullary space and the desired depth is obtained
8. Stabilise the catheter hub and remove the driver from the needle
9. Remove stylet by turning anti-clockwise and dispose in a sharps container
10. Secure the site
11. Connect primed EZ Connect tubing to exposed Luer-lock hub & flush with 10ml of normal saline
12. Connect the EZ Connect extension set to primed IV tubing & start infusion under pressure

Complications

- Infections – cellulitis or osteomyelitis
- Extravasation of blood or infusion into surrounding soft tissue
- Compartment syndrome
- Failure
- Bone fracture or through-and-through penetration from excessive force

