

Making Procedures SAFER

EZ-IO Placement

Indications

1. Adult or Pediatric need for vascular access for up to 24 hours
2. Generally this will be used for emergent or urgent need for vascular access when venous vascular access is difficult
3. EZ-IO is the PREFERRED method for vascular access during a "Code" event and is standard equipment in the Code Cart

Contraindications

1. Fracture of the target bone or infection at the area of insertion
2. Inability to identify the landmarks
3. IO or attempted IO access in the target bone within 48 hours
4. Prosthesis or orthopedic procedure near insertion site
5. EZ-IO is not MRI compatible

Procedural Considerations

1. EZ-IO is safe with a <1% serious complication rate with a 97% first-attempt success rate. Do not use EZ-IO in the sternum.
2. EZ-IO is a peripheral access device that delivers central line performance, but always use peripheral medication concentrations.
3. The proximal humerus has flow rates of 5-7L/hr and drugs reach central circulation in 3 seconds or less. It also is associated with less insertion and infusion pain than the tibia.
4. Selection of the correct needle size is essential and based off weight range guidelines. It is better to have extra needle exposed than not enough because of the telescoping feature within the stabilizer dressing.

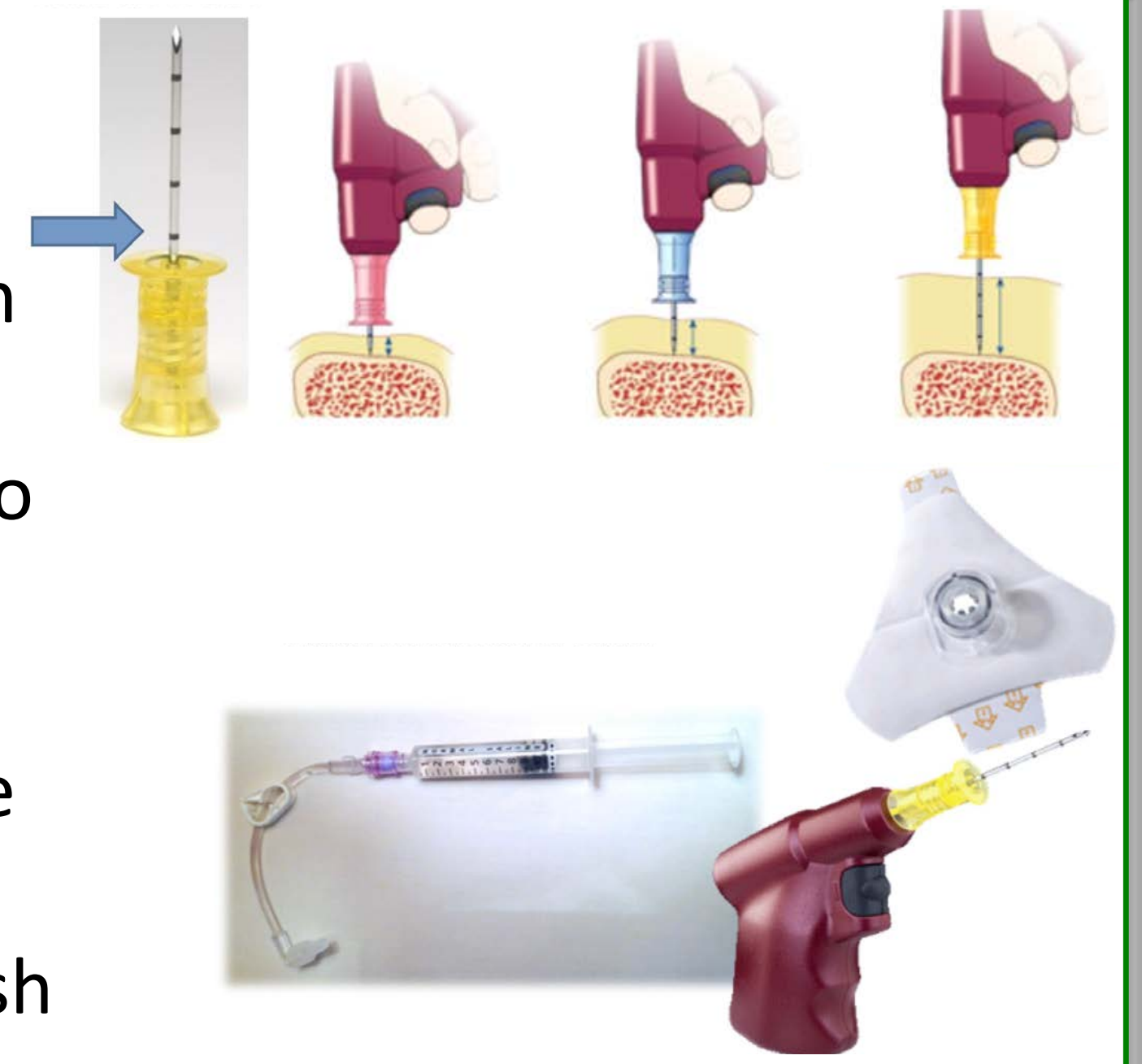
Equipment

Clinical judgement should be used to determine appropriate needle set based on weight, anatomy and tissue depth overlying insertion site



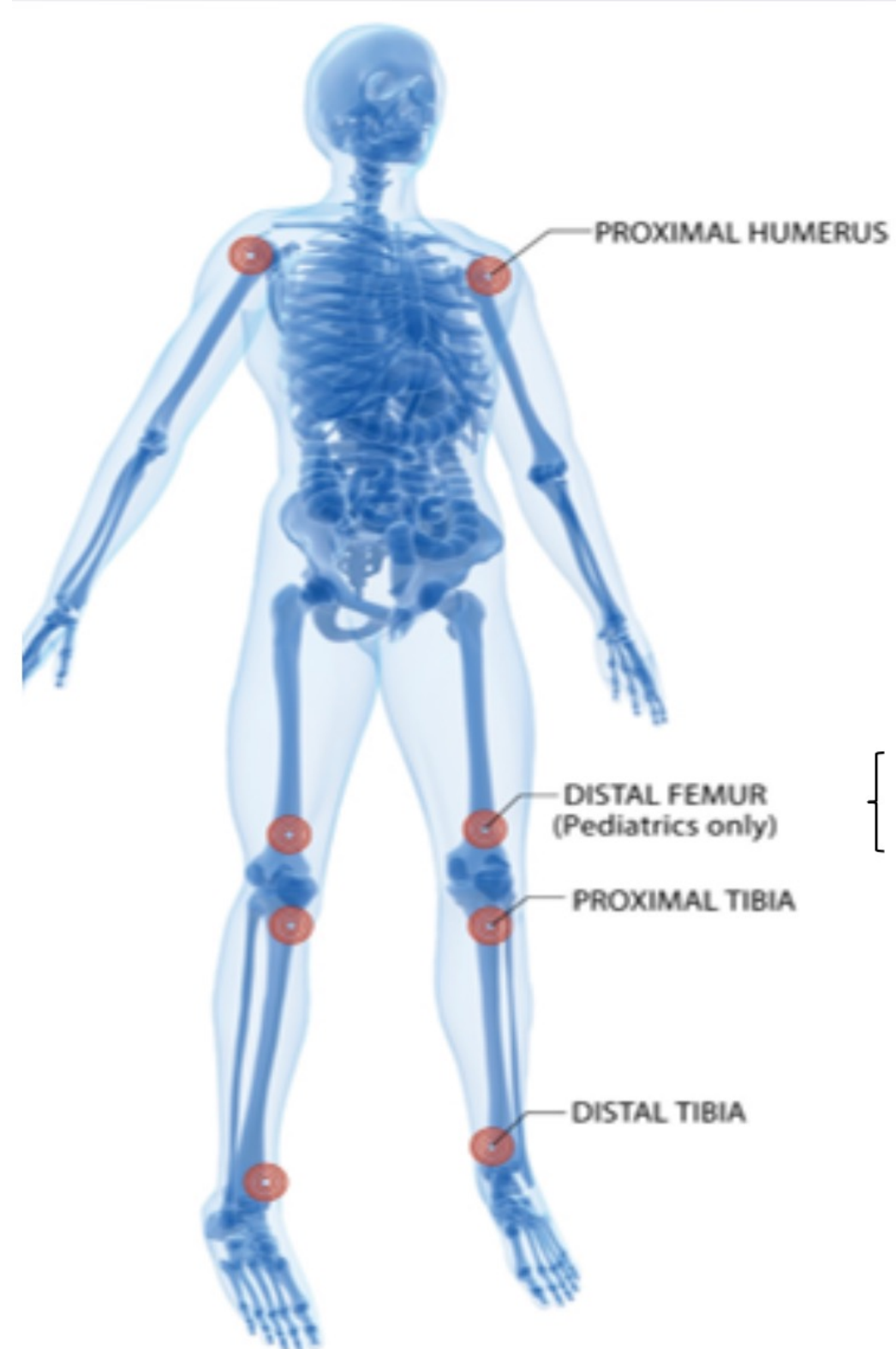
Patient Preparation

1. After site selection, estimate tissue depth and confirm with 5 mm mark visible above the skin
2. Prime the EZ-Connect Extension set & attach needle to driver
3. Prep site with chlorohexidine and allow to dry
4. If conscious patient, consider cardiac epinephrine free lidocaine (pink box) and infuse 60 mg slowly over 120 seconds after needle placement and before saline flush



Procedure

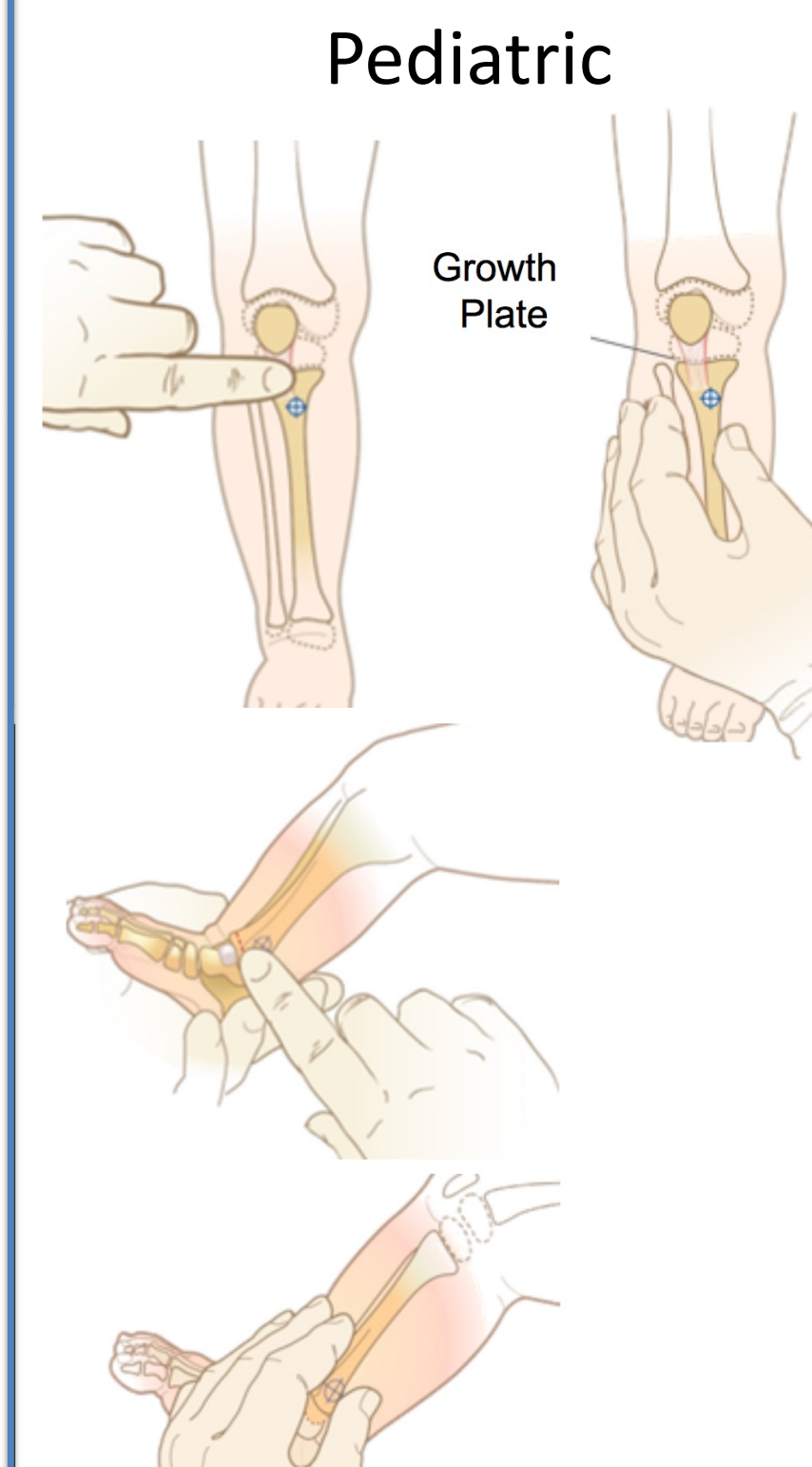
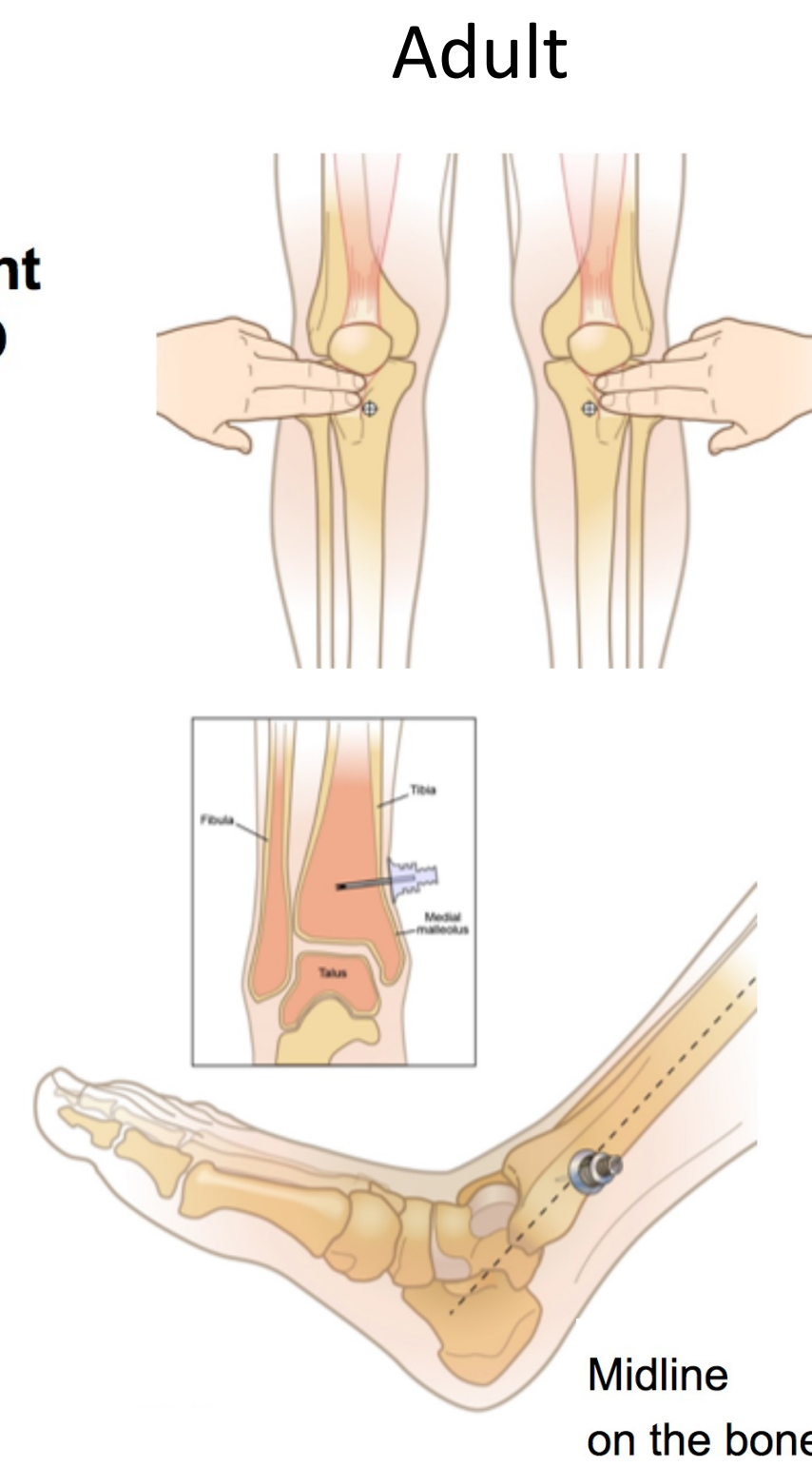
Site Selection



- Flow rates average 5L/hr
- 3 seconds to heart with medication/fluids
- Lower insertion & infusion pain
- Less medication required for pain management
- No reported compartment syndrome due to IO access placement

High success rates in pediatric patients

Adult Sites	Pediatric Sites
Proximal Humerus	Distal Femur
Proximal Tibia	Proximal Humerus
Distal Tibia	Proximal Tibia
	Distal Tibia

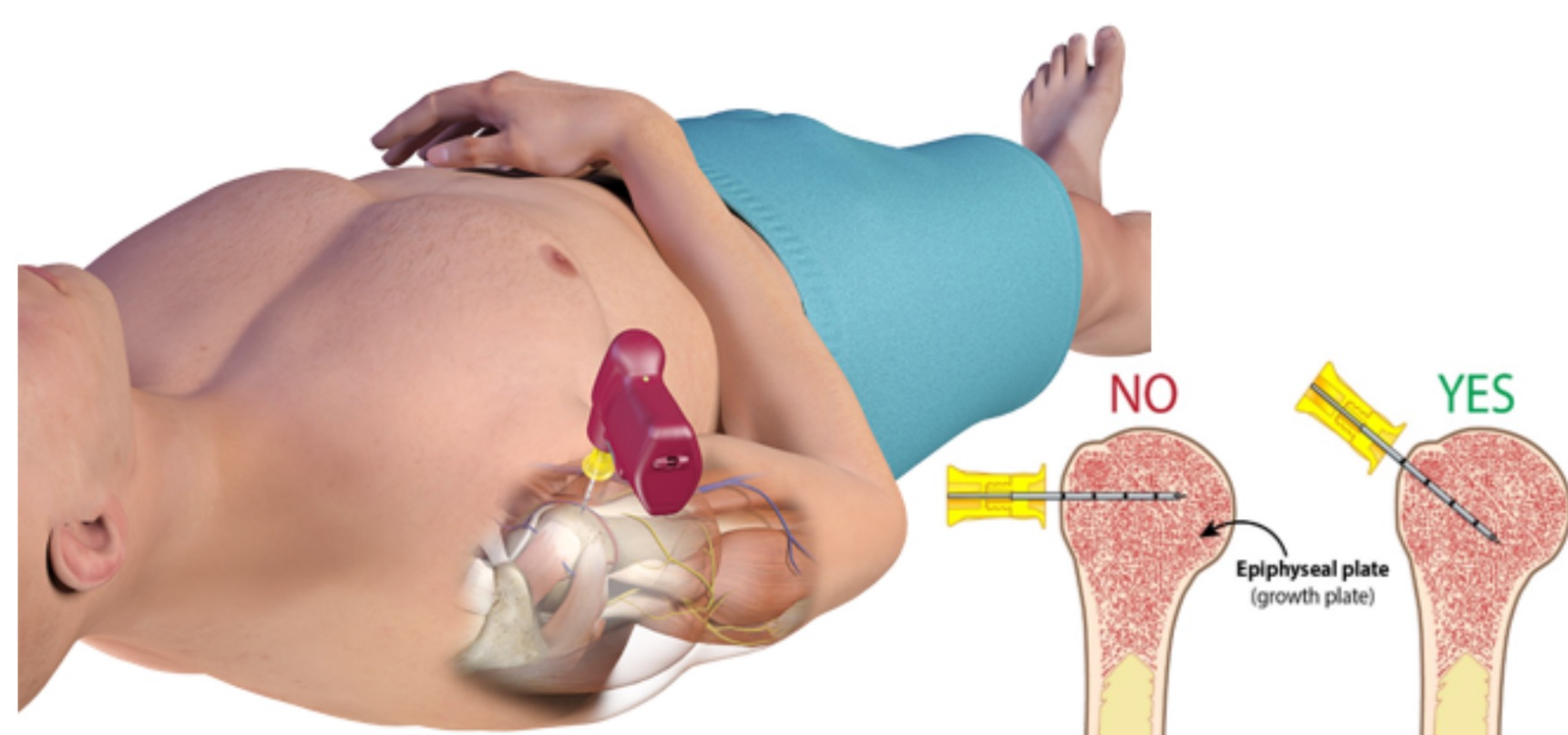


Humerus – Adult Preferred Site



Insertion

Humerus: Insert needle set at a 45° angle to the anterior plane and posteromedial

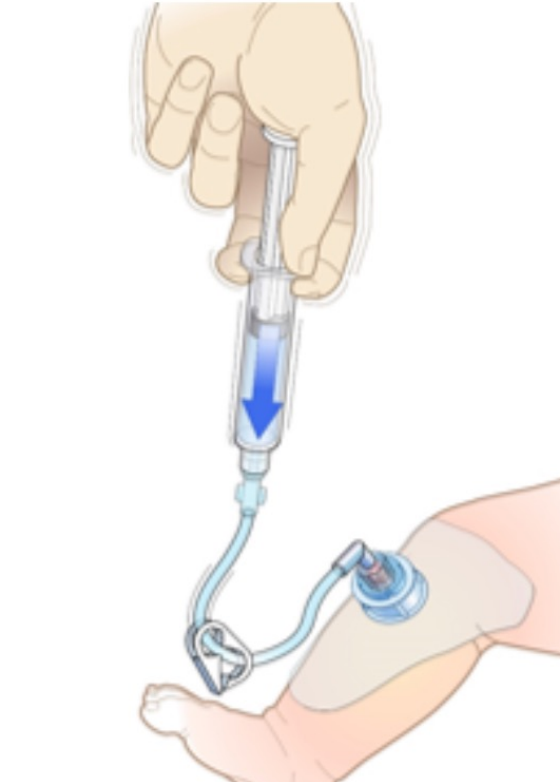


Tibia and Femur: Insert needle set at a 90° angle to the bone

1. Rapidly infuse saline to dislodge marrow

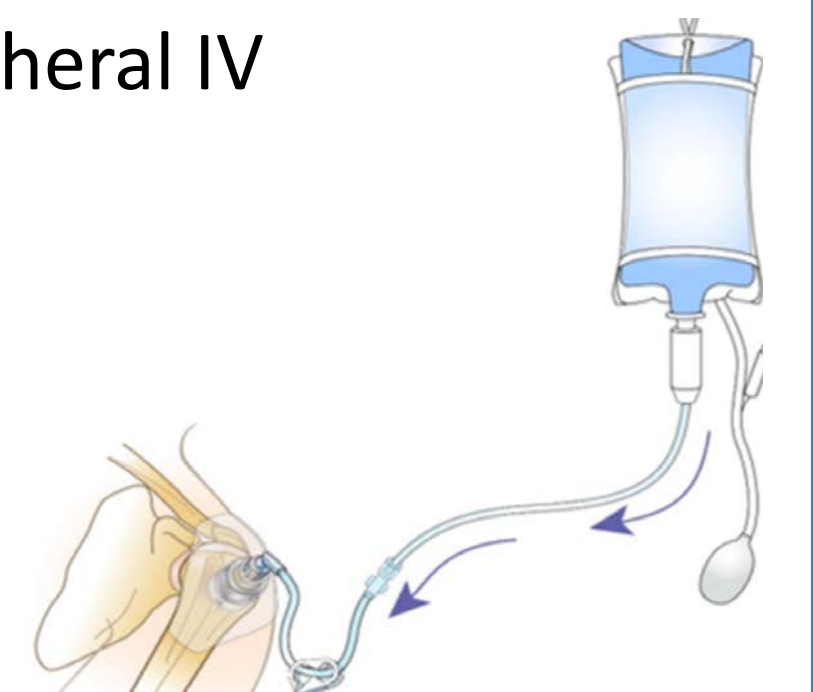
Adults: 5-10 mL

Infants & Children: 2-5 mL



2. Infuse using pressure bag

3. Administer medications in same dose and rate as peripheral IV



Post Procedure

1. Use securement device (EZ-Stabilizer) & attach EZ-Connect extension set. Place wrist band & monitor for complications
2. Removal: Release securement dressing, then using a syringe and with a twisting motion pull needle directly out of bone

