Intraosseous

PROCEDURE

STEPS

1. Choose the site — humerus, distal femur, or proximal tibia
2. Distal femur: secure the leg out-stretched; site just proximal to the patella, ~1–2 cm medial to midline
3. Proximal tibia: extend the leg; site on the flat tibia, medial to the tibial tuberosity, just below the patella
4. Pinch the tibia between your fingers to identify the medial and lateral borders
5. Insert with the driver, needle, stabilizer, and extension per device directions

IF IT GOES WRONG

- *[No troubleshooting content on the original page — to be completed]*

BEFORE YOU START

- Anytime vascular access is difficult in emergent, urgent, or medically necessary cases — up to 24 hours
- Patients ≥12 years: may extend to 48 hours when IV access is not available or reliable
- Sites and flow: humerus 7–8 L/hr; distal femur 5 L/hr; proximal tibia 1 L/hr
- Contraindications: fracture in target bone; infection at insertion site
- Excessive tissue / absent landmarks; IO attempted in that bone within 48 hours
- Previous significant orthopedic procedure at the site; prosthetic limb or joint

KIT YOU NEED

- Driver, blue needle, yellow needle, stabilizer, extension
- Lidocaine 2% for pain — adults 50 mg slow IO push; pediatrics 0.5 mg/kg

Take Home Message:

IO is for difficult access in emergent cases — know your sites and their flow rates: humerus fastest, proximal tibia slowest.