

SANTA BARBARA COUNTY EMERGENCY MEDICAL SERVICES AGENCY

INTRAOSSUEOUS (IO) VASCULAR ACCESS

Attachment C - FEMORAL IO INSERTION (Infant/Child Only)**I. Distal Femur Insertion Procedure – Indicated for patients weighing $\geq 3\text{kg}$**

- A. Extend the patient's targeted leg until it is fully extended, ensuring that the knee does not bend, and is accessible for procedure.
- B. Locating the Insertion Site
 1. Pediatric Placement (weighing $\geq 3\text{kg}$):
 - a. Identify the patella by palpation.
 - b. Insertion site is just proximal to the patella (maximum 1cm) and approximately 1-2cm medial to the midline ([See Figure 3](#) and [Figure 4](#)).
- C. Insertion of the Femoral IO
 1. Aim the needle set at a 90-degree angle to the center of the bone.
 2. Gently press the needle through the skin until the tip rests against the bone.
 - a. **The 5 mm mark must be visible above the skin for confirmation of adequate needle set length.**
 3. Drilling Technique
 - a. Pediatrics: Gently drill, immediately release the trigger when you feel the loss of resistance as the needle set enters the medullary space; avoid recoil – do NOT pull back on the driver when releasing the trigger.
 4. Carefully remove the IO needle. The catheter should feel firmly seated in the bone.
- D. Securing the IO and Disposal of Used Equipment
 1. Safely discard the used IO needle in the sharps container, and discard any equipment/supplies in the corresponding biohazard container.
 2. Secure the device in place using an approved stabilizer and
 - a. Use a longboard or sling to further immobilize the extremity prior to transport.
 3. Attach appropriate saline lock and/or Normal Saline bag with primed IV tubing.
 - a. Ensure that the pressure bag is located on the Normal Saline bag.
 - b. Aspirate for blood/bone marrow
 - i. The inability to withdraw/aspirate blood from the catheter hub does not mean the insertion was unsuccessful.
 - c. Flush with 5-10mL of Normal Saline.
 4. Safely discard the used IO needle in the sharps container, and discard any equipment/supplies in the corresponding biohazard container.
- E. Prehospital personnel cannot remove Femoral IO once it has been inserted into the bone unless otherwise directed by Base Hospital Physician.

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II. Reference Diagrams

Figure 3: Distal Femur IO Site (Peds Only)

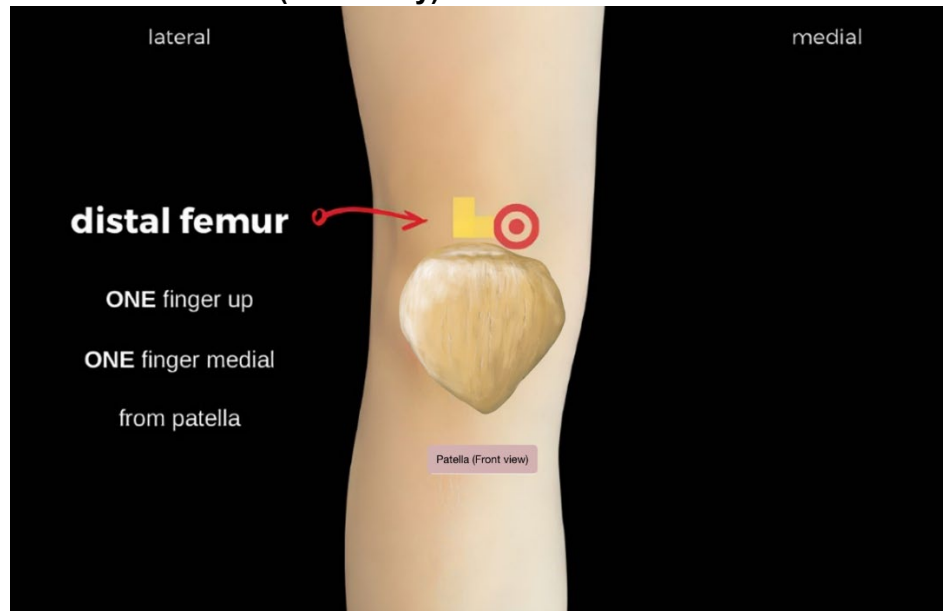


Figure 4: Distal Femoral Site on Infants and Children

