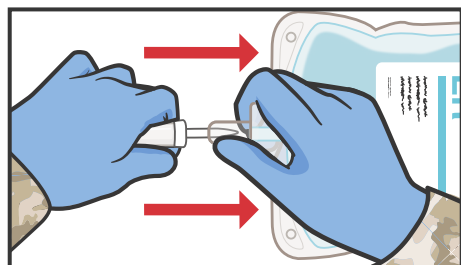


HUMERAL INTRAOSSEOUS (EZ-IO®)



CONSIDER body substance isolation.

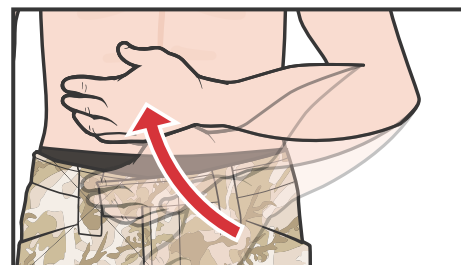
NOTE: If a Combat Lifesaver is available, direct them to assist.



02 SPIKE intravenous (IV) bag and properly prepare IV tubing.



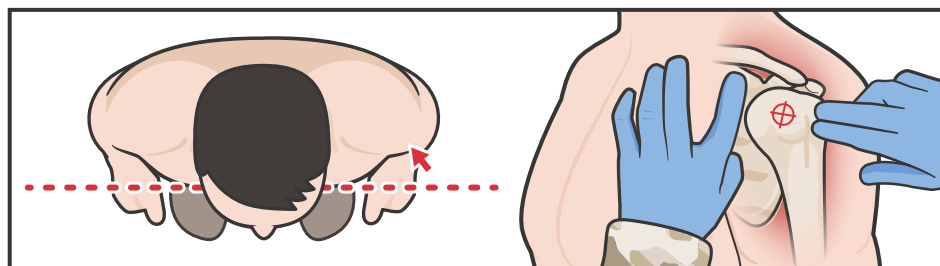
03 PRIME the IO extension tubing with sterile IV solution using aseptic technique. Replace saline with sterile IV solution.



01 GATHER, PREPARE, and INSPECT equipment.

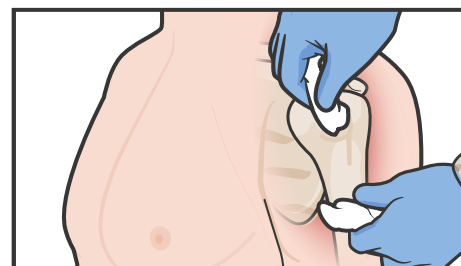
04 HAVE the casualty place their hand over their umbilicus and adduct the casualty's arm.

STEP 4 NOTE: Causes medial rotation of elbow and humerus to provide greater prominence of the insertion site.

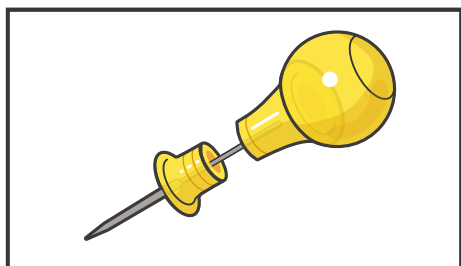


05 PALPATE the greater tubercle of the proximal humerus and then the surgical neck below that landmark. The ideal insertion site is 1 cm above the surgical neck.

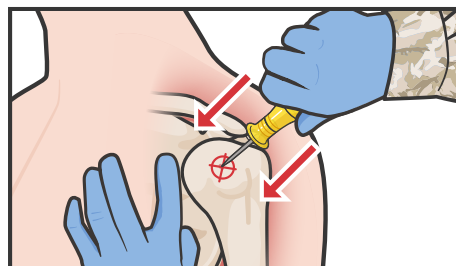
NOTE: The surgical neck of the humerus is just below the greater tubercle of the proximal tubercle (and should feel like a golf ball on a tee).



06 CLEAN site with alcohol or povidone-iodine pad.

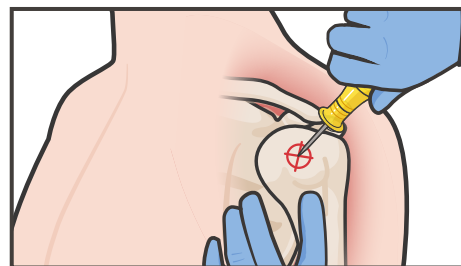


07 LOCATE the proper EZ-IO cartridge. If using a mechanical driver, open the EZ-IO cartridge and attach the needle set to the driver; you should feel a "snap" as the small magnet connects.



08 PREPARE the manual EZ-IO needle by removing the needle safety cap. If using the mechanical driver, remove the cap by momentarily powering the driver while holding the cap.

NOTE: Keep hands and fingers away from the needle.



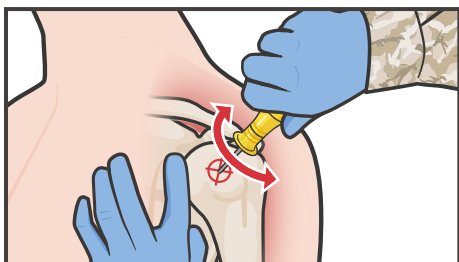
09 While holding the driver or the needle set in your dominant hand, **STABILIZE** the arm near the insertion site with your nondominant hand.

10 IO driver of the needle set should be placed at a 45-degree angle to the plane of the arm.

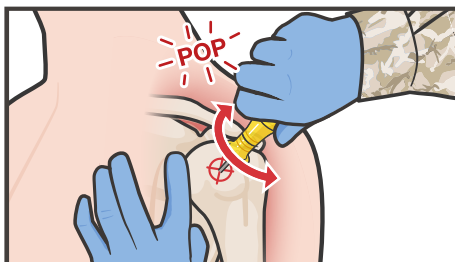
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HUMERAL INTRAOSSEOUS (EZ-IO®)

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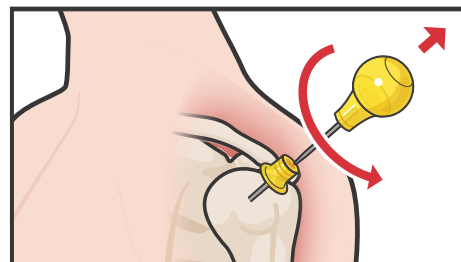


11 GENTLY PIERCE the skin and power or manually advance the needle set until the needle tip touches the bone.

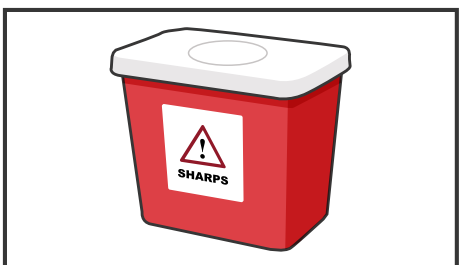


12 With consistent steady downward pressure, twist the needle set back and forth (or squeeze the driver's trigger) until you penetrate the bone cortex.

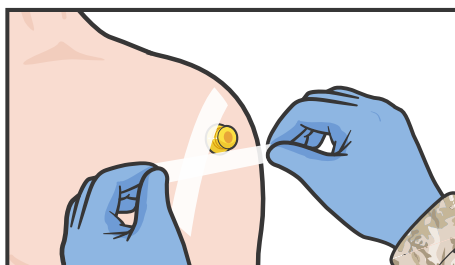
STEP 12 NOTE: An obvious give or pop is felt when the desired depth is obtained.



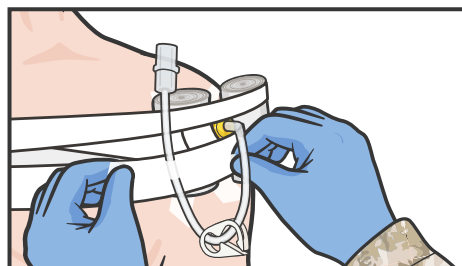
13 UNSCREW the styler counter-clockwise and remove styler from catheter. If using a mechanical driver, gently remove the drill from the needle.



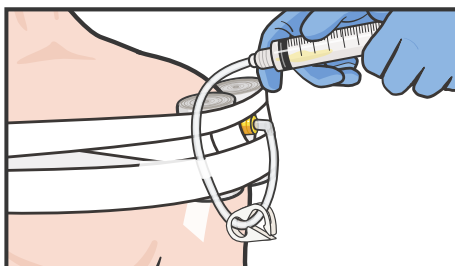
14 PLACE the styler in a sharps container.



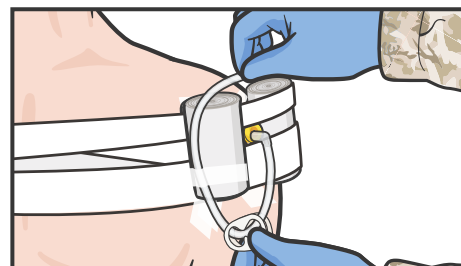
15 SECURE the site with an EZ-IO stabilizer, if available.
NOTE: If a stabilizer is unavailable, secure with bulky dressing and tape to prevent elevated extension tubing from becoming dislodged during casualty care or movement.



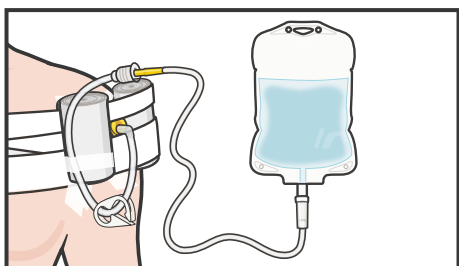
16 CONNECT primed extension set through the 90-degree IO tubing to the Luer lock EZ-IO hub.



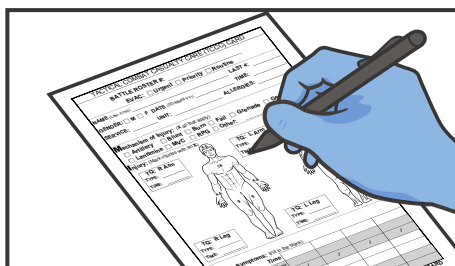
17 ASPIRATE to confirm needle is in the marrow (should see flash of blood-tinged material) and flush catheter with 10 ml flush using a rapid infusion.



18 ASSESS for signs of infiltration or complications.



19 PREPARE for fluid or medication administration.



20 DOCUMENT all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.