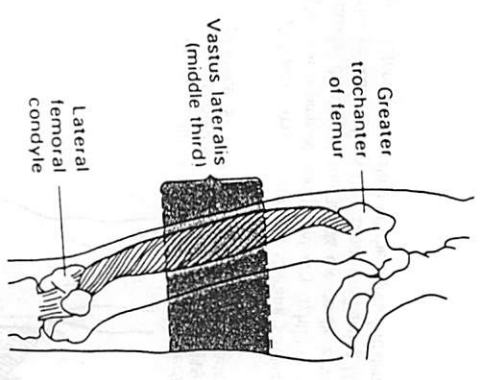
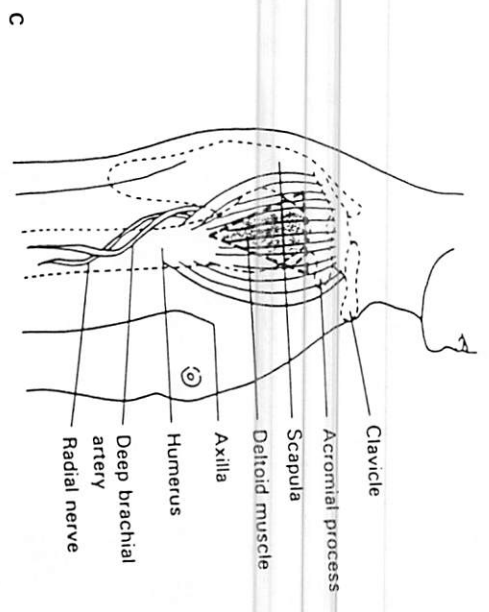
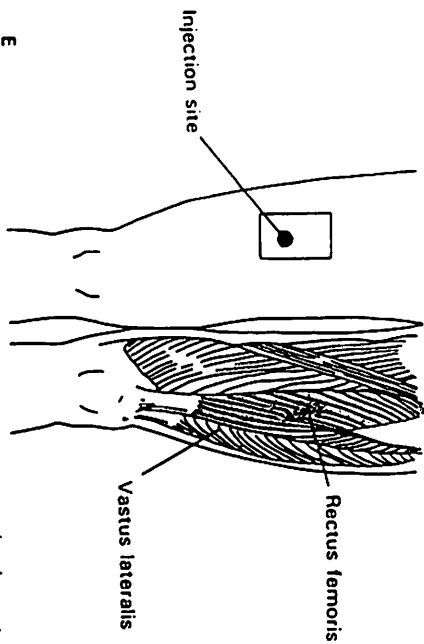


B Intramuscular injection sites. **A.** Landmarks for the dorsogluteal injection site. **B.** Landmarks for the ventrogluteal injection site. (continued)



D Intramuscular injection sites (continued). **C.** Landmarks for the deltoid injection site. **D.** Landmarks for the vastus lateralis injection site. (continued)

Intramuscular injection: Insert needle quickly into big muscle; pull the plunger back to assure that no blood returns and the needle is not in a vein; if no blood returns, inject slowly. Position the patient to relax the muscle, which will increase blood flow, and absorption, and decrease pain. Vastus lateralis muscle of the thigh is site of choice for children up to 3 y. ventrogluteal muscle is the site of choice for older children and adults; deltoid muscle and gluteus maximus are other possible sites in special situations.



E
Intramuscular injection sites (continued). **E.** Landmarks for the rectus femoris injection site. (Earnest, V.V. (1992). *Clinical skills in nursing practice*, 2nd ed. [pp. 865-866]. Philadelphia: JB Lippincott)

Z-Track: Very irritating or staining solutions may be given by Z-track technique. The skin is prepped and pulled very tightly to one side; the needle is inserted into the muscle; the drug is injected as the needle is withdrawn slowly, and the skin release. This procedure allows the various overlapping layers of tissue to slide back into position in a Z formation, sealing off the injected material.