

Medication Administration Review

The background of the slide is a gradient of blue, transitioning from a darker blue at the top to a lighter blue at the bottom. A thin, light blue curved line starts from the left edge and arcs across the slide, passing behind the text.

Subcutaneous Injection

- ✎ Volume usually less than 0.5 mL
- ✎ Administered through a ½- or 5/8-inch, 23- or 25-gauge needle

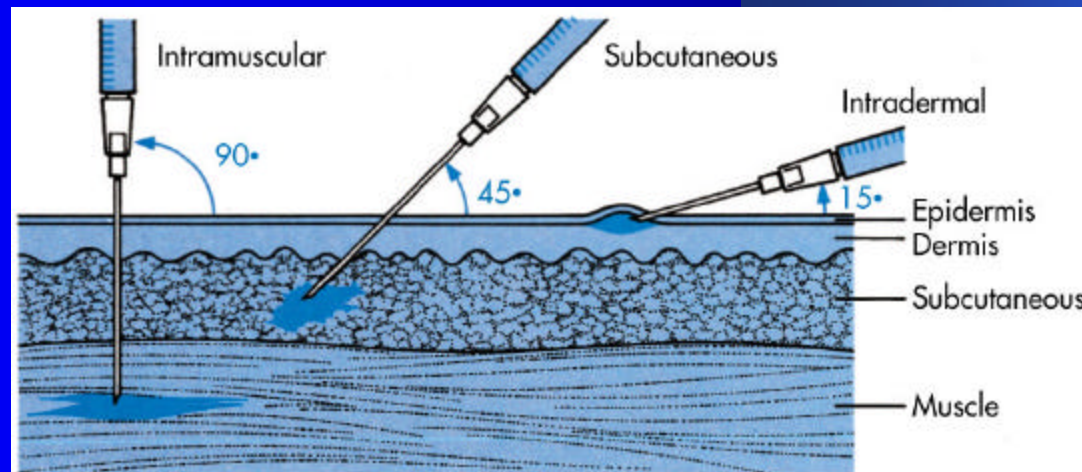


Figure 9-9

SC Injection – Common Sites

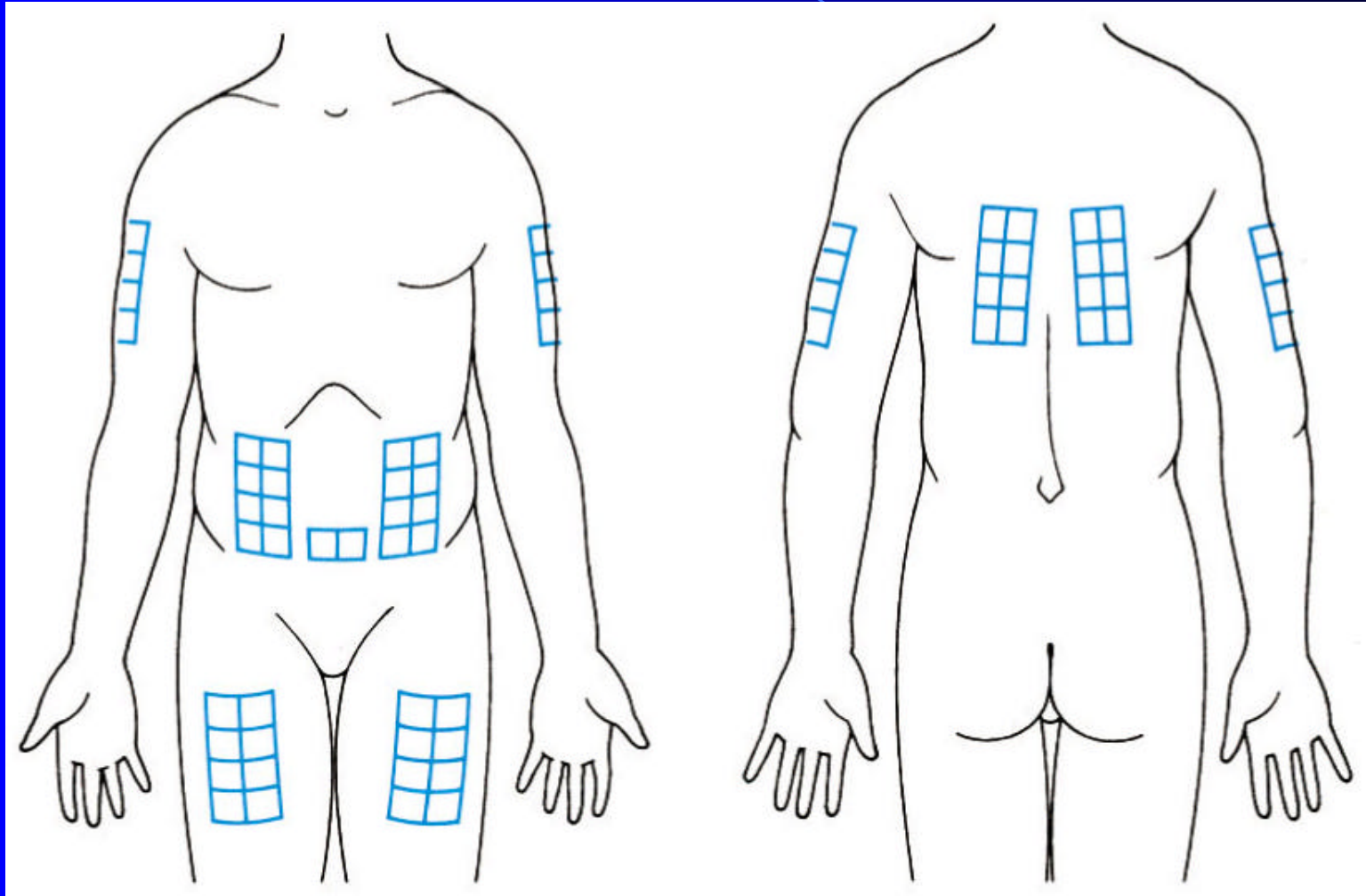


Figure 9-10

Subcutaneous Injection Procedure

- ✎ Choose the injection site
- ✎ Elevate subcutaneous tissue by “pinching” injection site
- ✎ With needle bevel up, insert needle at a 45-degree angle in one quick motion

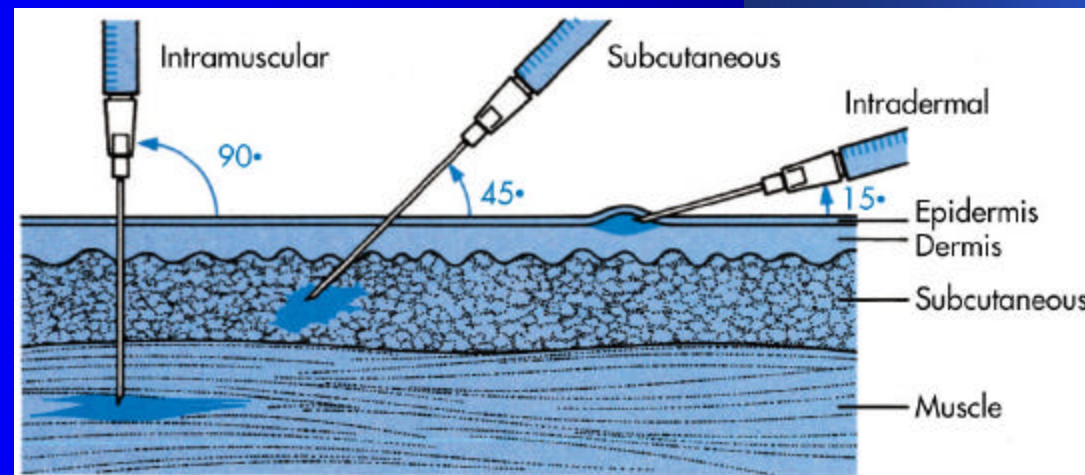


Figure 9-9

Subcutaneous Injection Procedure

- ✍ Pull back slightly on plunger (aspirate) to ensure needle placement
- ✍ After the injection, withdraw needle at same angle it was inserted
- ✍ Use alcohol swab to massage site

Intramuscular Injection

- ✍ Route used when a drug is too irritating to be given subcutaneously or when a greater volume or faster absorption is desired
 - Up to 5 mL may be given by IM injection (buttocks) although more than 3 ml can be painful
 - Deltoid up to 1 ml

Intramuscular Injection

- ✍ Type of needle used depends on:
 - Site of the injection
 - Condition of the tissue
 - Size of the patient
 - Nature of the drug to be injected
- ✍ 1 ½ inch, 19 or 21-gauge needle usually used

Intramuscular Injection

- Procedure for IM injection same as those previously described, but the needle is inserted at a 90-degree angle and the skin is held taut, not pinched

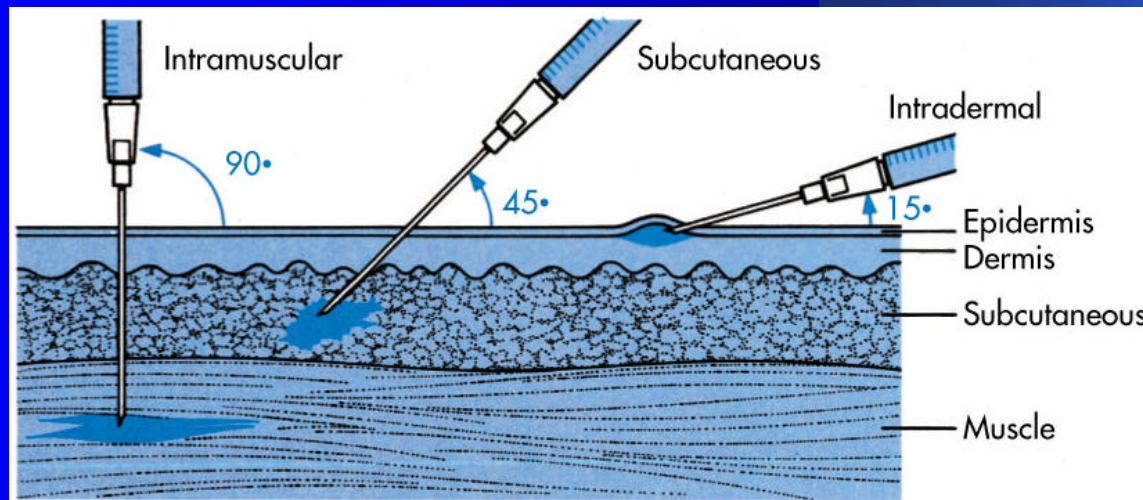


Figure 9-9

IM Injection - Deltoid

- ✍ Used primarily for vaccinations with small volumes (up to 1ml) because the muscle is small
- ✍ Can use 1" needle
- ✍ Avoid hitting radial nerve
- ✍ Patient should be sitting upright or lying flat and should be told to relax the arm muscles

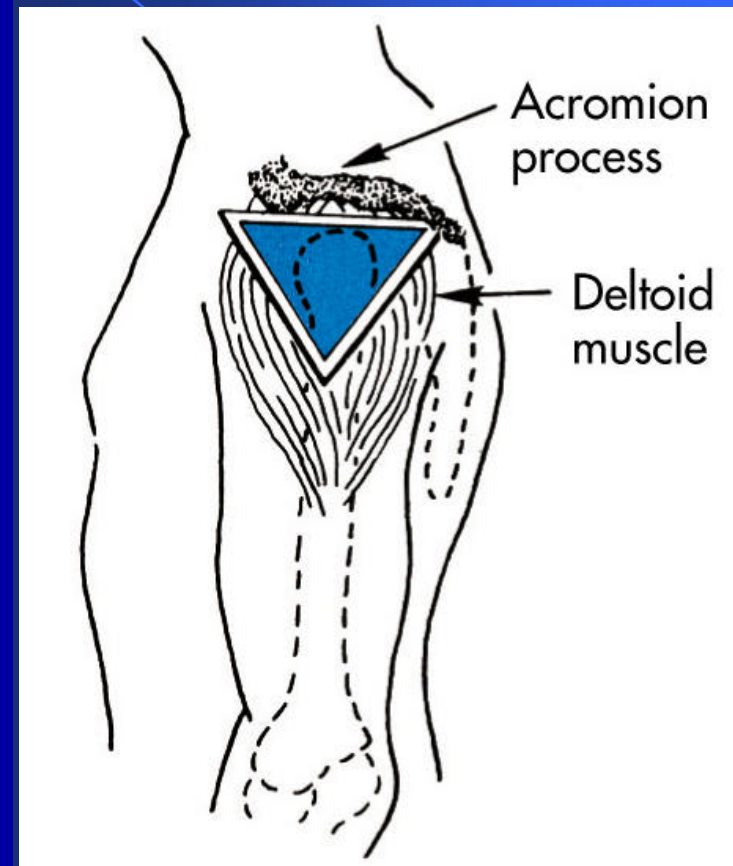


Figure 9-11

Dorsogluteal Method 1

- ✎ Divide buttocks on one side into imaginary quadrants
- ✎ Administer medication into upper outer quadrant

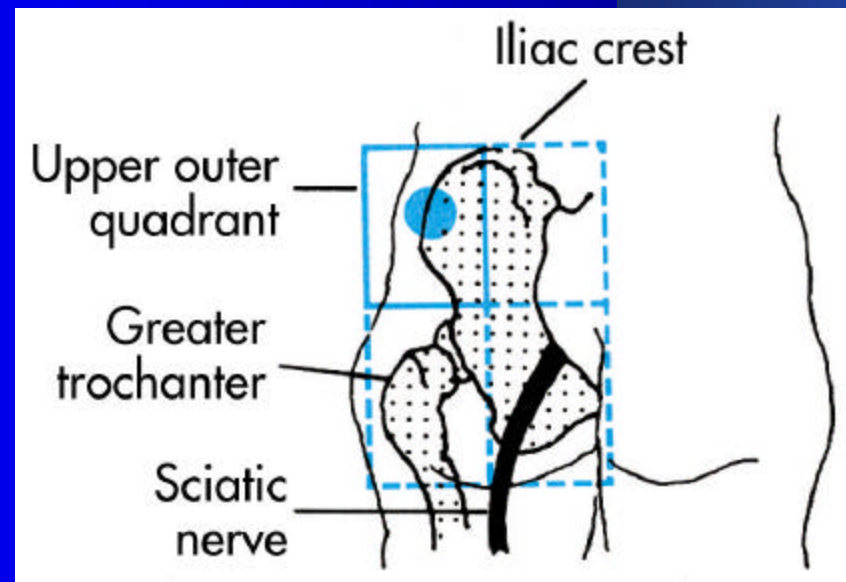


Figure 9-12 A

Dorsogluteal Method 2

- ✍ Locate posterior superior iliac spine and greater trochanter of femur
- ✍ Draw an imaginary line between the two landmarks
 - Injection given up and out from this line

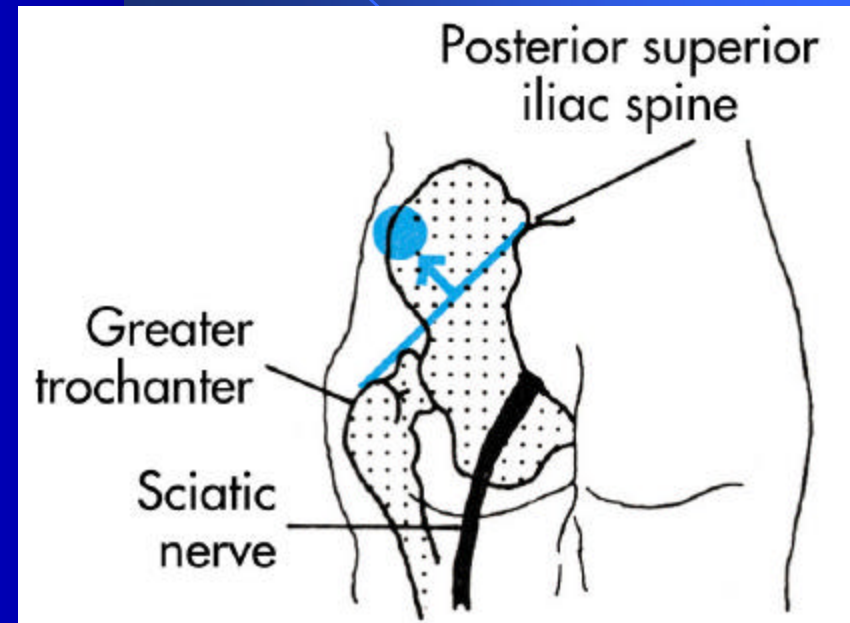


Figure 9-12 B

IM Injection – Dorsogluteal

- ✍ Large, well-developed muscles can accommodate an injection up to 5 mL
 - But anything over 3 mL may be uncomfortable for the patient
- ✍ Patient should lie prone with toes pointing inward to promote muscle relaxation

IM Injection - Vastus Lateralis and Rectus Femoris

- ✍ Up to 5 mL may be injected into a well developed adult
 - although more than 3 ml may be painful
- ✍ Acceptable volumes for injection vary with patient age and muscle size
- ✍ Vastus lateralis is preferred injection site for children (up to 2 ml)

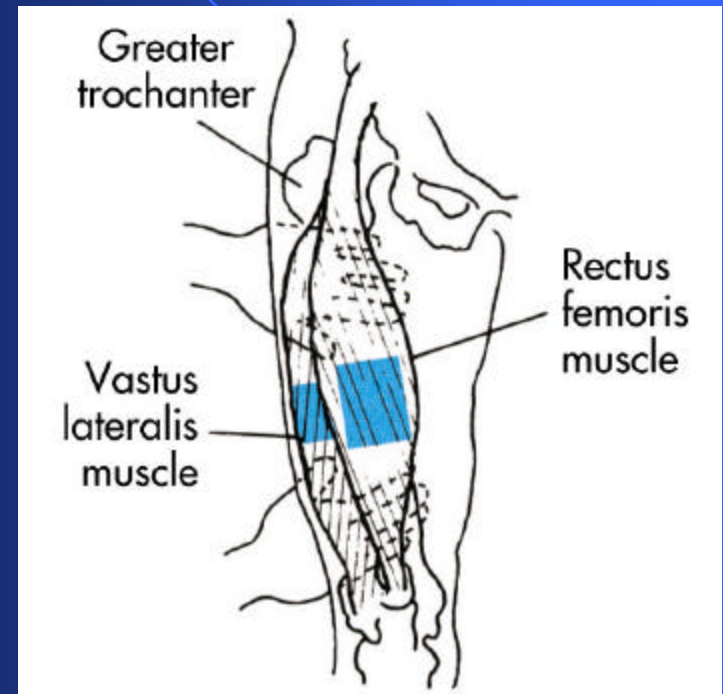


Figure 9-13

IM Injection – Ventrogluteal

- ✎ Accessible when patient lies in a supine or lateral recumbent position
- ✎ Site is free of large nerves and fat tissue
- ✎ In the adult, may accommodate up to 5 mL of a drug
 - although more than 3 ml may be painful

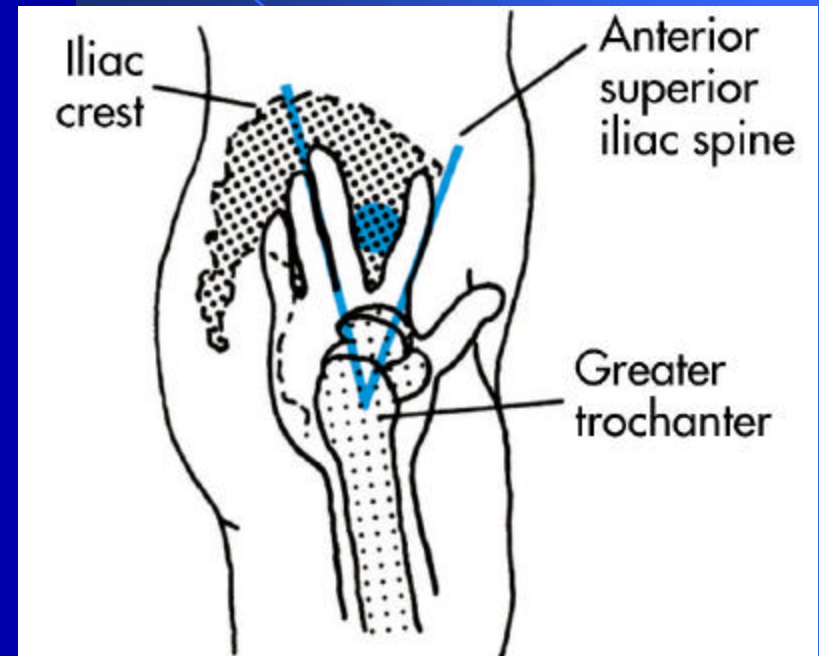
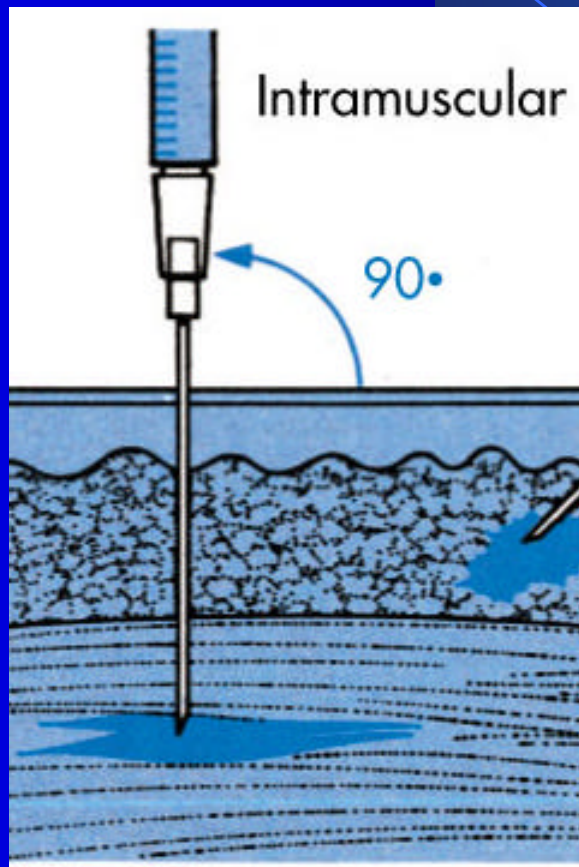
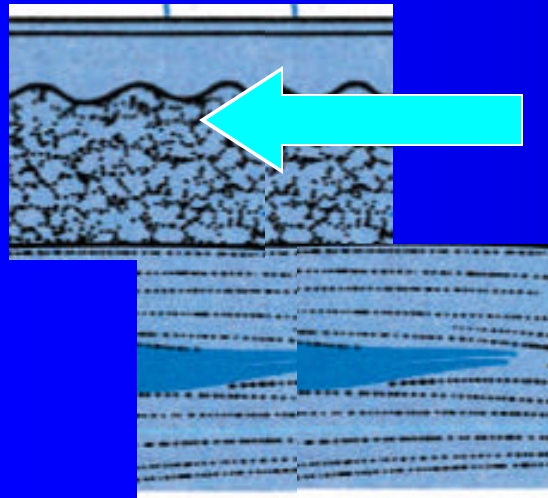


Figure 9-14

Z track IM Injection

Displace
subcutaneous
tissue prior to
injection



Once tissue
released, Z
track results

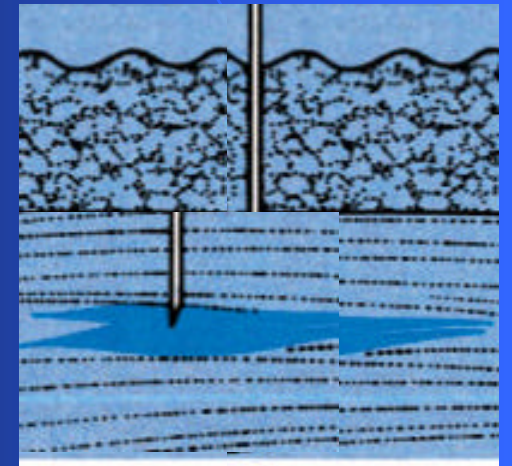


Figure 9-9

References

- ✍ Nasrawi, C.W. & Allender, J.A. (1999). Quick & Easy Dosage Calculations. W.B. Saunders Co., Philadelphia.
- ✍ Sanders, M.J. (2007). Mosby's Paramedic Textbook (Revised 3rd Ed.). Mosby. St. Louis, MO.