

Procedure Box 10-10 Z-Track Administration—cont'd

4. Aspirate for blood return (accidental placement in a blood vessel) by pulling backward on the plunger if agency policy requires.
5. If no blood is noted, gently and slowly inject all medication. (If blood is noted, withdraw the needle, discard the syringe and needle, and start the procedure over with a clean needle and syringe.)
6. Wait 10 seconds before removing the needle, to allow medication to be absorbed deeply.
7. Remove the needle and syringe quickly at the same angle of insertion engaging the needle's safety device and place a cotton ball at the insertion site.
8. Quickly release traction on the Z-track position (see Fig. 10-15). This prevents medication from leaking back into more superficial tissues.
9. Dispose of the needle and syringe immediately in a sharps container. **Do not recap.**
10. Assess the patient and the injection site.
11. Cover the wound with an adhesive bandage.
12. Remove gloves and wash hands.
13. Document dosage, site of placement, and the patient's response.

Example:

01/25/2013 8:30 a.m.: iron dextran 25 mg IM given via Z-track method to right ventrogluteal.
Patient tolerated procedure well. CJ Watkins RN, MSN

A **subcutaneous (SC)** injection may be prescribed if the medication must be absorbed more slowly than it does with an IM injection. The SC route places the medication into the fat under the skin. SC injection enters the fatty layer of the skin (Fig. 10-16), where medications are absorbed more slowly than when administered by the IM route. Insulin is one example of a medication that is administered by the SC route. Because fat does not have as generous a blood supply as muscle and also has fewer nerve endings, patients rarely complain of pain at the site, which rarely bleeds after injection. The most common medications given by this route are insulin and heparin.

Commonly used areas for SC injections include the fleshy part of the upper arm, the abdomen, and the thigh. If the patient is to receive regular injections, such as of insulin, the sites must be rotated so the medication does not accumulate in one area (Fig. 10-17). In the office or clinic setting, you may choose the back of the upper arms (not the deltoid muscle). Procedure Box 10-11 explains how to administer an SC injection. The needle is injected at a 45° angle. You do not need to aspirate to check for blood return because SC tissue has few blood vessels. You will also bunch up the tissue instead of holding it taut before injections as you would for an IM injection. Fast Tip 10.1 provides teaching tips for these patients.

Intravenous Medications and Administration

Finally, the IV route, which involves injecting the drug directly into a vein, is the most rapid method for administering medication into the bloodstream. IV medications are immediately absorbed and available for the body to use. The advantages of the IV route are not only rapid absorption, but also



FIGURE 10-16: Subcutaneous injections. These injections are administered into the subcutaneous fatty tissue.