until the expiration date on the label. Diabetic supplies should not be left in a hot environment.

Injection Procedure

Learning to give insulin injections is a source of anxiety for both parents and children. It is helpful for the learner to know that this important aspect of care will become as routine as brushing the teeth. First, the basic injection technique is taught using an orange or similar item and sterile normal saline for practice. To gain children's confidence, the nurse can demonstrate the technique by giving a skillful injection to the parent and then having the parent return the demonstration by giving the nurse an injection. With practice and confidence, the parents will soon be able to give the insulin injection to their children, and their children will trust them. Another effective strategy is to instruct the children and then have them teach the technique to the parents while the nurse observes. Both parents should participate, and as little time as possible should elapse between instruction and the actual injection, especially with parents and teenage learners.

Insulin can be injected into any area in which there is adipose (fat) tissue over muscle; the drug is injected at a 90-degree angle. Newly diagnosed children may have lost adipose tissue, and care should be exerted not to inject intramuscularly. The pinch technique is the most effective method for tenting the skin to allow easy entrance of the needle to subcutaneous tissues in children. The site selected will sometimes depend on whether children or parents administer the insulin. The arms, thighs, hips, and abdomen are usual injection sites for insulin. The children can reach the thighs, abdomen, and part of the hip and arm easily but may require help to inject other sites. For example, a parent can pinch a loose fold of skin of the arm while the child injects the insulin.

The parents and child are helped to work out a rotation pattern to various areas of the body to enhance absorption because insulin absorption is slowed by fat pads that develop in overused injection areas. The most efficient rotation plan involves giving about four to six injections in one area (each injection about 2.5 cm [1 inch] apart, or the diameter of the insulin vial from the previous injection) and then moving to another area.

Remember that the absorption rate varies in different parts of the