



FIG 20-11 Holding a small child for intramuscular (IM) injection. Note how the nurse isolates and stabilizes the muscle.

If medication is given around the clock, the nurse must wake the child. Although it may seem easier to surprise the sleeping child and do it quickly, this can cause the child to fear going back to sleep. When awakened first, children will know that nothing will be done to them unless they are forewarned. The Nursing Care Guidelines box summarizes administration techniques that maximize safety and minimize the discomfort often associated with injections.

A needleless injection system (e.g., Biojector) delivers IM or subcutaneous injections without the use of a needle and eliminates the risk of accidental needle puncture. This needle-free injection system uses a carbon dioxide cartridge to power the delivery of medication through the skin. Although it is not painless, it may reduce pain and the anxiety of seeing the needle.

Subcutaneous and Intradermal Administration

Subcutaneous and intradermal injections are frequently administered to children, but the technique differs little from the method used with adults. Examples of **subcutaneous injections** include insulin, hormone replacement, allergy desensitization, and some vaccines. Tuberculin testing, local anesthesia, and allergy testing are examples of frequently administered **intradermal**