usually 36.5° to 37.6° C (97.7° to 99.7° F). Skin temperature is slightly lower than core body temperature. Friedrichs, Staffileno, Fogg, et al (2013) report a significant correlation between rectal temperature and body temperature taken in the left axilla of full term infants. The mean difference between rectal and axillary temperature was 0.23° C. The single best method for determining a newborn infant's temperature remains elusive when considering the available studies. Despite their usefulness in older children and adults, the accuracy of tympanic membrane sensors is problematic in infants. A meta-analysis of 101 studies comparing tympanic membrane temperatures with rectal temperatures in children concluded that the tympanic method demonstrated a wide range of variability, limiting its application in a pediatric setting (Craig, Lancaster, Taylor, et al, 2002). Dodd, Lancaster, Craig, et al (2006) concur with this finding, stating that after a systematic review of studies involving almost 4100 children, they found that infrared ear thermometry would fail to diagnose fever in 3 or 4 of every 10 febrile children.

FIG 7-4 Mother taking axillary temperature with digital thermometer.