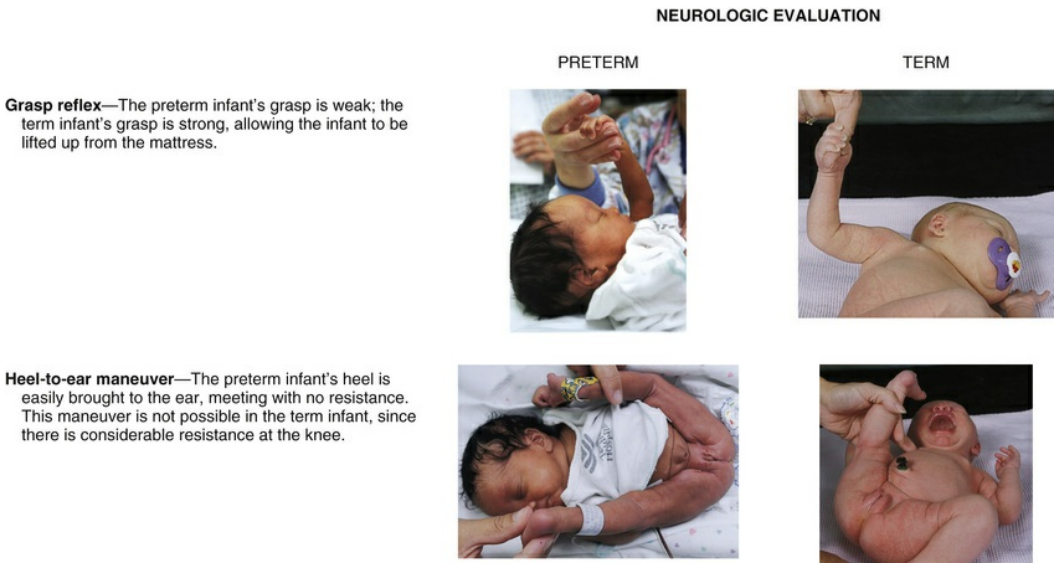

FIG 8-15 Clinical and neurologic examinations comparing preterm and full-term infants. (Data from Pierog SH, Ferrara A: *Medical care of the sick newborn,* ed 2, St Louis, 1976, Mosby.)

In contrast to full-term infants' overall attitude of flexion and continuous activity, preterm infants may be inactive and listless. The extremities maintain an attitude of extension and remain in any position in which they are placed. Reflex activity is only partially developed—sucking is absent, weak, or ineffectual; swallow, gag, and cough reflexes are absent or weak; and other neurologic signs are absent or diminished. Physiologically immature, preterm infants are unable to maintain body temperature, have limited ability to excrete solutes in the urine, and have increased susceptibility to infection. A pliable thorax, immature lung tissue, and an immature regulatory center lead to periodic breathing, hypoventilation, and frequent periods of apnea. They are more susceptible to biochemical alterations such as hyperbilirubinemia and hypoglycemia, and they have a higher extracellular water content that renders them more vulnerable to fluid and electrolyte derangements. Preterm infants exchange fully half of their extracellular fluid volume every 24 hours compared with one seventh of the volume in adults.

The soft cranium is subject to characteristic unintentional deformation caused by positioning from one side to the other on a mattress. The head looks disproportionately longer from front to back, is flattened on both sides, and lacks the usual convexity seen at the temporal and parietal areas. This positional molding is often