FIG 7-2 Three infants, same gestational age, weight 600 g, 1400 g, and 2750 g, respectively, from left to right. (From Perinatal assessment of maturation, National Audiovisual Center, Washington, DC.)

General Measurements

Several important measurements of newborns have significance when compared with each other and when recorded over time on a graph. For full-term infants, average head circumference is between 33 and 35.5 cm (13 and 14 inches). Head circumference may be somewhat less immediately after birth because of the molding process that occurs during vaginal deliveries. Usually by the second or third day, the skull is normal in size and contour.

Head circumference may be compared with crown-to-rump length, or sitting height. Crown-to-rump measurements are usually 31 to 35 cm (12.2 to 13.8 inches), thus head circumference is generally equal to or up to 2 cm more than crown-to-rump length. Comparing neonatal head circumference with crown-to-rump length may provide a means for identifying infants at risk for microcephaly, hydrocephalus, cephalhematoma, subgaleal hemorrhage, and subdural hematoma. Prematurity and intrauterine malnutrition may also disrupt the relationship between head circumference and crown-to-rump length.

Abdominal circumference need not be routinely measured in newborns but should be done in the event of abdominal distention to determine changes in girth over time. Abdominal circumference is measured just above the level of the umbilicus because the