

[Poison Prevention, et al, 2009](#)). Seats with shields (large padded surfaces in front of the child) and armrests (found on some older models) are unacceptable because of their proximity to the infant's face and neck. (For a discussion of appropriate car restraints for preterm infants, see [Community Focus](#) box, [Chapter 8](#); and for infants, see [Motor Vehicle Injuries](#) in [Chapters 9](#) and [11](#).)

In the United States and Canada, all states and provinces have mandated the use of child restraints. Therefore, hospitals and birthing centers should have policies regarding the safe discharge of newborns in car safety seats and provisions for parents to learn to use the devices correctly. In addition, hospital personnel should ensure that infants born before 37 weeks of gestation have a period of observation in the selected car seat to monitor for possible apnea, bradycardia, and oxygen desaturation ([Bull, Engle, Committee on Injury, Violence, and Poison Prevention, et al, 2009](#)). Parents are more likely to use a restraint correctly and consistently if the proper use of one is demonstrated and its necessity is stressed.

NCLEX Review Questions

1. Identify the anatomic changes that occur shortly after birth that affect the newborn's adaptation to extrauterine existence. Select all that apply.
 - a. Closure of the foramen ovale
 - b. Closure of the ductus arteriosus
 - c. Increase in pulmonary vascular resistance
 - d. Closure of the ductus venosus
 - e. Decrease in pulmonary vascular resistance
2. In the newly born infant thermogenesis is achieved by:
 - a. Shivering.
 - b. Brown fat metabolism.
 - c. Overhead warming unit.
 - d. Skin-to-skin contact with mother.
3. What does the Apgar scoring system assess? Select all that apply.
 - a. Respiratory effort