

genders may be engorged and secrete milk from the first few days of life to as long as 2 months of age. Female newborns may have **pseudomenstruation** (more often seen as a milky secretion than actual blood) from a sudden drop in progesterone and estrogen levels.

## **Neurologic System**

At birth, the nervous system is incompletely integrated but sufficiently developed to sustain extrauterine life. Most neurologic functions are primitive reflexes. The autonomic nervous system is crucial during transition because it stimulates initial respirations, helps maintain acid–base balance, and partially regulates temperature control.

Myelination of the nervous system follows cephalocaudal/proximodistal (head-to-toe/center-to-periphery) laws of development and is closely related to observed mastery of fine and gross motor skills. Myelin is necessary for rapid and efficient transmission of some, but not all, nerve impulses along the neural pathway. The tracts that develop myelin earliest are the sensory, cerebellar, and extrapyramidal tracts. This accounts for the acute senses of taste, smell, and hearing in newborns, as well as the perception of pain. All cranial nerves are present and myelinated except for the optic and olfactory nerves.

## **Sensory Functions**

Newborns' sensory functions are remarkably well developed and have a significant effect on growth and development, including the attachment process.

### **Vision**

At birth, the eye is structurally incomplete. The fovea centralis is not yet completely differentiated from the macula. The ciliary muscles are also immature, limiting the eyes' ability to accommodate and focus on an object for any length of time. The infant can track and follow objects. The pupils react to light, the blink reflex is responsive to minimal stimulus, and the corneal reflex is activated by a light touch. Tear glands usually do not begin to function until 2 to 4 weeks of age.