

boys continues to fall for a few more years. Females maintain a temperature slightly above that of males throughout life.

Even with improved temperature regulation, infants and young children are highly susceptible to temperature fluctuations. Body temperature responds to changes in environmental temperature and is increased with active exercise, crying, and emotional stress. Infections can cause a higher and more rapid temperature increase in infants and young children than in older children. In relation to body weight, an infant produces more heat per unit than adolescents. Consequently, during active play or when heavily clothed, an infant or small child is likely to become overheated.

## **Sleep and Rest**

Sleep, a protective function in all organisms, allows for repair and recovery of tissues after activity. As in most aspects of development, there is wide variation among individual children in the amount and distribution of sleep at various ages. As children mature, there is a change in the total time they spend in sleep and the amount of time they spend in deep sleep.

Newborn infants sleep much of the time that is not occupied with feeding and other aspects of their care. As infants grow older, the total time spent sleeping gradually decreases, they remain awake for longer periods, and they sleep longer at night. For example, the length of a sleep cycle increases from approximately 50 to 60 minutes in newborn infants to approximately 90 minutes in adolescents ([Anders, Sadeh, and Appareddy, 2005](#)). During the latter part of the first year, most children sleep through the night and take one or two naps during the day. By the time they are 12 to 18 months old, most children have eliminated the second nap. After age 3 years, children have usually given up daytime naps except in cultures in which an afternoon nap or siesta is customary. Sleep time declines slightly from 4 to 10 years old and then increases somewhat during the pubertal growth spurt.

The quality of sleep changes as children mature. As children develop through adolescence, their need for sleep does not decline, but their opportunity for sleep may be affected by social, activity, and academic schedules.