

hormone pulse patterns may coordinate body composition, weight gain, and linear growth (Lampl, Johnson, and Frongillo, 2001; Lampl, Thompson, and Frongillo, 2005). Furthermore, findings indicate a stuttering or saltatory pattern of growth that follows no regular cycle and can occur after “quiet” periods that last as long as 4 weeks.

### Sensitive Periods

There are limited times during the process of growth when the organism interacts with a particular environment in a specific manner. Periods termed **critical**, **sensitive**, **vulnerable**, and **optimal** are the times in the lifetime of an organism when it is more susceptible to positive or negative influences.

The quality of interactions during these sensitive periods determines whether the effects on the organism will be beneficial or harmful. For example, physiologic maturation of the central nervous system is influenced by the adequacy and timing of contributions from the environment, such as stimulation and nutrition. The first 3 months of prenatal life is a sensitive period in the physical growth of fetuses.

Psychosocial development also appears to have sensitive periods when an environmental event has maximal influence on the developing personality. For example, primary socialization occurs during the first year when the infant makes the initial social attachments and establishes a basic trust in the world. A warm and consistently responsive relationship with a parent figure is fundamental to a healthy personality. The same concept might be applied to readiness for learning skills, such as toilet training or reading. In these instances, there appears to be an opportune time when the skill is best learned.

### Individual Differences

Each child grows in his or her own unique and personal way. The sequence of events is predictable; the exact timing is not. Rates of growth vary, and measurements are defined in terms of ranges to allow for individual differences. Periods of fast growth, such as the pubescent growth spurt, may begin earlier or later in some children than in others. Children may grow fast or slowly during the spurt