which compromises the other 40% of the cycle. Phases include more specific spatiotemporal, kinematic, and kinetic components of gait. The intent of this chapter is not to provide an in-depth review of gait biomechanics, but a general understanding of these elements, which is critical for proper examination and evaluation.

Symmetry is a hallmark of a healthy and efficient gait. Cadence, foot progression angle, step length, step width, and stride length are spatiotemporal parameters that are easily and frequently measured. (See Table 12-1 and Figure 12-1.) Whereas breaking down the components of gait may be essential for an accurate assessment, it is critical to realize that just as a symphony cannot be understood or appreciated by studying each note in isolation, gait cannot be understood by studying only the individual aspects.

### Growth and Development

Gait parameters change across the lifespan. In general, younger children show greater variability in gait parameters than older children. Across childhood, step and stride lengths increase with age and cadence decreases, as step and stride lengths increase. The BOS decreases with age.\(^{17}\) The changes in these parameters reflect changes in many of the body systems and continual refinements of global neuronal maps. Gait is thought to be mature by age 7 years.\(^{17}\) (See Table 12-2 and Figure 12-2.)