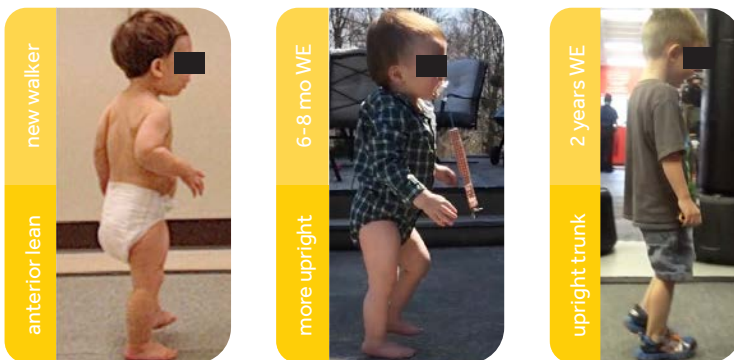


Typical gait development

Foot Contact



Trunk Posture



LE Muscle Activity



In typical development, we see progression in three primary areas during the first two years of walking experience. Lack of triplanar control from head to pelvis will impede progression in the development of an energy efficient gait pattern. Poor distal alignment due to atypical tone (either hypotonia or hypertonia) and lack of functional range of motion (range of motion deficits or hypermobility) will also negatively affect gait development.

Clark, Elaine PT, DSc, PCS; Sweeney, Jane K. PT, PhD, PCS, FAPTA; Yocum, Allison PT, DSc, PCS; McCoy, Sarah W. PT, PhD. Effects of Motor Control Intervention for Children with Idiopathic Toe Walking: A 5-Case Series. Pediatric Physical Therapy: Winter 2010 - Volume 22 - Issue 4 - p 417-426. Doi: 10.1097/PEP.0b013e3181f9d5b8

» Key Points in gait development:

1. A heel-toe pattern requires at least 10° of ankle dorsiflexion
2. Typical ankle dorsiflexion is 20-30° in children aged 4-7 years.
3. Typical heel-strike with active dorsiflexion doesn't emerge before aged 2.
4. The propulsive stage of stance phase (3rd rocker) is not usually complete until age 4-5 years of age.
5. Active use of the 3rd rocker creates extension of metatarsals and phalanges to drive the windlass mechanism and arch development occurs as a result of this typical gait progression.