



Topic:

Treadmill training and
infant motor development

Research tells us:

Using a slow-moving treadmill to stimulate an infant's inborn stepping reflex and provide practice in taking steps may be one method to enhance early motor development and encourage children with motor delays to walk at an earlier age than might be expected. Because most studies of the practice have used small, specially developed treadmills that are not commercially available, more consideration needs to be given to the general feasibility of the intervention before it can be recommended.

Infants may 'step up' to enhanced motor skills development via treadmill training

Scientists working in the area of infant motor development are bringing out babies' natural stepping instincts and encouraging them to practice taking steps by supporting them upright for short periods of time on slow-moving treadmills. Findings from an analysis of available research on this type of treadmill training show that it holds promise for enhancing early motor development, including earlier walking for young children with disabilities.

Tracy L. Masiello, Ph.D., and Lauren Tucker, B.A., of the Research and Training Center on Early Childhood Development examined eight studies of treadmill training that included 72 young children with and without disabilities. Findings from their analysis suggest that treadmill training may be one effective way to improve infant stepping and walking in alternating left-right steps and to encourage earlier walking in young children with disabilities.

The RTC researchers caution that additional research is needed before the practice can be widely recommended. In all but one of the studies examined, small motorized treadmills designed specifically for the study were used. Proponents of the practice say that standard, commercially available treadmills can be used to the same effect, but the feasibility of this has yet to be established.



Above: A mother supports her infant during a stepping session using a small, specially designed electric treadmill.

Acting on the evidence:

It is recommended that you discuss the practice with a motor development specialist, such as a pediatric physical therapist, if you are interested in exploring the use of treadmill training with your young child.



Photographs/Center for Motor Behavior and Pediatric Disabilities

Right: Dale Ulrich, Ph.D., professor of movement science and physical education at the University of Michigan (Ann Arbor), conducts experimental treadmill training with an infant at the Center for Motor Behavior and Pediatric Disabilities.

Take another look:

Read or download the complete research synthesis in the Bridges section of www.researchtopractice.info: Masiello, T. L., & Tucker, L. (2006). Influences of Treadmill Training on the Motor Development of Infants With and Without Disabilities. *Bridges*, 4(5).

Exciting print, web-based and multimedia materials of interest to parents and early childhood practitioners are available from the Research and Training Center on Early Childhood Development, on the Web at www.researchtopractice.info.

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