



Toe Walking: Don't Side Step this Gross Motor Problem

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As the mother of two young boys, I have experienced firsthand the joy of watching my children take their first steps. As a physical therapist (PT), I am particularly aware of how children learn to walk and the developmental milestones they meet along the way and, like any parent, I am also on the lookout for signs that my child is struggling.

Toe walking is a common gross motor problem that I see in young children.

Typically, children begin to walk independently at around one year of age. At first, they walk with stiff knees, on flat feet, tottering from one sturdy object to the next. Children don't start walking with a mature "heel-to-toe" pattern until they are around three and a half years old.

As they learn to walk, some children start walking in a tip-toe position but, because this pattern of walking is energetically inefficient, most children will adopt a heel-to-toe pattern over time. Typically children stop toe walking by the beginning of their second year, if your child continues to toe walk into his or her third year, this may be a sign that toe walking has become a habit.¹

Habitual toe walking is referred to as idiopathic toe walking. This type of toe walking is described as "idiopathic" because there is no known cause for this behavior, though there may be a higher incidence of toe walking in children with a family history.²

In addition to idiopathic toe walking, there is also another category of toe walking that is caused by a neurological disorder like mild cerebral palsy or autism. If your child has no evidence of prematurity or neurological problems, has met developmental milestones, and the toe walking develops after your child has started to walk, then his or her toe walking is most likely idiopathic.

A few months ago, I noticed that my younger son who is 18 months old was starting to walk on his toes. As a PT, I know how important it is to catch toe walking early. If toe walking becomes a habit, as your child gets older, this abnormal gait pattern will disrupt his center of gravity putting him off balance and disrupting his gross motor development.

Children who continue to walk on their toes instead of in a typical "heel to toe" gait do so because of habit, fear of losing balance or tight muscles in the lower legs. The more children walk on their toes, the tighter their muscles and tendons get. When I felt my son's Achilles' tendons, I noticed that they were beginning to tighten even though he had only been toe walking for a short time. This muscle stiffness makes it more difficult for children to break the habit of toe walking because walking with a heel to toe pattern becomes less comfortable.

¹ Sutherland DH, Olshen R, Cooper L, Woo SL. The development of mature gait. *J Bone Joint Surg (Am)*. 1980;62:336-353

² Eiff MP, Zegar Judkins D, What is the appropriate evaluation and treatment of children who are "toe walkers"? *The Journal of Family Practice*. 2006; 55:447-450.

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The good news is that children who exhibit idiopathic toe walking respond very well to physical therapy for stretching and strengthening the lower legs.

In order to intervene before my son's toe walking could become a habit, I reminded him to "put his heels down." As with most children who toe walk, my son can walk with a heel-toe pattern when he is prompted, but he might return to walking on his tip toes after a few moments. By consistently reminding my son to put his heels down and helping him with stretches, I have seen his toe walking decrease in frequency.

I utilize similar strategies when I work with other children who toe walk. I collaborate with families and caregivers to strengthen and stretch the lower leg muscles while working to retrain motor planning to encourage normal running and walking patterns.

Early, proactive intervention combined with at home carryover is typically effective in helping to stop toe walking and aid in the development of a mature heel-to-toe walking pattern. If your child consistently toe walks into his or her third year or you have noticed that your child is starting to toe walk, don't hesitate to contact your child's pediatrician or MTC for a free screening from one of our licensed and credentialed therapists.

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