

Patient Education



ARNOLD PALMER HOSPITAL
For Children
Supported by Arnold Palmer Medical Center Foundation

The Orthopaedic Center
at Arnold Palmer Hospital
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Toe Walking

The most common cause of toe walking in children is idiopathic toe walking. Idiopathic literally means “no known cause.” This is often referred to as habitual toe walking.

The hallmark of idiopathic toe walking is that children can walk in a normal heel to toe fashion at times or when asked to do so. It also implies that no other diagnosis has been found.

Walking on tip toes is quite common between 10 and 18 months when children are learning to walk. In some children it simply becomes a habit, and when asked to walk normally they put their heel down on the ground before their toes. In our office, it is known as his or her “doctor’s walk.” It’s just that when they’re not concentrating they seem to revert to walking on their toes.

The good news is that most children with idiopathic toe walking tend to outgrow this pattern of walking (or gait) as they get older. While we don’t know exactly why, there are probably several reasons: as children get older, they get heavier which makes toe walking more difficult and as children reach kindergarten and grade school they begin to adopt social behaviors which encourage them to walk like other children in their school.

Is this genetic or familial?

Well, we don’t know, but it might be. Patients’ parents often note that they themselves were toe walkers or that there are other toe walkers in the extended family.

Can there be other conditions that cause my child’s toe walking?

Yes, there are several which conditions all of which are less common and usually your child will have other signs or symptoms. However, your pediatrician and orthopaedist will look for these symptoms and ask questions about your child’s development, birth history, and family history to determine if these might be present.

Mild spastic diplegic Cerebral Palsy is perhaps the second most common, but will usually affect the hip and knee motions as well.

The rarer conditions that can cause children to walk on both tip toes are Charcot-Marie-Tooth peripheral neuropathy or muscular dystrophy, such as Duchene. There are some less common things like autism, schizophrenia and finally spinal cord anomalies and juvenile type multiple sclerosis too. These are all fortunately quite rare.

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What are our treatment options?

Most orthopaedic surgeons would recommend against any treatment early on as we know many or most children will stop toe walking on their own. We call this observation.

Casting is an option that can be employed. This is sometimes done as one set of casts or multiple sets of casts that are changed every 4-6 weeks. Advantages of this option are that it is non-surgical and relatively benign. Disadvantages include the fact that casts tend to be cumbersome and make bathing difficult. Further, they can rarely cause complications such as blistering which can be significant. Finally, the true rate of success of this is unknown as many children will improve temporarily and the toe walking may return. The use of casts may also create the same stigma as the thing you are trying to treat itself!

Casting with the use of Botox has been used in some centers. Botox (yes, the same thing used by soap opera stars to reduce face wrinkles) is a temporary toxin (obtained from a bacteria that causes botulism) that paralyzes muscles for 3-6 months. This may help improve the success rate of treating toe walking. However, it should be noted that this has never been proven in the medical literature, that long term effects of this medication in children remain unknown, that it requires a sedation in order to perform the injections in children, and that the toe walking may still recur despite its use.

Finally, the surgical option for toe walking may be offered in older children or children who have failed the above treatment options. This is called a tendoAchilles lengthening (TAL). This involves a brief anesthesia and the surgeon will cut the Achilles tendon in 2-3 locations to help lengthen the tendon. Six weeks of casting are usually used following this procedure to protect the tendon while it heals. This is the most invasive treatment option but also has the highest success rate. There is no defined age limit for this procedure although it is usually done in the age range of 4-8 years old. You will also notice some temporary weakness with running and jumping which can last for 6-12 months but almost always returns to normal.

What are the long term consequences of toe walking if left untreated?

There are none that we know of. Obviously, as children enter grade school, they may be teased by their peers if it is noticeable enough. Adults who toe walk may tend to wear out the front of their shoe soles faster than the back. However, we know of no long-term problems such as arthritis or other injuries that occur because of this.