

Idiopathic Toe Walking

Most children toe walk occasionally when their bare feet are on a cold floor, or when they are first learning to walk cruising along furniture. Some kids do it on and off for fun when role playing or doing ballet moves. But if your child is older than 3 years and consistently walking on his/her toes, a pediatrician, and/or an orthopedist should evaluate the child.

What Causes Toe Walking?

Toe walking has a spectrum of different etiologies. At the end of this spectrum is a condition called idiopathic or “habitual” toe walking. With this diagnosis ultimately the cause is unknown. A diagnosis of idiopathic toe walking is made after evaluating the child to rule out any neuromuscular or orthopedic problems. Such as, cerebral palsy (brain injury at birth), injury to the spinal cord, or paralytic muscle disease including muscular dystrophy. Once these diagnoses are ruled out a diagnosis of Idiopathic toe walking may be made. Idiopathic toe walking first appears when the child is a toddler and walking begins. Often the child can walk flatfooted when prompted to do so. But when the child is unaware he/she is being observed their preferred position is to walk on his/her toes.

A child with idiopathic toe walking may walk on his or her toes due to hyper or hyposensitivity. The child may not like the feeling of different surfaces on their bare feet causing them to rise up on their toes to decrease the surface of their foot in contact with the floor. In this case you may notice the child dislikes tight clothing, stepping in the sand, and/or on the grass, dislike certain textured foods, and/or dislike vestibular input such as, swinging, jumping, etc. Many times idiopathic toe walking is associated with language delays, and with certain forms of autism. So, it is important to make sure that your child is not having any delays with communication or social skills. In this case, a developmental assessment may be appropriate.

What is the Treatment for Idiopathic Toe Walking?

This habit of toe walking can result in loss of range of motion of the ankle, and ultimately lead to a shortened Achilles tendon. This may need further intervention such as daytime and nighttime bracing. This bracing would include a removable ankle foot orthosis, which is a lightweight plastic brace that goes up the back of the calf and maintains the foot at a 90 degree angle. In more extreme cases serial casting, and/or surgery to lengthen the achilles tendon may be appropriate. Like any habit, the longer you continue to do it, the harder it is to break. That is why it is important to have your child evaluated and started in to a physical therapy program as soon as possible.

In physical therapy your child will be started on a stretching and strengthening program, will complete gait training, balance, and postural exercises, and if necessary will be started on a sensory integration program. The physical therapist may also use neuromuscular electrical stimulation. This gives the child sensory feedback of when to use the appropriate leg muscles to allow for a more normal heel-toe gait pattern. The

physical therapist will also give the parents and child a home exercise program including exercises and activities to decrease toe walking.

General Physical Therapy Activities for Toe Walkers:

1) Abdominal and trunk strengthening:

- Sit-ups with feet held

2) Proprioceptive and Balance Activities:

- Start off by placing 10 marbles and a little bucket/Tupperware container on the floor. While standing pick up one marble with your toes and place the marble in the bucket on the floor. Continue to do this until all 10 marbles are in the bucket, and repeat using the opposite foot.
- Have child stand on a pillow to do activities at the table, such as playing a board game, cards, puzzle, play dough etc.

3) Stretching Exercises:

- Stand on bottom step holding on to railing. Move one foot back so that your heel is off the edge of the step. Using your body weight press heel down towards the floor. You should feel a stretch in your calf. Hold 30 seconds and switch feet.