Idiopathic Toe Walking

When you refer your patients to Cincinnati Children’s Division of Occupational Therapy (OT) and Physical Therapy (PT) you and your patients have access to:

- A standard evaluation with treatment intervention and recommendations based on current evidence
- PT intervention that includes specific strategies for idiopathic toe walking (ITW)
- Objective criteria for recommending referrals to other specialists
- Intervention provided by physical therapists who have participated in mandatory ITW competency training
- Periodic review of literature for newly published evidence

With Cincinnati Children’s Hospital you also have access to:

- A growing OT and PT division which has over 140 therapists
- Therapists who attend mandatory continuing education every year
- Access to physical therapists who perform serial casting
- Access to physical therapists who make orthotic recommendations, fit and modify orthotics

The evidence is here:

- Idiopathic Toe Walking (ITW) is a term used to describe the condition in which children ambulate with a bilateral toe-toe pattern without any known reason or pathology (Sala 1999).
- In typically developing children, a heel strike occurs by 18 months of age (or 50 weeks after the onset of independent ambulation) (Sutherland 1980).
- Toe walking is NOT a normal variant of early gait (Sutherland 1980).
- Some children with ITW are able to correct their gait to normal, but this is usually temporary (Sobel 1997).
- Gastrocnemius and/or achilles tendon tightness is acquired through years spent toe walking (Sala 1999).
- Prevention of a gastrocnemius contracture though early intervention by a physical therapist is needed (Harris, 1999).
- Decreased ankle DF PROM is associated with increased ankle injuries in children (Tabrizi 2000) and with increased foot pain/pathology in adulthood (DiGiovanni 2002).
Recommendation to the pediatrician for referral to a specialty physician or allied health specialist will be made in these cases:

- Recommend referral to Neurology or Orthopedics if the patient presents with a sudden onset of toe walking or unilateral toe walking
- Recommend referral to Division of Developmental and Behavioral Pediatrics (DDBP) if the patient demonstrates signs or symptoms of autism or PPD
- Recommend referral to Neurology if the patient demonstrates positive neurological signs
- Recommend referral to Physical Medicine and Rehabilitation (PM&R) for consideration of Botox injections to the gastrocnemius if indicated
- Recommend Speech Therapy if the patient demonstrates delayed speech
- Recommend OT if the patient demonstrates sensory processing concerns

Treatment can include the following:

- Stretching exercises for the gastrocnemius, soleus, and achilles tendon
- Strengthening exercises for the anterior tibialis, gastrocnemius/soleus, trunk/core and hip musculature as needed.
- Orthotics, including possible night splinting
- Serial casting with or without Botox injections
- Exercises to improve balance and gross motor skills

Recommended goals of intervention:

- Ankle dorsiflexion of at least 10 degrees with the knee extended
- Report of spontaneous of heel-toe walking at least 75 % of the time
- Improvement in Observational Gait Scale score
- Age appropriate gross motor skills
- Independence with Home Exercise Program (HEP)

Please fax your OT/PT referral to our one-stop referral line: 513-803-1111
The referral form can be downloaded at www.cincinnatichildrens.org/consults For additional information please contact 513-636-4651