

## ***REDUCTION OF PEDIATRIC IDIOPATHIC TOE WALKING***

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It is quite common for Physical Therapists to seek Orthotic intervention for children who consistently walk on their toes. By all accounts, the therapeutic evaluation indicates that the child has adequate strength and range of motion. There is no neurological condition creating tone, and yet, the child continues to subconsciously walk without heel strike. The gait pattern is generally not of great concern to the family and / or others who care for the child. As professionals, though, we are quite aware of the potential for heel cord contractures, metatarsal head callous formation, classroom ridicule, and other repercussions if left untreated.

Idiopathic Toe Walking may also be identified as “Sensory”. Typically, shoe wear will reduce the condition, while tactile surfaces such as cold tile or furry carpet will exaggerate the symptoms. The condition may present in a variety of severities from intermittent to consistent. The child is capable of a heel-toe gait if reminded, but quickly resumes the pattern with distraction.

Orthotic intervention is an accepted and successful treatment option for the condition. The treatment plan presents challenges and options to the Orthotist, as well as the family, child and therapist involved. Things to consider with the course or treatment include how often the child toe walks, age of the child, family involvement, and cosmetic concerns.

A minimally invasive approach may be considered in a number of circumstances. This route may be considered if cost and cosmesis are of concern. Often, there may be a lack of insurance coverage or inability to finance insurance deductibles. Additionally, parents are often uneasy with the appearance of visible orthoses that may be a source of ridicule from peers and others in the community. If time is not of the essence, a one to two month diagnostic period may be utilized.

In this case, simple, off the shelf foot orthoses with tone reducing modifications incorporated into them may be found effective. The inserts, available from Cascade DAFO, utilize aggressive modifications to the foot bed which have been found to hyper stimulate the feet and “trick” the brain into retraining. The result is a reduction of the tendency to over plantarflex during ambulation. Tone reducing modifications include metatarsal pads, toe risers and aggressive sustentaculum tali grooves. Initially, the exaggerated footbeds may feel awkward to the wearer, but oftentimes, a quick reduction of symptoms is noted. The drawbacks to this route of treatment are that shoes must be worn in order to use the inserts and there is not a guarantee that the plan will be effective. On occasion, after several weeks of use, toe walking

may still be present in some capacity and additional orthotic intervention may need to be considered.

The most obvious way to prevent plantarflexion during ambulation is to simply block it. Ankle Foot Orthoses have been the traditional method of motion restriction. Recently, less costly options have become appealing to many, as the treatment course is typically not long term. Off the shelf solid ankle AFOs, now available to Orthotists from Cascade DAFO, have proven an asset. They require no casting, can be obtained quickly and can be ordered with a variety of user specific options. Additionally, non skid traction can be applied by the practitioner in effort to allow for use without shoes. Ankle Foot Orthoses restrict the ability to plantarflex, without exception. It is essential, though that the family be involved in the treatment plan and commit to using the devices full time. Assurance to caregivers that they will not need to be worn for the duration of childhood is usually valuable in obtaining cooperation.

Pediatric healthcare presents with a very unique set of challenges. Simply treating the patient is not the norm, it is the exception. Practitioners must educate the family and, more importantly, instill confidence in them. A solid relationship with the Physical Therapist and the Physician are also essential. Numerous factors must be taken into consideration and all on the team must be in agreement. Flexibility is, without question, key to success. The ability to provide options, pros and cons, and thorough information instill confidence in the key players and allow them to feel a part of the decision making process.

*Sunni Solveson joined Hanger Prosthetics & Orthotics, Inc. in 2002. She is certified by the American Board for Certification in Orthotics & Prosthetics (ABC). As an orthotist for Hanger Prosthetics & Orthotics Inc., Sunni helps patients overcome biomechanical dysfunctions affecting the feet and legs, hands and wrists, and neck and spine. Still with Hanger Prosthetics & Orthotics Inc., Sunni now practices in Panama City, FL.*