

CASE STUDY

INTOEING

A 7 year old female was referred for bilateral intoeing. She presents with bilateral intoeing gait, lateral toe-off, and overpronation. She is very active and participates in running, tennis, dance, and basketball.

MEDICAL HISTORY

Her chief complaint was intoeing walking concerns. She experiences no symptoms. She has no prior injuries and no history of medical conditions. She has no issues with tripping.

CLINICAL OBSERVATION

- Static posture was observed. The patient's shoulder and hips were level. She had a genu valgus knee position. The hindfoot was valgus bilaterally with low medial longitudinal arch height.
- Weight-bearing functional tests were performed. The half-squat and double heel-rise test presented functions.
- Non-weight bearing range of motion testing showed normal ankle dorsiflexion and plantar flexion. Hypermobility in subtalar joint, midtarsal joint, 1st MTPJs, and hallux. Bilateral tight external hip rotation through the femur was present. No pain during range of motion testing.
- Gait was observed and recorded. Bilateral overpronation with hindfoot valgus and medial arch collapse. Internal leg rotation through the femur is seen during the swing phase. This leads to the lateral toe off the lesser toes. (Fig. 1)



Fig 1. Intoeing gait prior to intervention

TREATMENT PLAN

- Bilateral semi-rigid graphite intoeing corrective gait plates (Fig. 2) were created for daily use in runners. They were to reduce lateral toe off the lesser toes and allow for toe-off through the halls as the femur rotates more externally through the hips.
- Appropriate straight-lasted runners were recommended to use with the gait plates and these were to be worn daily at school, for activities, and around the house.
- Recommended for physiotherapy and exercises to assist with muscular imbalances through the hips.



Fig 2. Intoeing gait plates

GAIT PLATES FITTING

- Gait plates fitting took place 4 weeks later. They were reported to feel comfortable.
- A follow-up was recommended in 6 months with regular use of gait plates and physiotherapy.

9-MONTH FOLLOW UP

- Gait plates were worn consistently 5 days per week with no discomfort or challenges.
- Gait showed huge improvements with no intoeing on the left leg and very minimal, inconsistent intoeing on the right leg (Fig. 3).
- Has not gone to physiotherapy as recommended. It was still recommended to aid with the minimal right intoeing and prevention of creating muscular imbalances.
- Recommended to continue with gait plates until she outgrows them.
- Corrective custom foot orthotics for overpronation were discussed.

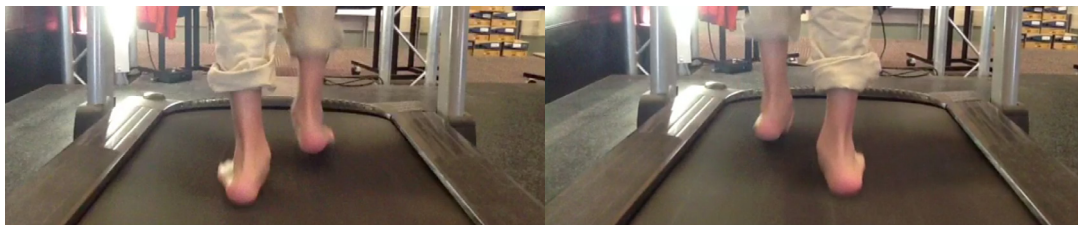


Fig 3. No intoeing gait at the 9-month follow up

All pedorthic appointments are handled by our on-site pedorthists with extensive anatomy and biomechanical knowledge. Each case is treated with the patient's comfort and safety in mind as recommendations are given accordingly.

A comprehensive treatment plan may include custom orthotics, heel lifts, and shoe modifications, to name a few. Follow-up appointments ensure the services provided at Kintec evolves along with the patients' ever-changing lifestyles.

Patients can see a Pedorthist by booking a custom orthotics appointment at kintec.net/booknow