

IN TOEING

Adult feet are usually angled directly forwards or slightly outwards when walking. In toeing is said to occur when feet are angled inwards. As children develop 'in-toeing' may occur. Aside from the appearance excessive tripping or unsteadiness may also be noticed. Between birth and adulthood children's feet and legs have a great deal of outward unwinding to do, from their birth position to their final adult positions in their teenage years. This unwinding happens in the bones, ligaments, and muscles, and occurs at different times to each other. There are various levels of severity and occasionally in-toeing may persist, or even reoccur after the original episode.

In toeing may occur from any level of the lower limb, for example, the hip, knee, shinbone, and forefoot. The four main causes of in toeing are: -

Femoral Ante-torsion: This is normal at birth but more common in girls. The shaft of the femur (thigh bone) is normally internally rotated. Throughout childhood this 'unwinds' to the normal adult shape. This can be delayed or may not happen (persistent). The kneecaps usually point inwards.

Femoral Retroversion: More common in girls. The leg appears to be held in an internal position due to the alignment of soft tissues such as ligaments or muscles surrounding the hip joint; when walking the limb may internally rotate. This is not normal and treatment is dependent on severity and symptoms.

Medial Genicular Rotation: This occurs at the level of the knee and is present if there is more internal movement of the shinbone than external movement - relative to the thighbone. When walking the non-weight bearing leg in the swing phase will appear to in-toe intermittently.

Internal tibial torsion: At birth the tibia (shin bone) appears twisted inwards. During the first seven years of life this should gradually rotate outwards. If this doesn't take place the foot will appear to in-toe.

Metatarsus Adductus: The long bones of the forefoot (the metatarsals) are positioned facing inwards. This can be categorised as mild to severe and flexible or rigid. This does not grow out. See your Podiatrist for advice.

For femoral ante-torsion and tibial torsion treatment is not indicated in the child and is rarely required in teenagers as it is normally out grown. For femoral retroversion treatment may be given in the form of insoles, stretches or splints depending on severity and symptoms. Insoles could help to support flat feet and to encourage the feet to 'out-toe'. Stretches can help to develop the range of motion of tight ligaments around a joint. Splints may help to reduce the mal-alignment. You may instead be advised to wait a few Months to see whether the problem will be outgrown. Metatarsus adductus does not grow out. If severe and flexible and caught early enough (below 2 years of age) manipulation and serial casting are indicated which can be provided by your Podiatrist.

