

Intoeing

One of the most common reasons parents seek Physiotherapy intervention for their child is concern regarding intoeing. Intoeing means that when a child walks or runs the feet turn inward instead of pointing straight ahead. It is commonly referred to as being "pigeon-toed". Intoeing is often first noticed by parents when a baby begins walking, but children at various ages can display intoeing for different reasons. Some children may intoe slightly while others may intoe severely and there are a number of reasons that child may intoe while walking or running.

The first, and most common cause for intoeing is the progression through normal development of alignment. Most children progress through three stages of alignment as they mature. The first stage of development of alignment occurs when children first begin to stand and walk independently. All babies, because of their position in utero are born bowlegged. Therefore, as children begin to stand and walk independently we often see a bowlegged appearance with toes turned out. Young children learning to take their first steps also tend to adopt this position in order to increase their base of support and increase their balance.

Over the first 3 years of a child's life bowing of the legs gradually begins to straighten and the knees become knocked. Therefore, the next phase of development occurs around 3-4 years of age. In this stage we see children become more knock-kneed with toes turned in. The degree to which a child intoes can vary significantly and will often be more pronounced when the child is tired or attempting a task that requires more balance and stability. For this reason you may see your child's feet turn in more while he/she is running or balancing. Occasionally, severe intoeing may cause young children to stumble or trip as they catch their toes on the other heel. However, it is important to know that intoeing usually does not cause pain, nor does it lead to arthritis.

The final stage of development generally can be seen by around 7-8 years of age, however, this can be different for every child. In this stage we see the hips, knees, and feet take on a straighter, more neutral alignment, more similar to that of an adult. More often than not, the cause of intoeing turns out to be progression through this normal development of alignment and requires little to no intervention. Further, in the vast majority of children younger than 8 years old, intoeing will almost always correct itself without the use of casts, braces, surgery or any special treatment.

Another reason for intoeing is known as anatomical alignment, or how we are put together. We are all built a little differently and this affects the position of our joints. The cause of in-toeing can actually come from the feet, the knees, or the hips joints. A child may have a curved foot (metatarsus adductus). In this situation the child's feet bend inward from the middle part of the foot to the toes causing the toes to point inward. Curved feet improve on their own most of the time, usually over the first 4 to 6 months of life.

Another physical cause of intoeing are twisted shin bones (tibial torsion). This occurs then a child's lower leg twists inward, in turn, causing the feet to turn inward. Twisted shins almost always improve without treatment, and usually before a child reaches school age.

The final physical cause of intoeing comes from the hip joints. The hips may be in a neutral position, may be rotated inward (anteverted), or may be rotated outward (retroverted). If an individual has hips that are rotated inward (femoral anteversion) it can cause both the knees and toes to point inward while walking. Of course, the degree of hip rotation can vary and the degree of intoeing will vary accordingly. This condition is often most obvious in children about 5 or 6

years of age. Children with this condition often sit in the "W" position, with their knees bent and their feet flared out behind them. Rotation at the hips spontaneously corrects in almost all children as they grow older. Studies have shown that casting and bracing make no difference in rotation of the shins or the hips. In severe cases special casts, braces or shoes may be required to correct curved feet.

Here is a quick trick you can try at home to help to determine if your child's intoeing is due to normal development or anatomical alignment . Have your child squat to pick an object off the floor and look at the position of his/her feet. If he/she is able to squat down with the toes facing forward this is a good indication that the cause of the intoeing is developmental and not anatomical.

If you are concerned about your child's intoeing while walking or running contact your local Physiotherapist. Your Physiotherapist will be able to assess the reason for your child's intoeing through observation and biomechanical assessment of the hips, knees, and feet.