GAIT ABNORMALITIES

In-Toeing (pigeon toed) can be due to one or more of the problems below :

1. Metatarsus varus (curvy foot)

- This abnormality is seen at birth and commonly disappears with stretching for the first 3 months.
- It tends to run in families and associated with not enough room in the uterus during pregnancy
- After 3 months, if the foot is rigid, serial casting might be necessary and your pediatrician will refer you to see an Orthopedic specialist

2. Tibial Torsion (inward twist of the lower leg)

- This can be present at birth but often develops between 9 months to 2 years of age. It does not affect your child's ability to move.
- Braces and stretching exercises have not be shown to make a difference. Usually, the legs will naturally straighten out by 4 years of age
- Children who sit on their feet while kneeling with their feet rotated inward may slow the progression to normal. This should be discouraged.

3. Femoral Anteversion (inward twist of the thigh)

- This usually develops between 1.5-3 years of age and naturally improves between 4-10 years of age. It tends to run in families.
- Often, children sit a W position (with their feet off to the side) and this should be discouraged
- This is a cosmetic abnormality and will not influence your child's athletic abilities. In fact many professional sports players have this abnormality!
- There is no special brace or shoe that can change this twist.
- Surgery to 'untwist' the bone is reserved for severe cases
- A small number of adolescents will develop pain in their knees due to the unusual mechanical forces placed on the knees. Typically physiotherapy to strengthen the inner thigh muscles is all that is needed.

Bowed Legs & Knock Knees

Many young children will have leg abnormalities that produce bowing of the legs or knock knees. Most of the time this is a normal variant that will disappear naturally within a few years.

Bowing typically appears within the first few years of life (peaks by 2 yo) and resolves by the 4th birthday. Knock knees develop a bit later (peaks at 3 yo) and resolves by the 7th birthday.

There are acceptable limits for this normal process and as long as your child stays within these limits, only observation is required. If they exceed the limits then Xrays &/or a referral to the Orthopedic specialist may be required. There is no boot, brace or cast that will change these angulations. Surgery is only considered if the child's function is significantly affected and is not considered until the teenage years.

Flat Feet

- This occurs in 1 out of 10 children
- In the first 3 years of life-there is extra fat in the arch area so it is difficult to properly assess the arch
- After 3 years of age, the foot can look flat because the ligaments are very flexible. When the child is not weight bearing-there is an arch but when they stand up, the arch falls down. This is called a Flexible Flat Foot (95% of all flat feet)
- If your child complains of pain, tiredness, walks with a limp or wears out their shoes quicker then normal then an Ante-pronation shoe might be needed. This is a shoe (usually a runner) with a strong heel, a firm sole and an arch support. Occasionally, children need shoe inserts. As these can be expensive, please talk to your pediatrician.
- Some children (5%) have a Rigid Flat Foot and they commonly have pain all the time when walking or running. Even when not weight bearing-these children have a flat foot. Your pediatrician will examine your child to determine if this is the case and may order X-rays &/or refer you to see an Orthopedic specialist

Toe Walking

- Many children walk on their toes when they first start to walk. This is quite normal and will often disappear on it's own.
- Your pediatrician will examine your child to see if there is an underlying problem (ie-tight muscles or a nerve problem)
- Long term toe walking can result in tight calf muscles. Your pediatrician may recommend seeing a physiotherapist to learn some calf stretching exercises.
- If your pediatrician thinks it is necessary, she may refer you to see an Orthopedic specialist for casting or splinting. You might get good results immediately but many children revert back to toe walking in the long term.
- Rarely, surgical management (cutting the heel cords) is necessary