

What Parents Need to Know About Intoeing

What is intoeing?

Most people's feet point straight ahead or outward. In some people, however, the feet point inward. This is called *intoeing* (say in-toe-ing), or "pigeon toes." Intoeing is very common in young children. Most of the time, intoeing goes away without any treatment at all. In a few children, it doesn't get better on its own and must be treated.

Is intoeing serious?

Intoeing usually doesn't cause serious problems, even if it doesn't go away by itself. Intoeing doesn't cause arthritis or clumsiness. Sometimes children with intoeing have problems getting shoes that fit, because of the curve of their feet. This fitting problem might make parents consider treatment for their child. Most braces, shoe inserts and special shoes are expensive and don't fix the problem.

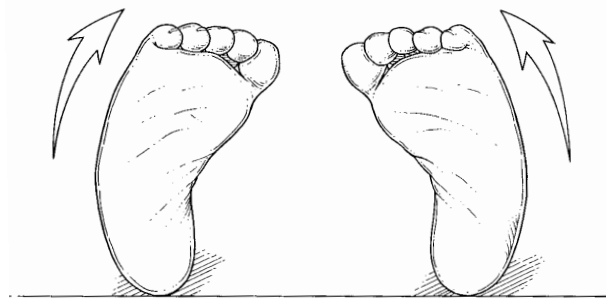
A very few children have a severe twist in the leg bone (*tibia*) or thigh bone (*femur*), which might bother them because it looks bad. Sometimes this problem requires surgery.

What causes intoeing?

There are three causes of intoeing in healthy children. They are *metatarsus adductus*, *internal tibial torsion* and *excessive femoral anteversion*.

What is metatarsus adductus?

Metatarsus adductus is a curve in the foot. This is best seen if you look at the sole of your child's foot, shown in the drawing below. If your child has metatarsus adductus, you may notice it while he or she is still a baby. The curve in the foot is probably caused before the baby is born, when the feet are pressed into this position inside the uterus. In nine out of 10 children with this problem, the feet get straight as the children grow up.



Metatarsus adductus

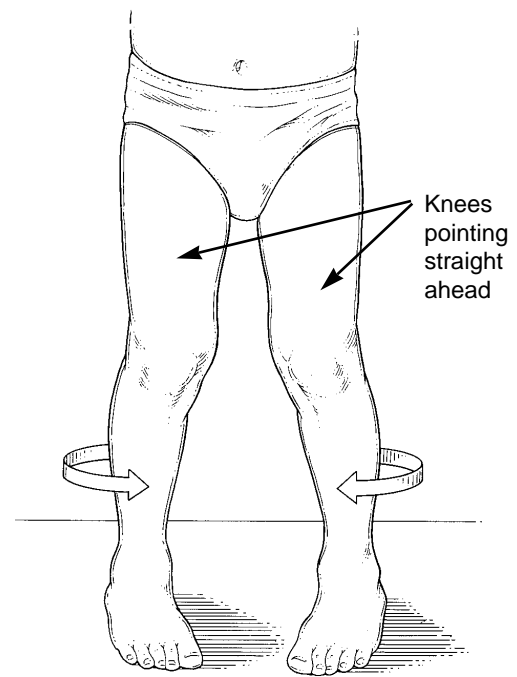
Your doctor may show you how to stretch the baby's foot to help the foot get straighter. If the foot shape is very curved or the curve doesn't go away, your doctor may treat your baby by putting casts on the feet to help stretch them into a straight position.

Doctors have different ideas about when the casts should be put on, but many think that if the feet are still curved when the child is four to six months old, casting should be started. The casting should be finished before the child reaches normal walking age. If the feet still have some curve after the casting treatment, that will not cause any problems with running and playing, and is never painful. A strong curve can cause problems with fitting shoes, and this is the main reason for using casts.

What is internal tibial torsion?

Internal tibial torsion is a twist in the *tibia*, the leg bone between the knee and the ankle, as shown in the drawing below. Parents usually notice internal tibial torsion about the time their child begins to walk. Some inward twist of the tibial bone is normal in babies. Usually this twist straightens out during the baby's first year. In some children, the twist doesn't get straight enough that their feet point straight ahead or outward, and these are the children who still intoe when they begin walking. Leg bones usually continue to grow straighter until the child is six to eight years old.

Braces and special shoes are not very helpful. One treatment that has been used is a bar with shoes on it that makes the child's feet point out. It hasn't been shown to work. Braces like this one are expensive, and often children don't like to wear them. So most doctors don't give any treatment for internal tibial torsion in young children. In a small number of children, the twist in the tibia doesn't go away. Even if the twist remains, it hasn't been shown to cause arthritis or problems with running and jumping.



Internal tibial torsion

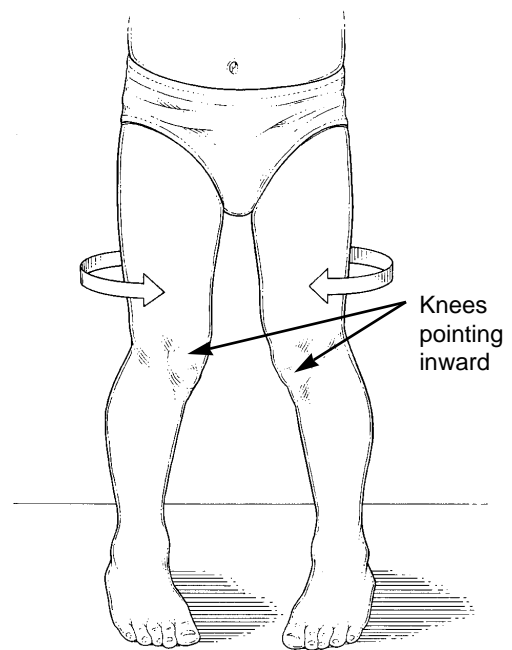
Sometimes appearance is a problem. In this case, the treatment is to cut the bones and turn (*rotate*) the bones outward, so the feet point straight. Very few children have to have this surgery. This is something that must be carefully discussed with your child's doctor.

What is excess femoral anteversion?

Excessive femoral anteversion is an inward twist in the *femur* (thigh bone), as shown in the drawing below. This cause of intoeing usually shows up in children between the ages of two and four. It can get worse during early childhood.

All babies are born with some inward twist of the thigh bone. It usually gets better during the first years of life. In babies and toddlers, the *ligaments* and *muscles* (soft tissues) that connect the bones are tight. As children begin walking, these ligaments and muscles become looser, allowing the hips to rotate more inward. If a child has an extra inward twist of the thigh bone, it may not show up until the child is two to four years old, because the intoeing gets worse as these soft tissues become looser.

Excess femoral anteversion usually gets better by itself. In most children, the feet will point straight ahead or outward by the time they are six to eight years old. Braces or shoe modifications won't help. In a few children with a very strong inward twist in the thigh bone, an operation is possible, to cut this bone and twist it outward, so the feet will point straight ahead.



Excess femoral anteversion

This handout provides a general overview on this topic and may not apply to everyone. To find out if this handout applies to you and to get more information on this subject, talk to your family doctor.



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