

Patient Education



ARNOLD PALMER HOSPITAL
For Children
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The Pediatric Orthopaedic Center
at Arnold Palmer Hospital
83 W. Columbia St. Orlando, FL 32806
321-841-3040 f:321-841-3049

Intoeing

Intoeing from the shin or thigh

Children with this problem may trip and fall more often than other children.



Our pediatric orthopedic group evaluates hundreds of children with intoeing each year, but this condition is very rare in adults. In fact, a review of 44,000 adult patients seeing orthopedic surgeons did not show one patient who was concerned about intoeing. Some adults do have intoeing, but it doesn't seem to bother them and it doesn't seem to be a cosmetic problem that makes them seek orthopedic care.

It is fortunate that most intoeing corrects all by itself because there is no treatment except for surgery for older children with severe deformity.

If you watch adults, you will see that some walk or run with their feet turned in or out more than others. For most people, this is a variation of normal like being tall, or being short. These variations are why some athletes are gymnasts while others are swimmers, soccer players, or ballerinas.

Babies are often born with twisted or bowed legs and feet. This is because they were squeezed in the womb and had flexible limbs that were molded to fit the space.

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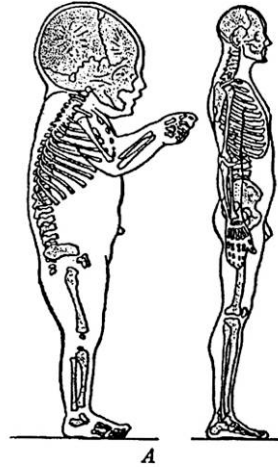
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But, babies change a lot as they grow to be adults, and there is plenty of time for them to straighten out on their own.



Internal tibial torsion

When the intoeing is from the shin, this is called internal tibial torsion. This is usually present at birth, but is much more visible when the child begins to walk and tries to run. It may seem to get worse up to the age of two years. One leg may be more affected than the other. This is probably caused by one leg being under the other in the womb. Children with this condition find it easy to sit with their feet under them. This sitting position may slow the natural correction if they sit for very long periods of time in this position.



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Special shoes and braces will not untwist the bones. Braces for the teeth are wired directly to the teeth and gradually tightened over a period of months or years. Pushing on the skin of the foot or leg doesn't create enough force to untwist the bone. In fact, strong braces applied to experimental animals have been shown to stretch the ligaments instead of the bones.

In extreme cases like the one shown below, the tibial bone is twisted 90°. If this doesn't correct by age 5 or 6 years, it can be untwisted by a surgical procedure called "osteotomy". The bone is cut, turned, and repaired with pins or plates until it heals in the corrected position. Fortunately, this is a rare procedure.



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Internal Femoral Torsion

When intoeing is from the thigh, it is called internal femoral torsion. The entire leg turns in. This can be seen because the knee caps point inward in line with the feet. The twist seems to be coming from the hip, but it is actually the thigh bone, or femur, that is twisted.

The knee caps turn in with the entire leg. Usually, both legs are affected the same, but the left leg is more affected here



Children and adults with internal femoral torsion can easily sit in the “W” position. There is no evidence that this is harmful, but prolonged sitting in this position is frequently discouraged. This photo shows our nurse, the child, and the mother



When these children run, their legs often fly out to the side in a circular movement called “padding” instead of straight up and down in a more efficient manner. This type of intoeing is uncommon in toddlers. It usually starts to appear between the ages of 2 and 4 years. It often gets worse until the age of six years before it starts to improve.

Braces, exercises, special shoes and other non-operative treatments are totally useless and don't change anything for the child. This can be very frustrating for parents and children. Boys and girls can have internal femoral torsion, but girls are usually more bothered by it. Sometimes girls don't correct until puberty when the pelvis widens and changes shape. If there is no correction by age 12 years, then the bone can be untwisted by a surgical procedure, but this is very rare.

It is our opinion that children with this type of intoeing may be better swimmers than other children because of their ability to rotate the thigh inward. A study conducted in Seattle, Washington found that children with internal femoral torsion had athletic skills equal to their peers by the time they reached high school.