

Posterior Medial Bowing of the Tibia

The lower part of the leg has 2 bones called the tibia and the fibula. Normal growth of the leg is influenced by a combination of factors including genetic signals, hormones that control growth, and positioning of the infant in the womb. In some babies a combination of these factors results in the tibia and fibula on one side being bowed and shortened. This is called 'posterior medial bow of the tibia' (PMB).

The earliest sign of posterior medial bow in the newborn is either the appearance that one leg is shorter than the other or there is a fullness in the leg just above the inside ankle bone. The diagnosis of posterior medial bow of the tibia is based on the x-ray appearance of the bone. The tibia and fibula are not as straight as the other side and the lower part of the bone bows inward and backward. The difference in length of the two legs may be as great as an inch or more on the initial x-ray.



Initially, and until the child begins to walk, therapy may be used to stretch the muscles and tendons around the ankle joint. Once the child is ready to stand and walk it is important to ensure that the child's foot is flat on the floor and not rolling inward excessively. Orthotics can be used if necessary to maintain the foot in proper alignment.

As the child continues to grow the difference in leg length is reassessed often to determine whether a shoe lift is needed. The bowed appearance of the leg usually improves by the time the child is in the first grade. In some cases the difference in length is significant enough that surgery may be required to equalize the legs as they grow. A small procedure to slow the growth of the longer leg as the child nears their adult height is often all that is necessary to obtain equal leg lengths.



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