

Patient Education



ARNOLD PALMER HOSPITAL
For Children
Supported by Arnold Palmer Medical Center Foundation

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Leg Length Discrepancy (LLD)

Often people's legs are slightly different in length, shape or size. This difference may be slight enough to never cause any difficulty. It may be significant enough for your child to have treatment to prevent an abnormal gait or for cosmetic reasons.

Why does LLD occur?

The femur (thigh bone) and tibia (shin bone) have growth areas on both ends of the bones. Something can disturb one of these areas and affect the growth. When this occurs, one leg will continue to grow while the other does not. Some of the causes for this could be infection, trauma, fractures, paralysis or even something that occurred before birth (congenital). Your doctor will explain the reason for the discrepancy if the cause is known.

What is the treatment for LLD?

The decision to treat a leg length discrepancy depends on how much difference there will be when the child stops growing. Not all leg length discrepancies need to be treated. The amount of difference determines the type of treatment needed.

Amount of leg length discrepancy:

- **0-2cm (<1 inch):** No treatment may be necessary or your doctor may suggest a shoe lift. A small lift is either placed inside the shoe or attached to the sole of the shoe.

- **2-5cm (1-2 inches):** A small surgery may be done to slow the growth of the longer leg. This allows the shorter leg to catch up in length. This takes very little away from your final height and has the advantage of being *substantially* easier with a *much* quicker recovery than procedures designed to lengthen the bone.

- **5-15cm (2-6 inches):** Surgical options include:

- Lengthen the **shorter** leg.

This surgery involves cutting the bone and putting an **Ilizarov** frame on the leg. This frame is used to slowly lengthen the bone. The process takes many months to finish and requires commitment from the patient and family to complete all of the treatment.

- Shorten the **longer** leg.

Once your child is finished growing, a surgery is done to remove a piece of the long leg. This will help make the leg lengths more even.

- **15 cm (> 6 inches) or more:** A prosthesis (artificial leg) may need to be worn on the shorter leg to make the leg lengths more even.