



**NATIONWIDE CHILDREN'S**  
*When your child needs a hospital, everything matters.*

**Helping Hand™**

*Health Education for Patients and Families*

## **Sports Medicine: Lumbosacral Transitional Vertebra (LSTV)**

The lumbar spine (low back) normally has 5 vertebral bones that attach to the sacrum (bone at the bottom of the spine). The lumbosacral spine supports the majority of the body's weight and protects the primary nerves that arise from the spinal cord. Lumbosacral transitional vertebra (LSTV) is a spinal change where the lowest vertebra of the low back is not usually connected to the sacrum. It can be seen in up to 40% of people.

- There are often no symptoms with LSTV.
- LSTV happens in 2 ways:
  - **Sacralization** is when the lowest lumbar vertebra (L5) becomes abnormally attached to the sacrum.
  - **Lumbarization** is when top of the sacrum (S1) can be separated from the sacrum and the lumbar spine appears to have 6 vertebrae, not 5.

### **Symptoms**

- low back pain
- stiffness in the back

### **Increased risk**

- family history of LSTV
- other spinal disorders like degeneration and spine instability

### **Treatment**

- Medicine
  - Anti-inflammatory medicines, such as ibuprofen (Motrin® or Advil®) or naproxen (Aleve®) may be recommended. Take these as directed by your health care provider.
  - Other minor pain relievers, such as acetaminophen (Tylenol®).
  - Local injections of anesthetic and corticosteroids may be given.

- Use of cold and heat
  - Cold should be applied for 10 to 15 minutes every 2 to 3 hours for swelling and after any activity that makes symptoms worse. Use ice packs or an ice massage.
  - Heat may be used before performing stretching and strengthening activities prescribed by your health care provider or athletic trainer. Use a heat pack or warm soak. Apply for 10 to 15 minutes.
- Exercises
  - Exercises to improve strength, stability, flexibility, and proper body mechanics are important. These can be done at home, but often a referral to a physical therapist or athletic trainer may be advised by your health care provider.
- Braces
  - A back brace may be prescribed to help with pain control and support.
- Osteopathic Manipulation
  - Treatment by an osteopathic physician (DO) to improve muscle imbalance and alignment may be advised.

## How to prevent

- Do correct warm-up and stretching before practice or competition.
- Maintain proper conditioning, strength, flexibility, endurance, and cardiovascular fitness.

## When to call the health care provider

Call your health care provider or the **Sports Medicine team** at **(614) 355-6000** if:

- symptoms get worse after 4 weeks, even with treatment
- you develop loss of bowel or bladder function
- new, unexplained symptoms develop

To schedule an appointment with Sports Medicine, visit [NationwideChildrens.org/SportsMedicineScheduling](https://NationwideChildrens.org/SportsMedicineScheduling) or scan this code with your camera phone.

