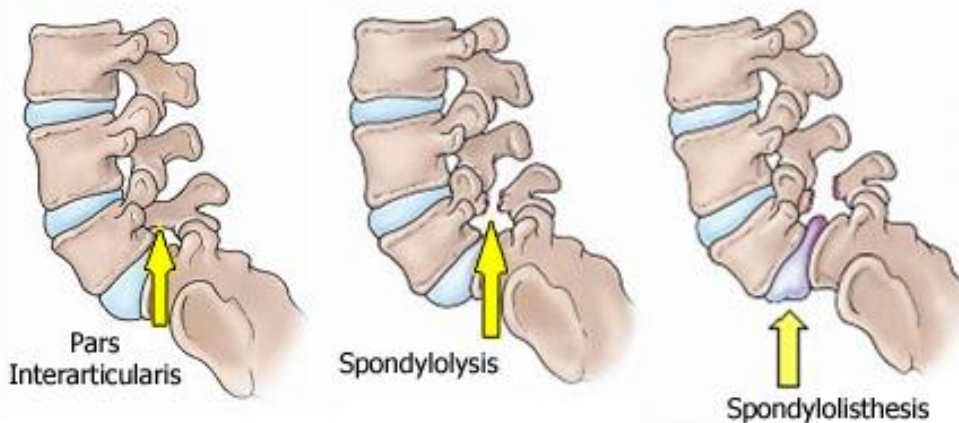




Spondylolysis and Spondylolisthesis

Spondylolysis and spondylolisthesis are the most common causes of low back pain in adolescent athletes.

- **Spondylolysis** (spon-dee-low-lye-sis) is a stress fracture in the posterior spine pars that are part of the spine.
- **Spondylolisthesis** (spon-dee-low-lis-thee-sis) is when the vertebra can start to shift out of place if a stress fracture weakens the bone so much that it is unable to maintain its proper position.



Left: The pars interarticularis is found in the posterior portion of the vertebra. **Center:** Spondylolysis occurs when there is a fracture of the pars portion of the vertebra. **Right:** Spondylolisthesis occurs when the vertebra shifts forward due to instability from the pars defect. (Courtesy of John Killian, MD, Birmingham, AL)

CAUSES AND RISK FACTORS

Some children are born with a predisposition to develop spondylolysis or spondylolisthesis. In other children, it is caused by overuse. Some sports, such as gymnastics, weight lifting, and football, put a great deal of stress on the bones in the lower back.

Spondylolisthesis can cause spasms that stiffen the back and tighten the hamstring muscles, resulting in changes to posture and gait.

SYMPTOMS AND TYPES

- In many people, spondylolysis and spondylolisthesis are present, but without any obvious symptoms.
- Pain usually spreads across the lower back and may feel like a muscle strain.

DIAGNOSIS AND TESTS

X-rays of the lower back (lumbar), an MRI or a CT scan may be used for diagnosis.

TREATMENT AND CARE

Nonsurgical Treatment

- Take a break from the activities until symptoms go away. Activities can be resumed gradually and there will be few complications or recurrences.
- Anti-inflammatory medications, such as ibuprofen, may help reduce back pain.
- Sometimes a back brace and physical therapy may be recommended. Stretching and strengthening exercises for the back and abdominal muscles can help prevent future recurrences of pain.

Surgical Treatment

Surgery may be needed if slippage progressively worsens and does not respond to non-surgical treatment. A spinal fusion may be recommended.



**Need an appointment or have questions?
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For our West Campus location, call 832-227-7678.**