

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: PARS PROCEDURE FOR YOUNG ATHLETES
REPORT: MB #4676

BACKGROUND: Spondylolysis is a spinal fracture of a bone structure called the pars interarticularis, which connects the facet joints of the spine. The spinal cord is protected by rings of bone that make up the middle and posterior portion of the spinal column. In each of these rings, the pars interarticularis (or simply "pars" for short) connects other components of the ring, known as the pedicle and lamina. Spondylolysis (sometimes called by the shortened name, "pars fracture") usually occurs during childhood or adolescence from repetitive stress, rather than from an acute injury. In other words, it is usually a stress fracture rather than a sudden break. This is a common condition of children and teenagers who are involved in organized sports. Active kids and teens with spondylolysis may experience symptoms. However, some people with this condition may not develop symptoms until later in adulthood.

(Source: https://www.hss.edu/condition-list_spondylolysis-spondylolisthesis.asp)

TREATMENT: Initial treatment is almost always nonsurgical in nature. Most patients with spondylolysis will improve with nonsurgical treatment. Nonsurgical treatment may include rest, NSAIDs such as ibuprofen and naproxen, physical therapy, and bracing. Surgery may be recommended for patients who have severe or high-grade slippage, slippage that is progressively worsening, or back pain that has not improved after a period of nonsurgical treatment.

(Source: <https://orthoinfo.aaos.org/en/diseases--conditions/spondylolysis-and-spondylolisthesis/>)

NEW TECHNOLOGY: Allan D Levi MD, PhD, FACS, Professor and Chairman of Neurosurgery at the University of Miami Miller School of Medicine talked about the pars procedure he developed, "Essentially we make two small incisions. And we use X-ray - or fluoroscopy - to localize where the fracture is. And we put a pin through the fracture. Then we get an intraoperative CAT scan to make sure that the pin is exactly where we want it to be. And then we put a screw across the fracture site along the pin. And then the other thing that we do is that the screws are only good to stabilize the fracture. We add some protein to help fusion, as well as some bone graft inside the fracture. And that's done through another tiny separate incision." Dr. Levi says patients who have a lot of arthritis of the spine are not good candidates. X-rays may miss initial diagnosis. He recommends doctors perform a CAT scan to see the fracture. For more information on the pars procedure go to <http://med.miami.edu/news/unique-surgery-helps-young-athletes-with-spinal-fractures>.

(Source: Allan D Levi MD, PhD, FACS)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com