

Teen Athletes at Risk for Spine Fractures

As a competitive volleyball player, Kelsey is used to playing through pain. So when she felt some twinges in her back during a tournament with her Virginia Elite Volleyball Club last year, she ignored them. “I thought my muscles were sore after sitting out the previous year with Lyme disease,” says Kelsey, who was a senior at Westfield High School at the time. “But as the game progressed, the pain got worse and worse. At the end of the day I could barely move.”

After resting for three weeks, Kelsey returned to the volleyball court, and so did her back pain. She and her mom decided it was time to consult an orthopaedic surgeon. They chose Thomas Mazahery, MD, who specializes in degenerative spine conditions, cervical spine pathology and trauma at Commonwealth Orthopaedics. No sooner had Kelsey described her symptoms to Dr. Mazahery than he made his diagnosis: spondylolysis. An X-ray and bone scan confirmed it.

“Spondylolysis is a stress fracture of the pars interarticularis, most commonly in the lower lumbar spine,” Dr. Mazahery says. “Those at highest risk are gymnasts and football lineman, but anyone doing repetitive hyperextension—soccer players or volleyball players like Kelsey—can be affected. It’s a growing problem in our region because young people are so athletically active. At Commonwealth, we typically see up to three cases a day.”



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Kelsey practices with a local volleyball team while home from college.

The classic symptom is low back pain that worsens with extension or twisting activities. If left untreated, spondylolysis can progress to a much more serious condition, spondylolisthesis. “Spondylolisthesis occurs when the stress fracture weakens the bone so much it is unable to maintain its proper position and the vertebra shift out of place,” says Amanda Trucksess, MD, a Commonwealth Orthopaedics physician specializing in physiatry. “If this condition becomes severe enough, the patient may experience radiating pain and possibly nerve irritation or damage.”

Spondylolysis treatment varies depending on the patient. In Kelsey’s case, Dr. Mazahery prescribed a back brace for several months to allow her stress fractures to heal. Once the brace was off, she had some physical therapy to ease back into athletics and improve her core strength.

“Ninety percent of our patients respond well to this type of non-operative management,” Dr. Mazahery explains. “As long as these youngsters are compliant, and allow the bone to heal, they usually don’t have any problems later on.”

For the small number of patients who do require surgery, Commonwealth offers the latest minimally-invasive options and motion-sparing technology, including bone grafting and fusion.

Kelsey spent the summer at volleyball camp, and then headed off to the University of Wisconsin at Madison, where she plays on the volleyball team. “This is the Big 10, so it’s very competitive,” she says. “Fortunately, I’m playing at the same level as I was before. Thanks to the great care from Dr. Mazahery and Commonwealth Orthopaedics, my back pain is completely gone.”



Amanda B. Trucksess, MD, graduated *cum laude* with a major in kinesiology from The College of William and Mary. She went on to earn her medical degree from the Virginia Commonwealth University School of Medicine at the Medical College of Virginia. Following medical school, she completed a four year residency in Physical Medicine and Rehabilitation (Physiatry) at the University of Virginia. Physiatry is a sub-specialty of medicine that focuses on the restoration of function and the non-operative treatment of nerve, muscle, and bone disorders.



Thomas Mazahery, MD, Spine Specialist, graduated with a BA in Biology from the University of Virginia and earned his medical degree from the Medical College of Virginia. He then completed a general surgery internship and an orthopaedic surgery residency at Northwestern University in Chicago, Illinois. Additionally, Dr. Mazahery completed a spine fellowship with the renowned surgeon Dr. Henry Bohlman at Case Western Reserve University in Cleveland, Ohio.

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