

## **Thoracic Spine Staples in a Collegiate Volleyball Player**

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### **ABSTRACT**

**CASE HISTORY:** The participant in this research study was diagnosed with idiopathic scoliosis at the age of 8. **PHYSICAL EXAM:** Upon physical examination it was determined that she had a lateral curvature of the spine. **DIFFERENTIAL DIAGNOSES:** Herniated disk, erector spinae muscle strain, thoracic back pain, quadratus lumborum strain, or scoliosis. **TESTS & RESULTS:** She underwent many different x-rays and MRIs to get the best possible imaging of her spine. These images determined she had idiopathic scoliosis. She underwent seven total surgeries to repair the scoliosis present. The first of these surgeries was to place one Harrington Rod to correct the scoliosis present. Another surgery was performed to place 5 spinal staples into her thoracic spine. Three years after the first surgery a final surgery was performed to remove the Harrington Rod. **FINAL DIAGNOSIS:** The final diagnosis was idiopathic scoliosis.

**DISCUSSION:** During the years between the surgery processes she was confined to a back brace which prevented her from participating in athletics. Approximately 6-9 months after her final surgery she began participating in volleyball. Research shows there is no measurable effect on upper extremity functionality for subjects who have undergone surgery to repair idiopathic scoliosis. Spinal fusion patients often learn how to perform sport movements effectively even though they are less mobile in the thoracic spine area. This is because patients have less range of motion in the spine but learn how to move their trunk and extremities to be effective in sports activities. If the thoracic spine is no longer able to move adequately, the cervical and lumbar spine will compensate, or the movement does not occur. Therefore, they are able to play sports that most people would believe they would not be able to do. Many of these individuals may also have a reduced equilibrium compared to others who have not undergone spinal fusion surgery to repair idiopathic scoliosis. Therefore, the person may not have a good understanding of their body positioning because of the lack of mobility in the thoracic spine. This could possibly be a negative effect on sport performance because of not being fully aware of the position of the body at all times. Lack of equilibrium could possibly be dangerous to the athlete if they are not able to detect their body angles when jumping or diving. Patients who have undergone corrective surgery may also show a decrease in physical activity compared to preoperative levels due to decreased flexibility and pain that could be present. **OUTCOME OF THE CASE:** The participant returned to activities of daily living and athletic competition post-surgery. **RETURN TO ACTIVITY AND FURTHER FOLLOW-UP:** The participant returned to athletic competition and currently competes in NCAA Division I athletics as a volleyball player. She has had no further complication with scoliosis since the procedures were performed.