

A 12 YEAR-OLD FIGURE SKATER WITH A FRACTURED SACRUM.

Monitoring an athlete's weight and preventing future injury.

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Case history: A 12-year-old figure skater presented to the office complaining of posterior pelvic pain that onset while practicing single and double axels on the ice. She felt a sharp pain upon landing, which then subsided somewhat, but returned the next day during skating practice. She reported to an orthopedic surgeon who diagnosed her with a pars-like fracture of the sacrum, as revealed by computed tomography. The patient had one previous episode of the posterior pelvic pain three and one half months previously which seemed to resolve on its own. The patient presented to the chiropractic office one month after the CT scan with the goal of managing the pain and preventing future injury. Bone density tests were normal. The patient is pre-menarchial.

Discussion with the patient's mother revealed that prior to the injury, there had been a decrease in several markers of athletic performance including vertical jump (land) and skating speed. The patient's mother is a certified nutritionist. The patient is a lean, pre-pubescent female who weighs between 67 to 73 pounds. The patient's mother stated that at the time of injury, the patient was about 5 pounds lighter than normal. Although the mother did not suspect an eating disorder, she did state that her daughter does not have a good appetite and is a very finicky eater.

Diagnoses:

1. Posterior sacral and lumbar stress fracture
2. Grade II spondylolisthesis
3. Chronic training fatigue
4. Risk for female athlete triad

Management:

The patient's skating and off-ice training schedule was reviewed and modified. The patient was spending 20 hours a week on the ice and an equal amount of time in dry land training which included pilates, yoga and stretching. The patient's coaches were unwilling to decrease her on-ice training time; however it was determined that her off-ice training schedule would be reduced to six to ten hours per week with an emphasis on strength training. Her weight was monitored and a positive feedback system was developed by her parents and coaches to promote weight gain. Specifically, the patient's weight was plotted against skating performance and the results showed that the patient clearly performed better when her weight was higher, as manifested by higher jumps and more clean landings.

Discussion:

Health issues such as eating disorders disordered eating and over-training syndromes abound in athletics today and are especially prevalent among female athletes. Inadequate nutrition in female athletes can result in fatigue, decreases or plateaus in performance, as well as more frequent injury and can lead to the female athlete triad.

Early detection and intervention along with positive support from family, coaches, healthcare providers and friends are keys for successfully managing female athlete triad. Although the patient in this case study did not demonstrate female athlete triad, she demonstrated risk factors for the condition. To date, early intervention with her training program and diet along with a strong support network have kept her health and performance in tact.

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