

Stress Affects Athletic Injuries, Recovery

Physicians not immune to 'culture of risk,' which encourages athletes to keep playing despite pain.

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Difficult life events and other types of stress, as well as psychological interventions, can have a marked impact on the occurrence of athletic injuries among children and adolescents, according to the authors of a review on the topic.

These issues also can affect the way in which children and adolescents recover and subsequently perform in sports, the authors wrote.

Awareness of psychosocial stressors "unique to young athletes that may contribute to injury occurrence and influence rehabilitation may help counter the negative effects and unhealthy behavioral responses that sometimes occur post injury," said Angela H. Nippert, Ph.D., and Aynsley M. Smith, Ph.D., in the May issue of *Physical Medicine and Rehabilitation Clinics of North America*.

Dr. Nippert is with the department of kinesiology and health sciences, Concordia University, St. Paul, Minn.; Dr. Smith is with the Mayo Clinic Sports Medicine Center and the department of orthopedic surgery and physical medicine and rehabilitation at Mayo Medical School, Rochester, Minn.

Dr. Nippert and Dr. Smith also recommend that medical professionals be aware that even though they might be considered the least likely person involved with an injured athlete to pressure the athlete to return to participation before a full recovery, they may not be immune to the "culture of risk," in which playing a sport despite continuing pain and injury is acceptable.

To help maintain objectivity, it is important to be aware of the influence this culture of risk might have on decisions about injured athletes, the authors wrote. Other factors, such as whether an athlete is a starter, the time in the season, and their own experiences with competing and training also can influence their decisions, the authors added (*Phys. Med. Rehabil. Clin. N. Am.* 2008;19:399-418).

Psychosocial factors that can affect child and adolescent athletes before and after an injury include athletic identity, body image, and life stressors, such as a parent's divorce. A stressful situation can increase the risk of sustaining an injury when, for example, it interferes with attention.

The authors cite several studies of different types of young athletes that have found an association between stressful life events and increased risk of sustaining injuries. Stress and coping resources, in addition to the stress of an injury, also can affect athletes after an injury.

As an example, the authors described a 14-year-old basketball player who sustained a severe ankle sprain after the divorce of his parents and missed out on a full season. He became alienated from

the team, which had provided support during the divorce. Because his only coping skills were connected to sports, he gave up on physical rehabilitation, and started to experiment with alcohol, marijuana, and sex. But a sports psychology counselor helped the athlete resume involvement in athletics and other activities that helped him improve his behavior and self-esteem.

The damage an injury can do to a young athlete's self-esteem also can increase their risk for a mood disturbance, particularly if the athlete strongly identifies with a sport, according to the authors.

Dr. Nippert and Dr. Smith also cite data suggesting that mood disturbances start immediately after the injury and begin to ebb as athletes feel they are recovering.

However, mood might not return to baseline in some athletes, the authors pointed out, adding, "mood disturbance is a concern for adolescents and young adults who are already at approximately three times greater risk for suicide than the general population."

When evaluating a young athlete with an injury, medical professionals should be aware of their psychological responses after the injury and during rehabilitation, they advised, noting that "changes in affect, energy, sleep patterns, eye contact, commitment to rehabilitation, and hygiene may be flags for concern."

They also recommend looking out for signs of an eating disorder, which can affect male and female athletes after an injury, and the use of performance enhancing substances.

Sports injuries among children and adolescents can be very stressful—even if they are minor—but treatment often focuses only on the physical aspects of the injury, not the stress associated with the injury and the recovery period.

If not recognized or addressed, this stress can affect recovery and performance when the individual resumes full participation in the sport, the authors observed.

Psychological interventions that can help athletes cope with psychosocial stressors and improve mood include setting short, intermediate, and long-term goals for rehabilitation and for returning to sports, such as daily goals of icing the injury, elevating the injured area, and managing pain, the authors recommended.

Other interventions that have been reported to help during recovery from a sports injury are the use of relaxation and mental imagery.

"Through awareness and appropriate interventions, medical professionals can help facilitate an optimal physical and physiologic recovery" in young athletes who have sustained a sports injury, Dr. Nippert and Dr. Smith concluded. ■

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Reference: 1. Biederman J, Faraone SV, Spencer TJ, et al. Functional impairments in adults with self-reports of diagnosed ADHD: a controlled study of 1001 adults in the community. *J Clin Psychiatry*. 2006;67:524-540.

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