

## Playing through the pain: Psychiatric risks among athletes



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### Injuries, other factors increase athletes' vulnerability to psychopathology

**S**uck it up. Tough it out. There is no "I" in team. These are a few of the messages athletes receive from coaches, teammates, and fans. There are norms, values, and expectations in every culture, including sports, that affect behavior and emotional expression. When taking a patient's history, clinicians may ask about participation in sports because it provides health and lifestyle information. However, many clinicians fail to consider the extent to which sport participation can influence a person's explanatory style, experience of injury, and attitude toward medications. Whether your patient is an elite athlete or someone who participates in sports solely for exercise, the extent to which he or she identifies as an athlete is worth exploring.

Research on athletes has focused on physical aspects of injury, but this may be just a small component of an athlete's devastation after serious injury. In this article, we discuss athletes':

- psychiatric risks after injury
- expression of pain
- risks of having an identity driven solely by sports
- distress tolerance.

We also provide tips for making a differential diagnosis and providing treatment. This information is based on our experience treating athletes, supplemented by relevant literature.

### Psychiatric risks after injury

Research has explored eating disorders and substance use among athletes, but clinicians generally are less aware of the prevalence of mood and anxiety disorders in this popu-

lation. Although participating in sports can protect against emotional distress, athletes who sustain an injury are at risk for major depressive disorder, posttraumatic stress disorder (PTSD), or an adjustment disorder.<sup>1</sup> Only about 10% of injured athletes have severe, long-term psychological consequences,<sup>2</sup> but the prevalence of anger and depression after an injury is well documented.<sup>3,4</sup> Researchers have found that injured athletes experience clinically significant depression 6 times as often as non-injured athletes.<sup>5</sup> Injured athletes also exhibit significantly greater anxiety and lower self-esteem than non-injured controls immediately after injury and at 2-month follow-up; those with more severe injuries are more likely to become depressed.<sup>6</sup> Non-injured athletes seem to experience depression at the same rate as the general population.<sup>7</sup>

### Injury and expression of pain

Psychiatric illnesses often are underreported and undertreated in athletes.<sup>8</sup> This may be because athletes feel that admitting they have a psychiatric illness or symptoms could threaten their status with their team. One professional figure skater we treated failed to seek recommended treatment for a psychiatric disorder because she feared she would be asked to leave her skating company. Her symptoms dangerously escalated before she was hospitalized.

Based on our clinical experience, many athletes feel acute pressure to play through psychological and physical pain. Some athletes continue to play with an injury to hold on to a paycheck or scholarship. Some continue to play even though they no longer enjoy the sport to prevent letting down parents or coaches; others know no other way but to “tough it out.” Supporters such as coaches, parents, or teammates may encourage athletes to play with injury, and sometimes provide medication to do so.

Mostly, however, the pressure to continue to play despite injury comes from athletes themselves. The culture of sport may lead athletes to minimize pain, fear, and self doubt.<sup>9</sup> Athletes who fuse the culture

of sport with their own being may underreport physical and psychiatric symptoms. In a survey of National Collegiate Athletic Association Division I athletes, Nixon<sup>9</sup> found that 70% of respondents reported having been injured at least once, and more than one-half felt pressure to play while injured. Feeling pressure to perform with injury was affected by “starter” status, and whites and men scored highest on pressure scales, although women showed a roughly equal probability of playing through injury. Students who received an athletic scholarship experienced more injuries that required surgery. There was no difference in pain expression between players of contact and non-contact sports. Finally, athletes may be less likely to seek pharmacologic treatments because of cultural messages that emphasize ideas such as “the body is a temple.”

### Loss of identity

An athlete’s injury should be analyzed for meaning; what may seem insignificant to one person may be quite different for another. When injury makes athletic activity impossible, an athlete may suffer more distress than someone who does not exercise regularly. Understanding the significance of the experience for an athlete is crucial to achieving recovery.<sup>10</sup> For example, to a non-athlete a fractured wrist may be an annoyance, but it may be disastrous to a collegiate pitcher who is forced to be inactive when scouts for Major League Baseball teams search for prospects.

To an athlete, injury can mean loss of identity. Whereas most people become competent in many aspects of life, and develop support systems across multiple contexts, an athlete—particularly an extraordinarily talented one—may have focused only on his or her sport. Although athletics can help young people develop confidence, participation also can be a trap. Individuals with strong athletic identities are less likely to explore other career, educational, and lifestyle options.<sup>11</sup> In the context of team sports, an athlete may feel less emotionally supported if an injury results in the loss of his or her central role with

## Clinical Point

Understanding the meaning of an injury to the athlete is crucial to achieving recovery



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## Psychiatric risks among athletes

### Clinical Point

Overtraining syndrome shares symptoms with depression but can be reversed by reducing activity

### Box

## Athletes and suicide: Who is at risk?

Suicides by several high-profile athletes have called attention to the severity of psychiatric risks among athletes. In June 2002, 20-year-old Nathan Eisert died of a self-inflicted gunshot wound 5 weeks after being released from the Western Kentucky University basketball team for academic reasons; the year before, he had suffered a serious ankle injury.<sup>13</sup> Former National Football League (NFL) player Kenny McKinley committed suicide in September 2010, after a knee injury sidelined him.<sup>14</sup> In May 2012, former NFL star Junior Seau, who had retired in 2011, fatally shot himself.<sup>15</sup>

For some athletes, career-ending injuries lead to suicidal behaviors. A study of 5 athletes who attempted suicide after sustaining an injury found 5 common characteristics:

- all were successful in their sport before getting injured
- all sustained an injury severe enough to warrant surgery
- all endured a lengthy rehabilitation
- all were not as successful at their sport when they returned to play
- all were replaced by a teammate.<sup>16</sup>

the team. Helping athletes form an identity that is not based solely on sports is ideal because subsequent injuries could lead to recurrent struggles with loss of identity.

Athletes who achieve higher levels of success have higher levels of depression and higher suicidal ideation after injury.<sup>12</sup> An athlete may attempt or complete suicide, particularly those who are injured (*Box*).<sup>13-16</sup>

**Student athletes.** When working with student athletes, it is crucial to understand the lifestyle that promotes forming a single-factor identity. Student athletes may be required to train 2 or 3 times a day, rarely spend their school breaks in tropical locations, often miss social events, and may forgo commencement ceremonies. When an injury suddenly makes these perpetual sacrifices seem to be in vain, the risk of psychiatric illness may increase.

### Tolerating distress

Athletes often use their sport as an outlet for emotional expression. When an injury removes that outlet, an athlete may develop anxiety and disappointment. Left alone to manage these emotions, an athlete may become irritable, passive, socially isolated, depressed, or suicidal.<sup>17</sup> Trying but failing to find socially acceptable ways to express these feelings may intensify depression or anger. Difficult life issues, such as avoided losses, relationship issues, or various insecurities, may come to the surface when an athlete's primary coping skill is lost. In ad-

dition, without the support of the athletic "family" (eg, teammates, coaches, staff) many athletes turn to alcohol or drugs unless they have alternate coping strategies and social supports.<sup>18</sup>

### Overtraining and stress

The differential diagnosis for athletes who present with psychiatric symptoms includes several mood and anxiety disorders and other conditions (*Table*). When evaluating athletes who have depressive symptoms, it is essential to rule out overtraining syndrome (OTS). A common phenomenon among athletes, OTS is characterized by athletic "staleness" and chronic fatigue.<sup>19</sup> Although there are no official OTS diagnostic criteria, characteristic symptoms include decreased physical performance or stamina, fatigue, insomnia, change in appetite, irritability, restlessness, excitability, anxiety, weight loss, loss of motivation, and poor concentration.<sup>19</sup> The primary distinction between OTS and depression is that OTS results from athletic endeavors and can be reversed by reducing activity.

Experiencing an injury—or even a near-miss—can be terrifying to a person who derives his or her identity from a fully functioning body and feels that a perfectly working body is essential to an acceptable life. Such athletes may develop acute stress disorder or PTSD.<sup>20,21</sup> We treated a hockey player who just missed being involved in a serious incident on the ice. "I watched my whole athletic career up to that point

flash before my eyes.... I keep getting flashes of that," he said. After the incident, he experienced hypervigilance, avoidance, and anxiety—both on and off the ice—and was diagnosed with acute stress disorder. Similarly, we cared for a young running back whose physical symptoms had abated after experiencing a concussion. He developed an irrational fear that he would become injured again. Neither athlete had a history of psychiatric illness or serious injury, and both were paralyzed by the idea of returning to play. One of these athletes successfully engaged in exposure therapy, and the other experienced severe avoidance, hopelessness, depression, nightmares, and flashbacks before seeking treatment.

### Substance use: Common and risky

Anecdotal and clinical evidence suggests that athletes in different sports engage in different substance abuse patterns. Studies show that college athletes use alcohol at higher rates than non-athletes.<sup>22,23</sup> In 2000, the American College of Sports Medicine reported that athletes' abuse of recreational drugs far surpasses their abuse of performance-enhancing drugs.<sup>24</sup> Some athletes may use prescription pain medications recreationally or to self-medicate emotional pain as a result of injury. Athletes may not understand the risks of recreational use of prescription medications or illicit substances—such as cocaine's deleterious cardiovascular effects—and may hesitate to discuss their self-medicating with physicians.

Some athletes abuse performance-enhancing drugs, such as anabolic steroids, androstenedione, stimulants, diuretics, and creatine.<sup>25</sup> Side effects of these substances include liver disease, brain hemorrhage, weight loss, and depression.<sup>25</sup>

### Our recommendations

Working with athletes—particularly injured athletes who have internalized sports culture—requires informed clinical effort, whether your patient is a student athlete, elite athlete, leisure athlete, or former athlete. Successful diagnosis and treatment

Table

## Differential diagnosis of conditions associated with athletic injury

Acute stress disorder
Adjustment disorder
Anxiety disorder NOS
Depressive disorder NOS
Major depressive disorder
Overtraining syndrome
Postconcussion syndrome
Posttraumatic stress disorder
NOS: Not otherwise specified

requires understanding the meaning of athletics in your patient's life and the extent to which he or she has "back-up" stress relievers and support systems, and assessing for cognitive dysfunction that may contribute to mood or anxiety symptoms. During evaluation, take a careful history to distinguish major depression or adjustment disorders from OTS, and assess for PTSD symptoms. When treating an injured athlete, help the patient determine whether he or she can find another outlet—preferably more than one—to replace athletics.

For an athlete who has depressive symptoms, we recommend determining whether the patient's symptoms remit after a brief period of rest before initiating pharmacotherapy. For patients who exhibit minimal neurovegetative features, we recommend psychotherapy as a first-line treatment. Many athletes are reluctant to take medication and would be more likely to follow through with cognitive-behavioral and biofeedback interventions.

If a patient requires pharmacotherapy, ask about his or her feelings toward medications that may impact adherence. For example, is a gymnast worried about weight gain? Is a sprinter concerned with lethargy? When prescribing, be aware of the prevalence of drug and alcohol problems among athletes, understand how habits and temptations differ among sports cultures, and provide patients with psychoeducation about substance abuse when appropriate.

### Clinical Point

Helping an injured athlete find other outlets to replace athletics may reduce emotional distress

continued



## Psychiatric risks among athletes

### Clinical Point

Depressed athletes may be more likely to follow through with psychotherapy than pharmacotherapy

## Related Resources

- International Society for Sports Psychiatry. <http://sportspsychiatry.org>.
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### Disclosure

The authors report no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

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## Bottom Line

Treating athletes who develop psychiatric illness requires understanding the importance of sports in the patient's life. Athletes may form an identity based on participation in sports, and disruptions to this lifestyle caused by injury or other factors can result in depression, anxiety, stress disorders, or suicide. For athletes who have depressive symptoms, psychotherapy may be preferred to pharmacotherapy as a first-line treatment.