Diagnosing Emotional Disorders in Athletes: A Sport Psychiatrist’s Perspective

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Like the sports medicine physician, the sport psychiatrist plays an important role in the sports medicine team (SMT). A specialist in diagnosing emotional disorders can increase the diagnostic and treatment capabilities of the SMT. The goal of this article is to increase awareness of the psychiatric disorders commonly occurring among athletes and highlight the value of accurate psychiatric diagnosis. Using vignettes involving established athletes, the article examines anxiety and mood disorders, eating disorders, substance use disorders, and attention deficit disorder as they occur in athletic settings, as well as other syndromes with particular relevance to athletes, such as overtraining and postconcussion syndrome. Other clinical issues encountered while working with athletes, including learning disabilities and career termination concerns, are also discussed. Finally, the basic concepts of transference and countertransference are reviewed to highlight important relational dynamics between the athlete and the SMT.

Despite a recent issue of Clinics in Sports Medicine (Tofler & Morse, 2005) devoted entirely to the relationship between sport psychiatry and sports medicine, relatively little attention has been paid to the utility of a sport psychiatrist’s input to sport psychologists, trainers, and other members of the sports medicine team (SMT). Yet certain psychiatric disorders have a higher than expected prevalence among athletes (Macleod, 1998), and early and correct diagnosis of these disorders is crucial if athletes are to receive necessary treatment. For this reason, the sport psychiatrist has an important role to play as a member of the SMT. It is the goal of this article to define that role and highlight the many ways psychiatrists can contribute to an integrated, multidisciplinary SMT.

Macleod (1998) has noted that in athletes, certain psychiatric disorders clearly have a higher than expected prevalence (e.g., substance abuse, including alcohol and steroids, as well as eating disorders) and that the incidence of brain injuries and impulse control disorders, including violent on- and off-the-field behavior may be higher as well. Given the persistent pressure athletes are under to perform and their frequent experience of loss and injury (common precipitants of depression), mood...
disorders (particularly depression) and anxiety disorders are likely to be at least as prevalent in the athletic population as they are in the general population. Similarly, attention-deficit/hyperactivity disorder (ADHD), the most common neurobiological dysfunction of childhood, is now being diagnosed more and more frequently in high school and college athletes as well. There was a fourfold increase in diagnosis of ADHD in the decade 1987–1996, and the disorder is present in 4–12% of 6–12 year-old children (Brown et al., 2001). Fully 65% of these individuals maintain the diagnosis through adolescence and into adulthood (Agency for Health Care Policy and Research, 1999). Thus, more players are presenting at the professional level already diagnosed with this disorder and taking stimulant medication (McDuff, Morse, & White, 2005; Olfson, Marcus, Weissman, & Jensen, 2002).

Given these epidemiological factors, the SMT clearly needs a psychiatric clinician who is an expert in the diagnoses and treatment of Axis I conditions. In addition, this clinician must possess specialized interviewing skills, an understanding of the pressures of competition and forces unique to the athletic world, and the ability to assess athletes using a comprehensive biopsychosocial model. This model, which grew from the work of the early psychoanalyst Franz Alexander, takes into consideration the athlete’s physical condition, including injuries and overall health, as well as his or her social roles and potential sources of emotional distress. Alexander, who focused on the mind-body relationship at a time when Freud was focused exclusively on the psyche, influenced George Engel (1980) who expanded mind-body science and developed the biopsychosocial approach.

Using the biopsychosocial model, the sport psychiatrist might look at an athlete who presents with the symptom of anxiety from one or all of these several perspectives:

1. **Biological.** Is this a recent phenomenon, specific to a certain athletic situation, or has the athlete been anxious and a worrier since early childhood (state vs. trait)? Is there a strong familial or genetic component (e.g., a mother with panic disorder, a brother with many phobias)? Have relatives been prescribed medication, and if so, which medications have helped? Could the athlete have thyroid dysfunction or an adrenal tumor, either of which can appear with anxiety symptoms as its first manifestation?

2. **Psychological.** What have been the athlete’s adaptive patterns and defenses in response to danger up to this point? How strong are his or her parental bonds, and what is the nature of them (e.g., high expectations, withdrawal of love after a poor performance leading to chronic feelings of mistrust and doubt, etc.)? How significant to the presenting problem is the issue of sibling rivalry, since brothers and sisters often excel in the same sport (e.g., the Williams sisters, the Manning brothers), and how closely is the player’s identity tied to high achievement in a particular sport?

3. **Socio-cultural.** How stable is the athlete’s family? Is there an imminent divorce or serious family illness? How is the athlete handling the coach, pressures from peers, and outside distractions? Are there prejudice issues that the athlete is facing in daily life or on the team?

In addition to the biopsychosocial model and clinical experience, the sport psychiatrist also brings the understanding of a physician to the anatomical and psychological impact of an athlete’s injury—and to the treatment and the rehabilitation
associated with injury. In addition, as a physician, the sport psychiatrist adds to the SMT’s assessment of the emotional and physical impact of other medical conditions that might be affecting the athlete, such as diabetes, asthma, hypertension, congenital abnormalities, migraines, back and chronic pain, and other maladies. By adding the sport psychiatrist’s assessment of an athlete to those of the sports medicine practitioner, the trainer, and the sport psychologist, the entire SMT is able to reach an integrated consensus regarding the best approach to promoting the athlete’s physical and emotional well-being, while also optimizing athletic performance.

The Interview

Regardless of discipline, all sports clinicians endeavor to help athletes realize their full potential and reduce their incidence of mental and physical injury. To accomplish the mental side of this task effectively, the SMT must create an atmosphere that conveys psychological safety to the athlete. Many athletes come to an interview with a sport psychiatrist or another sports medicine professional feeling closed and guarded. For this reason, when interfacing with a player, it is necessary to create a “holding environment” (Winnicott, 1965) that encourages the athlete to voice his or her fears and concerns.

To best create this atmosphere, whether one is a sports medicine physician performing a preparticipation physical examination (PPE), a trainer following the athlete over the course of an injury, or a sport psychology performance consultant who has been asked to see an athlete with a recent performance decline, each member of the SMT team should be mindful of the following issues when interacting with an athlete:

1. **Time.** It is essential not to appear rushed, even when working within a very circumscribed time frame.

2. **Interest.** Paraphrase what the athlete says to indicate that you are listening; try not to take telephone calls in the midst of the consultation.

3. **Connectedness.** Make good eye contact.

4. **Confidentiality.** When possible, assure the athlete that you answer only to them. When employed by a team, the sport psychiatrist or psychologist should, at the outset, disclose mixed allegiances and define the bounds of confidentiality (see Moore, 2003).

5. **Understanding.** Many child and adolescent athletes are guarded in the presence of a physician or therapist, but an athlete who feels understood will readily open up. The therapist who can give voice to an athlete’s inner fears encourages the athlete to speak of deeper issues. Heil, Bowman, and Bean (1993), for example, advocate an active listening approach that emphasizes the use of paraphrase and of tuning into what the athlete may be feeling. Using their approach, an interchange between a therapist and an elite female high school tennis player whose recovery from an ankle injury was proceeding more slowly than anticipated might proceed as follows:
Athlete: You know doc, it really bugs me. It seems like I’ve been at this level in my recovery forever and the ankle’s still not real strong.

Therapist: And you really don’t know how quickly you’re going to get better, or whether your ankle will be back to full strength. You’re a little worried about that, huh?

Athlete: (sighs) Yeah. And I’ll tell you some other things I’m worried about.

6. Support. Be accepting and nonjudgmental of where the patient is. Functional pain, for example, is still pain, and the emotional pain behind it may be massive.

If, in the end, the SMT conveys these qualities to the athlete, there is a good chance that a therapeutic relationship based on trust and rapport will evolve. (For a more comprehensive discussion of the sport psychiatry interview, including issues surrounding the recommendation of prescription medications, see Kamm, 2000, 2005 and the International Society for Sport Psychiatry, ISSP, web site: www.theissp.com.)

An ideal time to apply these principles would be when the sports medicine physician-member of the SMT conducts the PPE. Since it may be the only time all year that an athlete sees a physician, it has been argued that the PPE is the optimal time to counsel athletes regarding such sensitive issues as smoking, alcohol and drug use, and violence (Armsey & Hosey, 2004). All of the aforementioned, except for smoking, have been reported to have higher incidence rates in athletes than in the general population (Kamm, 2000; Poper, 1987). The sports medicine physician can, therefore, function as an important gatekeeper in the prevention and diagnosis of emotional disorders and injuries in athletes, and if necessary, can make appropriate referrals.

It is, of course, essential that all SMTs understand the stigma facing an athlete when it comes to admitting that he or she has an emotional problem or disorder. Indeed, the very word “psychiatrist” or “psychologist” in some sporting circles can provoke a stigma reaction. Consequently, many athletes suffer needlessly, stoically ignoring their symptoms. For example, Terry Bradshaw, the Hall of Fame quarterback for the Pittsburgh Steelers, reportedly used to sweat profusely and break into tears after a game, but he never realized he was suffering from depression, nor did those around him, who focused on his stellar performance on the field. Only after growing more melancholy after retirement, seeking therapy, and being placed on paroxetine (Paxil) has Bradshaw stopped experiencing his inexplicable lows (Wertheim, 2003).

**Clinical Disorders**

The following section reviews some of the clinical disorders that psychiatrically savvy SMT members should bear in mind when examining an athlete. The incidence of these entities in athletes seems to mirror their incidence in society, unless otherwise noted.
Mood Disorders

**Depression.** According to the *Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition, Text Revision (DSM-IV-TR; American Psychiatric Association, APA, 2000)*, the primary criteria for depression are feelings of sadness and loss of interest in activities one normally enjoys. Other symptoms include psychomotor slowing (or agitation), feelings of worthlessness, difficulty concentrating, and recurring thoughts of death or suicide. In addition, symptoms that are common to many other medical conditions, such as insomnia, weight loss, and fatigue, can also be hallmarks of this devastating disorder. Depression is one of the most commonly occurring psychiatric disorders with a lifetime prevalence of 15% in the general population and 25% in women (Eccles & Barber, 1999).

The case of former New York Mets pitcher Pete Harnisch illustrates the low index of suspicion that exists in the athletic community regarding the existence of an emotional disorder. Coming off shoulder surgery, Harnisch was expected to be the ace of the 1997 Mets pitching staff. He stopped chewing tobacco in spring training and soon found himself fatigued, unable to sleep, and losing weight. Unsure of himself, Harnisch approached manager Bobby Valentine and told him he did not feel he could pitch on opening day. According to Harnisch, his manager ridiculed him in front of the team, poisoning the relationship between the two. When Harnisch approached other team personnel, he was prescribed Benadryl for insomnia, and he was thought to have Lyme disease before the proper diagnosis of depression was finally made. Harnisch was prescribed Paxil, underwent psychotherapy, and made an excellent recovery, feeling that his pitching was just as good on Paxil as off (Kamm, Baum, Glick, & Burton, 2000; Saunders, 2003).

In retrospect, a more careful interview by team trainers and physicians would likely have revealed Harnisch’s feelings of sadness and guilt, lack of joy, and the fact that there was a history of depression in his family, which made him more susceptible to a depressive episode.

A depressive disorder can best be ferreted out by the SMT through (a) observation, in which the patient seems down, slumped, and sad and (b) history, in which there are sleep, appetite, and concentration disturbances, irritability, lack of energy or fatigue, loss of interest, lack of pleasure from things, and guilt. There may also be crying and suicidal ideation. A cluster of these symptoms (at least 5) must be present more times than not for at least a 2-week period to receive the diagnosis. For diagnostic purposes, all SMTs should have a reference copy of the *DSM-IV-TR* (APA, 2000) in their offices.

**Bipolar Disorder.** Manic and hypomanic episodes, which include expansive or irritable mood, grandiosity, lack of need for sleep, pressured speech, distractibility, and excessive goal-directed and pleasurable activities, are the hallmark of bipolar disorder (see *DSM-IV-TR, 2000*). Though only prevalent in 1% of the population (Kaplan, Sadock, & Sadock, 2003), bipolar disorder has been known to affect several high profile athletes, including Ilie Nastase, John Daly, and Muffin Spencer-Devlin (Wertheim, 2003). In a hypomanic episode, which includes manic symptoms at a lower level of intensity and for shorter duration than in a manic episode, athletes may seem only gregarious, outrageous, or overly aggressive. In a frankly manic episode, however, severe behavioral dysfunction occurs, as when Miami Dolphins defensive tackle Dimitrius Underwood reportedly took a knife to his neck in 1999.
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In addition, Pro Bowl center Barret Robbins of the Oakland Raiders missed the 2003 Super Bowl when he went to Tijuana on a drinking binge the evening before the big game (Nobles, 2005). Though Raiders officials were aware that Robbins had been diagnosed as having bipolar disorder since 1996, Robbins’ teammates were never told. Robbins stopped taking his medication during preseason summer camp, and his mood and behavior became erratic during his Pro Bowl season. Although he started drinking (substance abuse can precipitate a bipolar episode), no one on the Raiders’ staff effectively intervened.

This case underscores the importance of the SMT being attuned to the nuances of mental illness. In retrospect, the Raiders, with Robbins permission, should have had a buddy system in place for their center, where a trainer or teammate would have been assigned to watch any gross changes in Robbins’ behavior and report back to the team physician, especially as stress peaked at the beginning of the team’s Super Bowl run. The presence on the team staff of an astute, proactive sport psychiatrist would certainly also have been helpful.

Bipolar disorder can be diagnosed by noting escalated or irritable mood that causes discomfort in colleagues and friends, over spending, need for little food and sleep, pressured speech, inflated self-esteem or grandiosity, and boundless energy (Kaplan et al., 2003). Judgment becomes impaired and athletes frequently turn to drugs or alcohol, especially if there is a prior history of alcohol abuse, as seems to have been the case with Barrett Robbins (Nobles, 2005). In childhood and adolescence, aggression, irritability, and ADHD-like symptoms may be the first manifestations of an underlying bipolar disorder. The diagnosis becomes more probable when there is a history of bipolar disorder among blood relatives, or family history reveals the existence of an eccentric relative who was a gambler, a criminal, or a prostitute.

Anxiety Disorders

**Generalized Anxiety Disorder.** Worry, or apprehensive expectation, is the central feature of generalized anxiety disorder. Patients with this disorder find their worries difficult to control, and it can lead them to feel agitated, easily distracted, irritable, and fatigued. It is also associated with uncomfortable muscle tension and sleep disturbance (see APA, 2000). Generalized anxiety disorder has a 1-year prevalence range of 3–8% (Kaplan et al., 2003). Thus, it is a fairly common condition and is characterized by excessive worry and anxiety, but not by gross panic attacks. Many athletes have normal state anxiety (i.e., they get anxious during the state of preparedness that precedes a big meet). But some athletes also have trait anxiety (i.e., they are worriers from an early age, often beginning in adolescence, stressed out before examinations and catastrophically projecting ahead regarding an upcoming youth sport contest: “What if I drop the pass, what if I strike out?”). The SMT’s index of suspicion regarding GAD should be raised when individuals present with this picture.

Perhaps the best way to distinguish between generalized anxiety disorder and normal anxiety is to ask the athlete whether he or she feels the anxiety is excessive or difficult to control. At times, the affected athlete will present to the trainer or SMT with only the psychosomatic manifestations of anxiety—headache, palpitations, upset stomach, and diarrhea—rather than with the anxiety itself. Fatigue, difficulty
concentrating (e.g., “my mind went blank during the meet”) and insomnia may also be present, but the prominent feature is the “what if-ing”—either regarding upcoming athletic performances or about the meaning of their somatic symptoms: “Gee, Doc, I’ve been getting these headaches, what if I have a brain tumor?”

**Panic Disorder.** Panic attacks are characterized by spontaneous, unexpected bouts of sheer terror during which patients report feeling “totally out of control” or as though they are going to die or “go crazy.” Symptoms include racing heart, sweating, shaking or trembling, shortness of breath, sensations of choking, and other indicators of intense autonomic arousal (see APA, 2000). Many patients report feeling trapped and believe they must leave a situation immediately, while others feel as though they are having a heart attack and need to call 911. Panic attacks can be differentiated from other types of anxiety attacks because they are unexpected and uncued, and the patient feels “out of control” and in an intense state of fear. There is often no obvious psychological cue for the first attack, and the individual becomes significantly fearful of experiencing another attack. The lifetime prevalence for panic disorder and panic attacks is 5% (Kaplan et al., 2003).

When reviewing the patient’s history, the clinician typically finds that the individual has experienced previous attacks. In true panic disorder, for example, the patient usually remembers his or her first episode very well and can relate it in detail. Common physical symptoms include tachycardia, palpitations, shortness of breath, and sweating. Feelings of choking or smothering can lead to feelings of weakness and fatigue. During an attack, memory can be impaired, and dissociation (i.e., feeling removed from or outside oneself) can occur. Almost as debilitating as the panic attack is the anticipatory anxiety that exists between attacks. The patient lives in fear that if he or she returns to the place where the initial attack occurred or experiences similar physical sensations, another attack will happen.

If the SMT suspects that an athlete is having a panic attack during a game, it is advisable to bring the athlete to the sidelines to narrow his or her visual and auditory input. The clinician can cup hands on both sides of the athlete’s face, like blinders, have the athlete make eye contact, and reassure the athlete that everything is all right. Having the athlete use a paper bag to rebreathe his or her exhaled air, increasing carbon dioxide intake, also can help alleviate many of the immediate symptoms. A short break in the locker room may be even more beneficial. Possible medical reasons for the physical symptoms must, of course, be ruled out such as mitral valve prolapse, thyrotoxicosis paradoxical atrial tachycardia, pheochromocytoma, and other medical conditions. Panic attacks can also be associated with substance intoxication, particularly stimulant use. Until recently, the unrestricted use of amphetamines (“greenies”) in baseball, for example, suggests that there could be an increased rate of anxiety and panic in baseball players.

Panic disorder symptoms can severely disrupt performance in almost any sport. For example, a boxer inexplicably quit fighting in the middle of an important match. He had a history of strange behavior in the ring, having been disqualified more than once for repeatedly fouling his opponent, even while ahead on the judges’ cards. Those around him openly wondered if the athlete had an anxiety disorder, and it is likely that this boxer did indeed suffer a form of panic attack in these instances. As Clark, Tofler, and Lardon (2005) mention in an article on golf, when in a state of panic, an athlete’s cognitive abilities are greatly diminished, judgment
is impaired, and the athlete frequently reverts to instinct. One could speculate that in the throes of anxiety, the boxer was no longer cognizant of the rules of boxing (e.g., hit above the belt) and reverted to instinct, slugging away without regard to which areas were fair or foul.

In a similar example, a women’s eight rower stopped rowing as her team approached the last leg of its race in a major international competition. The athlete had behaved similarly two years before, but sport psychiatry services were never offered to her. Though exceptionally well trained (but not overtrained), the athlete reported complete exhaustion at that pivotal point in the race. The sport psychology/psychiatry community in the athlete’s home country felt, in retrospect, that the rower’s behavior was the result of an emotional disorder, not a “quitter’s mentality,” as many in the rowing community were saying. There were reports of the athlete throwing up before the race, and one could again speculate that her sudden experience of exhaustion was a manifestation of a panic attack.

**Social Anxiety Disorder.** Social anxiety, also known as social phobia, involves persistent fear of social or performance situations in which the individual believes he or she will be scrutinized or judged by others (see APA, 2000). When exposed to these situations, the individual with social anxiety disorder experiences physiological symptoms like those of a panic attack (e.g., tachycardia, sweating, shaking, etc.). As a result, the individual typically attempts to avoid these social or performance situations or endures them only with considerable distress.

Ricky Williams, former star running back for the Miami Dolphins, is the best known example of an athlete who suffered symptoms of social anxiety disorder (Wertheim, 2003). Early in his career, Williams gave postgame interviews to reporters while still wearing his helmet with his visor down. In retrospect, Williams reported that he always knew he was “wired differently” from his classmates, even in high school. He would recoil from social situations, even from speaking in class, and believes that because he was a football star, his extreme introversion was shrugged off as aloof behavior typical of a coddled athlete. This case illustrates how society’s tendency to place a gifted athlete on a pedestal can impede the diagnosis of psychiatric conditions in these athletes. As Williams said, “If I didn’t want to honor an obligation, I always knew someone would cover for me. A lot of people made it easy for me to hide.”

Williams broke his ankle during his second NFL season while still with the New Orleans Saints but states that no one paid attention to his emotional state, even though trainers and rehab specialists oversaw his every move. With the stress of an injury now adding to his anxiety, Williams went to the Internet and finally diagnosed himself with social anxiety. He then sought out a therapist and had the diagnosis confirmed. According to Williams, however, his team did not respond with understanding. When he went to Saints’ coach Jim Haslet to explain that he was seeking treatment for psychological issues, Williams reports, Haslet yelled at him “to stop being a baby and just play football.” This vignette illustrates how an injury can make an underlying psychiatric condition more manifest, and how seeking help for treatment for an emotional disorder still tends to be seen as a weakness by many in the sports establishment.

After an SSRI and psychotherapy were added to his treatment, Williams moved to the Miami Dolphins where he became one of the most productive running backs
in that organization’s history. New Orleans fans are correct to wonder whether Williams would have stayed with the Saints and changed that franchise’s luck had he been accurately diagnosed and properly treated while on that team.

The diagnosis of social anxiety disorder often hinges on taking a good history, which will usually reveal that the patient has been self-conscious about entering social situations for many years, especially if they require being among strangers. Often the individual will use alcohol or marijuana to self-medicate before entering such situations, and the SMT member must remain ever mindful of the common coexistence of social anxiety and other anxiety disorders with substance abuse and alcoholism. Again, Ricky Williams offers an example of what SMTs can expect. Late in his 2004–2005 season in Miami, Williams withdrew from play, provoking great anger from teammates. It seemed that this withdrawal was related to Williams’ imminent suspension for testing positive for marijuana and his stated desire to keep on smoking it.

Ricky Williams seems to have suffered from the generalized type of Social Anxiety Disorder, but there is, in addition, a specific type, also known as performance anxiety. The latter occurs only in special situations. An example of performance anxiety would be a softball pitcher who can throw well in practice but “freezes up” before a game. Performance anxiety can also present subtly as the sudden, inexplicable inability to perform what used to be a routine athletic task. Examples of this phenomenon include Chuck Knoblauch, Steve Sax, Mackie Sasser, and Steve Blass.

Posttraumatic Stress Disorder (PTSD). The hallmark of PTSD is the witnessing of a traumatic, life-threatening (or potentially life-threatening) event that produces intrusive memories, nightmares, and hypervigilant arousal (see APA, 2000). The lifetime prevalence of PTSD is estimated to be about 8% of the general population, but an additional 5–15% (up to 23% of the population) may experience subclinical forms of the disorder (Kaplan et al., 2003). Vietnam veterans, of course, have a higher incidence, and athletes, particularly those in sports with high risks of serious injury or even death (e.g., auto racing, horse racing, football, boxing) would seem to be at higher risk. PTSD is, then, a common psychiatric disorder that, unfortunately, often goes unrecognized by therapists, general physicians, and psychiatrists alike.

At a psychiatric symposium chaired by the author (Kamm et al., 2000), Hall of Fame jockey Julie Krone detailed her experience with PTSD. Because Krone had a reputation for being so tough—as a woman in a man’s sport must be—her symptoms went unnoticed and she almost committed suicide. In June of 1993, Julie became the first and only woman rider to win a Triple Crown race—the Belmont. Later that summer at Saratoga, Krone suffered a spill, falling under the heels of several horses and suffering almost fatal injuries. She suffered heart contusions and a fractured ankle that needed to be rebuilt with 2 plates and 14 screws. Despite their severity, Krone rehabbed well from these injuries, taking recovery as a challenge.

Interestingly, however, the spill that precipitated PTSD was actually much less serious (not uncommon in PTSD) and occurred 2 years later at Gulf Stream Park when her horse broke down in the middle of a race and pitched her off. Rolling on the turf, Krone covered her head with her hands, which were broken. When referring to the injury, Krone stated that “It fried me, I couldn’t talk. The straw didn’t
break the camel’s back; it gutted the sucker, left the camel for dead. I was numb, couldn’t think. I was afraid of horses, hated riding” (Lipsyte, 2000, p. 13).

Some critical points regarding PTSD are illuminated by Krone’s comments. Note that the stressor in this case was not of the magnitude of the Saratoga spill. The previous spill had, however, sensitized her, and events in her life were such that this second spill took on great psychological meaning and became “the last straw.” As Krone told me (Julie Krone, personal communication, April 2000), “The heart and the hands are a jockey’s biggest organs. The first spill got my heart, but this one got my hands—my trademark—the way I uniquely communicated with my mounts.”

To be diagnosed as having PTSD, an individual must have experienced a traumatic event that is perceived as a major threat to one’s life or self, or have viewed a scene (e.g., human body parts) outside the realm of normal human experience. This is followed by the painful reexperiencing of the traumatic event. For example, when Krone went to the starting gate for subsequent races, she had actual flashbacks of the spill. She then became anxious and communicated this to the horse, resulting in a performance decline. Krone also had recurrent nightmares of the spill and even reexperienced the event when someone swung a golf club near her. The swish of the wind created by the club evoked the sensation that horses were passing over her. Other characteristics of PTSD include emotional numbing (Krone felt numb and detached and no longer cared about riding), avoidance (Krone, for the first time in her life, became afraid of horses and riding), and increased arousal (Krone exhibited symptoms of insomnia, difficulty concentrating, and irritability). Increased arousal caused Krone particular difficulty when after a race, she physically attacked a jockey who had cut her off, resulting in a 7-day suspension.

Krone consulted with various physicians during this time, but no one picked up on her PTSD. She even went to an optometrist for blurred vision at the starting gate, which was really caused by anxiety, but she was told that there was nothing wrong. By luck, after another bad day of racing and just as she was contemplating committing suicide that evening, Krone ran into a psychiatrist friend at the track. The friend suggested she talk to him, and psychotherapy eventually led to medication (an SSRI), which helped Krone return to full functioning.

This case illustrates many important features of PTSD, which should be suspected when an athlete has a minor injury that takes longer than expected to resolve. It also should be suspected when the presentation is one of vague medical or psychophysiological complaints (e.g., headaches, stomach aches, backaches, soreness of muscles, blurred vision). The interview should focus on events known to have traumatic or tragic consequences in a sport. For example, a gymnast should specifically be asked about PTSD if she presents with some of the above symptoms months after hurting her neck in a fall from the high bar or after vaulting.

**Obsessive-Compulsive Disorder (OCD).** Individuals with OCD experience intrusive or disturbing thoughts, impulses, or images that cause anxiety or distress (see APA, 2000). These thoughts are not simply exaggerated worry about real-life problems, but thoughts considered inappropriate and unwanted. Individuals with OCD attempt to suppress or ignore these thoughts, but regardless of how hard they try, they cannot get the thoughts that bother them out of their mind. They do, however, recognize that these thoughts are products of their own mind and
do not, as in psychotic disorders, believe that they are imposed from someone outside themselves. They may have compulsions, as well, such as compulsive checking, hand washing, counting, or hoarding, that often follow rigid rules. The purpose of these compulsions is to prevent or alleviate the distress associated with the intrusive thoughts. To warrant diagnosis of OCD, the patient’s obsessions or compulsions must be time consuming, taking up more than one hr per day or otherwise significantly interfering with day-to-day functioning. Because the patient will rarely volunteer information about these symptoms, clinicians typically must inquire about them. In addition, since OCD is an anxiety disorder, any situation that increases stress will worsen it.

Julian Swartz, who had been diagnosed and treated for OCD since the ninth grade, was the Associated Press Wisconsin high school basketball player of the year his senior season (Rhoden, 2003). He went on to enroll at the University of Wisconsin, and while still a freshman, he helped his team make the Final Four. Swartz’s anxiety mushroomed, however, as he became consumed with doubt that he was good enough to contribute to the team. Doubt is a common symptom of this disorder. Being a perfectionist, he also felt that he was not working hard enough. A bout of depression followed, as did a suicide attempt. When Julian finally transferred to a Division III school, he felt less pressure to perform, and his symptoms became controllable again. In retrospect, a small school probably would have been a better initial choice for Julian, given his disorder.

OCD is to be differentiated from superstitious rituals, which are common in athletics. Because OCD must grossly interfere with important areas of the patient’s life, this distinction can rather easily be made. Obligatory running or obligatory exercise may also be seen as part of the OCD spectrum (Yates, Leehey, & Shisslak, 1983). It is compulsive in that the patient “has to” do it. Affected athletes feel anxious if they do not run a certain distance or swim a certain number of laps. Such individuals organize their life around their exercise, and it can severely impact interpersonal relations. Though the patient on a certain level realizes that he or she does not actually “have to” run, the perception is that the task must be done. The patient usually rationalizes this perception by arguing that running will help maintain desired weight or tone the cardiovascular system. These individuals will train even when advised by the SMT to rest because of injury.

Eating Disorders

Athletes are at greater risk for developing eating disorders than the general population (Sungot-Borgen, 1994). Often, coaches or parents will have praised other athletes within earshot of the patient regarding how much weight the other athletes have lost, how much better they now look, and how much faster they are. A vulnerable teen or preteen then embarks on a crash program to also lose weight. Interestingly, male athletes are much more at risk for developing eating disorders compared with the general population of males than female athletes are when compared with nonathletic females.

Athletes engaged in sports that value or demand a certain aesthetic look (e.g., gymnastics, figure skating, sports dance, and diving) are at a greater risk for eating disorders than others, as are those involved in sports with weight classifications, such as lightweight crew, lightweight football, boxing, and wrestling. At the other
end of the spectrum, some positions in sports put a premium on weight gain (e.g., heavyweight wrestlers, shot putters, and linemen in football). To keep their weight up, these athletes may indulge in binge eating. In making the diagnosis of an eating disorder in an athlete, however, one must not be bound strictly by weight. For example, in *anorexia athletica*, which would be diagnosed as eating disorder not otherwise specified in *DMS-IV-TR* nomenclature (APA, 2000), athletes are able to keep themselves above 85% of their excepted minimum body weight (the criterion cut-off for anorexia nervosa) because of their intense training and increased muscle mass. Nevertheless, these athletes still exhibit many of the signs and symptoms of anorexia nervosa (Swoap & Murphy, 1995).

**Anorexia Nervosa.** Individuals with anorexia nervosa refuse to maintain normal body weight. They engage in weight loss efforts that lead either to body weight that is less than 85% of normal expected weight or to failure to make developmentally expected weight gains. They also experience intense fear of gaining weight or being fat, and they perceive themselves as overweight, despite being underweight and exceedingly thin in appearance. In postmenarchal females, as body fat drops, the patient will have missed at least 3 consecutive periods. Some anorectics (i.e., purging type) use vomiting, laxatives, diuretics, or enemas to control weight. Others (i.e., restricting type) only limit their food intake or use exercise to burn more calories (see APA, 2000).

When an athlete appears overly thin to the SMT, anorexia nervosa should be suspected. Questions regarding body image should then follow: “When you look in the mirror, how do you see yourself?” The anorectic will claim to be fat when, to the neutral observer, he or she is clearly thin. This syndrome is frequently associated with compulsive exercise, intense fear of gaining weight, and meticulous dietary restriction. When the athlete becomes anorectic, weakness eventually affects their performance. Patients who have anorexia are very secretive and often wear bulky clothes to conceal their thinness. A high index of suspicion is therefore often required to make the diagnosis, and collateral visits with family members are usually necessary.

Anorectics have a hard time admitting that they have a serious problem because they engage in denial and have perfectionistic tendencies. Yet early detection and intervention are associated with better outcomes, essential in an illness with a significant (5–18%) mortality rate (Kaplan et al., 2003; Currie & Morse, 2005). Successful referral, then, is of the utmost importance. Though the patient will resist the idea that they have an eating disorder that requires psychotherapy, Swoap & Murphy (1995) advise the referring SMT to focus on the distress the athlete is currently feeling (i.e., distress from their decreased athletic performance and from pressure from their family to eat and see a doctor) rather than focus on the patient’s weight. Suggesting that the athlete go for a consultation to assess whether there is a problem is often better received than a direct referral for therapy.

**Bulimia Nervosa.** The patient with bulimia nervosa is often of normal weight or slightly overweight. Symptoms of the disorder include binge eating (i.e., consuming larger amounts of food than most people would eat in a similar period of time and in similar circumstances), as well as an experience of uncontrolled eating (i.e., the feeling that one cannot stop eating). In addition, individuals with bulimia nervosa engage in frequent (i.e., at least twice a week for 3 months) compensatory behaviors,
such as self-induced vomiting, use of laxatives, fasting, or excessive exercise. Finally, these individuals are overly influence by perceptions of their body shape and weight, yet they are able to maintain normal weight, not falling below the 85% threshold required for anorexia nervosa (see APA, 2000). Bulimia nervosa disorder is more common than anorexia nervosa, affecting between 1% and 3% of young women (Kaplan et al., 2003).

During a binge, bulimic patients typically eat food that is sweet, high in calories, and generally soft and smooth in texture (e.g., donuts). The collateral family visit may reveal suspicious behavior, such as the patient frequently eating alone, taking numerous trips to the bathroom when at restaurants, and returning from the bathroom with blood shot eyes. Bulimics frequently have wide fluctuations in weight, and they are often depressed, particularly after a binge. Not all binge eaters purge (nor do all anorectics), and it is believed that those who purely binge have less body image disturbance and less anxiety concerning eating than those who binge and purge. Bulimics, like anorectics, are very secretive about their illness, so confirmatory history usually needs to be obtained from the family. Laboratory studies may show electrolyte imbalances, hypomagnesaemia, and hypermagnesaemia, particularly in purging (Kaplan et al., 2003).

Bulimia, unlike anorexia, may not directly affect the athlete’s performance, but the associated guilt, depression, and family conflicts regarding the bulimia will stress the athlete. Some psychoanalysts believe that bulimia is a symptom of the struggle that a young woman is having between merging with the maternal figure and separating from it. The eating may represent a wish to fuse with the caretaker mother, and regurgitation may unconsciously express the wish for separation (Kaplan et al., 2003).

**Alcoholism and Substance Abuse Disorders.** Though they get better grades, recent evidence indicates that high school athletes are more likely to use drugs and alcohol than their than nonathletic classmates (National Clearinghouse for Alcohol and Drug Information, 1994). Among athletes, particularly at the high school level, male athletes have been found to drink to intoxication significantly more often than female athletes. Since it has been found that 6.2% of Americans have indulged in heavy alcohol use in the past month (Marder, 1995), it is likely that at least 3 or 4 players on the average high school football team will be affected in some way by alcohol abuse (Carr & Murphy, 1995). A study by Nattiv and Puffer (1991) found that undergraduate college student athletes were found more likely than their nonathletic peers to consume large quantities of alcohol per sitting, and they were also found to have three times as many DUs. A family history of alcohol and drug abuse was also greater in the athlete group (athletes, 22%; nonathletes, 9.5%). To be diagnosed as having alcohol abuse, the athlete must exhibit recurrent use in hazardous situations, recurrent use that results in failure to fulfill major obligations (school, home team), recurrent alcohol-related legal problems, and continued use despite social or interpersonal problems caused and exacerbated by the alcohol (see APA, 2000).

As the athlete needs a larger and larger dose of alcohol to achieve the same effect, the phenomenon of tolerance develops, and one begins to suspect alcohol dependence (see APA, 2000). The athlete experiences withdrawal and a great deal
of his or her time is spent trying to obtain alcohol, using alcohol, or recovering from the effects of alcohol. Alcohol dependence impacts the athlete’s performance and allegiance to the team, and persistent efforts to cut down or control the alcohol use prove unsuccessful. The patient continues to use alcohol, despite the knowledge that it is causing psychological and physical problems (i.e., denial). There may also be periods of amnesia for events taking place during heavy drinking bouts (i.e., blackouts). The CAGE questionnaire (Marder, 1995) is a brief and straightforward instrument that has been widely used as a screening device. CAGE is an acronym derived from the following four questions:

1. Have you ever felt you ought to Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt bad or Guilty about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (Eye opener)?

The scale’s developer, John Ewing, found that answering “yes” to at least two of these questions was a strong indicator for alcohol abuse by men. In the screening for substance abuse, use of the patient’s drug of choice can be substituted for the word “drinking.” Since marijuana and alcohol use usually begin in high school, and cocaine thereafter, it is important that the SMT specifically ask about the use of these agents when assessing high school and college athletes.

Jonas, Sickles, and Lombardo (2004) describe the crucial role of the team physician in the diagnosis of drug or alcohol abuse:

Identification of the use and/or abuse of therapeutic (and illicit) agents in athletes often requires little more than a careful clinical history during the athlete’s preparticipation evaluation. Young athletes are often unaware of the abuse potential of many of these agents and need to be counseled regarding their appropriate use, not only as it relates to athletic competition, but also regarding the appropriate use of medication to treat medical illnesses and their symptoms. Athletes frequently utilize over-the-counter products without considering them to be medications. It is especially important for athletes who are competing in events where drug screening is performed and detection of banned substances is possible that they are carefully counseled regarding what medicines they may or may not be permitted to take. When it is not readily apparent from the history, it is then much more difficult to detect inappropriate use of therapeutic agents in athletes other than through random drug screening programs. The use of these medications should be tightly controlled by the team physician. Athletes who need these potent medications should be counseled regarding their appropriate use. Most of these compounds are on a banned substance list of many athletic governing bodies. Athletes’ access to most prescription medications is through either their team or primary care physician. Education programs encouraging athletes to communicate with members of the health care team regarding their use of any drug is important. Primary care physicians should be aware of the appropriate use of therapeutic drugs in athletes and participate as an active member of the health care team to ensure safe, ethical, and legal participation of athletes who require medical treatment. (p. 384)
For a complete listing of the NCAA and United States Olympic Committee (USOC) banned and restricted drug list, SMT members should refer to the Athletic Drug Reference ‘99 (Fuentes & Rosenberg, 1999) or go to www.antidoping.org.

**Anabolic Steroid Abuse.** It has been estimated that 1 million people in the United States have used illegal steroids at least once (Kaplan et al., 2003). Alarmingly, half of the users started before the age of 16, and a recent survey shows that 6% of all high school students have used steroids (Ross, 2005). The highest use rate is seen among 18–25 year olds, with 26–34 year olds having the next highest rate. Estimates for the rate of use in body builders have ranged from 50% to 80%, and athletes who abuse steroids have, in the past, tended to come from those sports emphasizing strength and endurance (e.g., track and field, weight lifting); however, as the performance enhancement benefits of steroids have become known over the past 40 years, athletes in all sports have been magnetically drawn to them.

When an athlete is cycling on steroids, he or she will often experience affective lability—euphoria, irritability, and grandiose feelings, even to the point of feeling invincible. The athlete may also experience anger, arousal, irritability, hostility, anxiety. “Roid rage” has become a popular term for the violence and behavior in which steroid users sometime engage. Somatization and depression may be present, particularly during times where steroids are not used. Changes in personality are not uncommon, and steroid abusers with no record of antisocial behavior or violence have been known to commit murder and other violent crimes. In addition, steroids are both psychologically and physically addictive, and when an abuser stops using them, he or she may become depressed, anxious, and overly concerned about physical shape. It is assumed that the SMT is well aware of the physical stigmata of steroid use in young men and women, so these will not be listed here.

Even more than with their ego-syntonic use of alcohol and drugs, athletes may have difficulty perceiving steroid use as problematic, asking “How can anything be wrong with something that actually makes me faster, stronger and able to jump higher?” Jose Canseco’s (2005) justification of steroid use in baseball is a recent example of this. Indeed, even an athlete’s coach and parents may view the use of anabolic agents as positive and perfectly acceptable, seeing their use as a laudable conformity to the sports ethic of win at all costs. Such performance-enhancement and “competitive edge” practices have been referred to by sport sociologist Jay Coakley (1998) as “positive deviance,” and they are on the rise. Ominously, a recent survey (Faigenbaum, Zaichkowsky, Gardner, & Micheli, 1998) revealed that 2.9% of middle-schoolers (grades 5–8) were using steroids. That number increased to 9% when only serious gymnasts and weight lifters in this age group were polled.

Steroid users are reluctant to give up a drug that they believe makes their body look and feel good while also increasing their performance. The SMT should therefore reframe the choice of whether to use performance-enhancing agents by placing it into the larger context of how sports participation can help an athlete develop decision-making skills. After all, one of the hallmarks of great athletes is their ability to make difficult decisions under duress, good decisions for themselves and their team, and good decisions during a match. Asking the athlete to reflect on whether the use of steroids is really a good decision, and whether it meshes with the moral lessons that one ideally learns from sports participation (e.g., fairness, integrity, compassion, sportsmanship) is to give an adolescent or young adult a say in the
unfolding of his or her own moral development. Recent revelations about steroid use in professional baseball promises to keep this issue on the front burner.

**Muscle Dysmorphia.** Muscle dysmorphia is a subtype of body dysmorphic disorder, a somatoform disorder characterized by preoccupation with imagined defects in appearance (see APA, 2000). Also known as reverse anorexia, muscle dysmorphia is essentially a disorder of distorted body image. Though the athlete is extremely well-built and solid, he or she feels small and underdeveloped. Affected athletes check their appearance dozens of times a day in the mirror and become anxious if they miss even one day of working out in the gym. Their preoccupation with weight lifting costs them social and occupational opportunities. For example, though their bodies are extremely well developed, athletes with muscle dysmorphia believe that they will look too small when seen in a bathing suit and often will not go to the beach. Bodybuilders seem to be more at risk for this disorder than other athletes, and there is a higher incidence in female bodybuilders than in their male counterparts (Pope, Gruber, Choi, Olivardia, & Phillips, 1997).

SMT's should ask all athletes whether they are taking creatine or other over-the-counter supplements. Some supplements, especially those containing stimulants, can precipitate a manic episode in those prone to bipolar disorder. Some athletes, it should be noted, will refrain from abusing substances if the SMT stresses strongly enough that the governing body of their sport will disqualify them for continued use.

**Pathological Gambling.** Pathological gambling is present in up to 3% of the general population (Kaplan et al., 2003), and it has been responsible for the destruction of several professional athletes’ careers, most notably Pete Rose and Art Schlichter, the great quarterback from Ohio State and the Indianapolis Colts. According to the *DSM-IV-TR* (APA, 2000), the prevalence of pathological gambling may be as high as 8% in adolescents and college students, but the National Research Council (1999) estimated that 20% of adolescents were either pathological or problem gamblers, and that was prior to the onset of the current poker craze. This disorder is more common in men than women, and, on history, approximately one-fourth of pathological gamblers have a parent with a gambling problem.

Pathological gamblers make no serious attempt to budget or save money. Like substance abusers, when their borrowing resources are strained, they are likely to engage in antisocial behavior (e.g., forging checks) to obtain money to sustain their habit. In sports, they may be subject to fixing athletic contests. At times, they will bet on their own team as Pete Rose did. The criteria for the diagnosis of pathological gambling are similar to those for the diagnosis of alcohol dependence: preoccupation with gambling, the need to gamble with increasing amounts of money to achieve the desired degree of excitement, repeated unsuccessful efforts to cut back, and gambling despite the loss of personal and vocational relationships. Social gambling is distinguished from pathological gambling in that the former occurs with friends, on special occasions, and with predetermined acceptable and tolerable losses.

**Attention-Deficit/Hyperactivity Disorder**

ADHD is characterized by either inattention or hyperactivity or a combination of the two. It is typically first diagnosed in childhood but it can persist into adulthood.
It will probably not be the presenting complaint of the ADHD-affected athlete. But careful history, or history obtained from parents, will reveal that the athlete has difficulty finishing projects, often loses things, is forgetful, has difficulty organizing tasks and activities, and is easily distracted. A good question to ask the athlete to tease out the diagnosis is this: When you were in grammar school and a fire engine went by, or it started to snow, did you get so lost in the distraction that you forgot about the teacher? These symptoms will have been present since before age 7, or 2nd grade. In the hyperactive-impulsive type, the athlete will have a history of having been “always on the go,” like the Energizer bunny. Early report cards will be full of teacher descriptions of the patient fidgeting, leaving his or her seat in the classroom, or interrupting the teacher (or coach) in the middle of a question. There may well have been a history of difficulty playing quietly or of engaging in quiet leisure activities. Lack of impulse control may also be part of this syndrome.

An example of ADHD posing problems in a sport context would be a soccer goalie who, unable to wait for a play to fully develop, runs out and tackles the opposing forward. It might seem counter intuitive that a goalie could have ADHD, but goalies have to be aware of everything that is going on around them, and, if they can also keep their focus on the field of play, the ADHD can work to their advantage. One ice hockey goalie, however, had his performance impaired by ADHD when people in the stands would yell his name. When the goalie would turn and look at them, he would allow the puck to slide into the goal. Stabeno (2004) argues that ADHD athletes do best in “continuous chaos” sports (e.g., soccer, ice hockey) where there is a high degree of unpredictability and where the athlete is continuously reacting to and aware of the entire surface of the contest. ADHD athletes do less well in slow paced sports, such as American football or baseball where more time is spent waiting for the next play than actually playing the sport. Referral to a sport psychiatrist and prescription of stimulant medication, though one must be careful regarding banned substances, in addition to psychotherapy and family therapy are extremely effective in treating ADHD. Stabeno’s *The ADHD affected athlete* (2004) and an article by Kamm (1999) offer helpful guides to parents and coaches of athletes with ADHD.

**Learning Disabilities.** In the course of getting to know an athlete, the SMT may begin to suspect that the athlete has been pushed along in the educational process, not because of academic merit but because of his or her highly valued athletic prowess. Advancing the athlete for the sake of his or her athletic career may have left a learning disability, such as reading disorder or other *DSM-IV-TR* learning disorder undiagnosed. Alan Page, the Hall of Fame defensive lineman for the Minnesota Vikings and current associate justice of the Minnesota Supreme Court, related the following story (Page, 1998):

Late in Page’s career, the Vikings got a new defensive line coach. Though the players were part of one of the greatest units in NFL history, the coach insisted that each defensive line meeting consist of one player reading plays to the others from the Vikings’ defensive playbook. As the playbook was passed around the room, it became apparent to Page that four of the seven linemen
in his unit could not read. Like Page, the SMT may be surprised to discover illiteracy during a routine exam. Detecting this condition, however, and helping the athlete overcome it, can only enhance the player’s self-esteem and lessen their anxiety about being “found out.”

After conducting a clinical interview and collecting necessary data, the SMT may make a formal psychiatric diagnosis (if they are comfortable with doing so), or they can speak to the athlete and his or her family in general terms (e.g., “Emily seems down, perhaps she’s depressed” or “Rick’s feeling like he’s under too much pressure; he may be having anxiety”). Treatment for emotional problems may be undertaken if the SMT is comfortable in that arena, or referral to the sport psychiatrist or psychologist can be made. At times, if the SMT or trainer feels that the athlete might feel stigmatized by a psychiatric disorder or referral to a psychiatrist, the SMT can reframe the referral as a consultation with “a colleague who specializes in behavioral sports medicine” or “a mental skills training specialist.”

Neuropsychiatry

Postconcussion Syndrome

The all-star hockey player Pat LaFontaine suffered a severe concussion while playing for Buffalo in 1996. Following the concussion, LaFontaine experienced severe migraine headaches, depression, sleepless nights, confusion, and wild mood swings. He was shocked one day to find that hockey no longer mattered to him. Though LaFontaine’s symptoms continued to worsen, a number of physicians, apparently misdiagnosing him with overtraining, told him that all he needed was “rest.” One physician, minimizing the player’s complaints, even told him, “You know, I’m sure if you go out and score a couple of goals, you’ll feel better and everything will be fine.” LaFontaine remembers looking at the physician and saying, “Doc, I don’t care about scoring goals anymore. I’m scared” (Nobles, 2005, p. D2). Afterward, realizing that he had just told a doctor that he did not care about scoring goals, LaFontaine knew that something was drastically wrong. He went to the Mayo Clinic where postconcussion syndrome (PCS) was diagnosed.

LaFontaine’s symptoms make him a textbook case for PCS. In addition to the symptoms described above, one might also see fatigue, vertigo or dizziness, irritability, aggression with little or no provocation, and a change in personality. PCS causes significant impairment in social or occupational functioning, and there is a noticeable decline from previous levels of functioning. When deciding to treat PCS, it is essential that the SMT and the trainer remain mindful that head trauma patients may be particularly susceptible to the side effects associated with psychotropic medication. Therefore, if the sport psychiatrist elects to treat the anxiety or depression component of PCS with an SSRI or a benzodiazepine, treatment with these agents should be initiated in lower doses than usual, and they should be titrated upward very slowly. Neuropsychological testing can play an important role here, as the athlete can be tested for cognitive deficits in a quantifiable and reproducible way (Kaplan et al., 2003).
Dementia Pugilistica

*Dementia pugilistica*, or punch-drunk syndrome, is typically found in boxers. In fact, symptoms ultimately affect one boxer in five (Kolata, 1997). The syndrome is also known as chronic traumatic brain injury (CTBI), and it is the most serious public health concern in modern boxing. CTBI is thought to represent the long-term and cumulative neurological consequences of repetitive head trauma. It has most typically been used to describe active or retired boxers after a long exposure to the sport. Number of rounds sparred seems to be one of the greatest risk factors, even more than number of fights, but CTBI also may be found in individuals who have participated in other sports where head trauma, or the use of the head, is common (e.g., football, soccer, ice hockey). The diagnosis is made clinically by obtaining a history of repeated head trauma and by the presence of cognitive impairment, including Parkinsonism, ataxia, pyramidal tract dysfunction, or behavioral changes. It has long been a mystery why some boxers with many brutal fights do not develop CTBI while those with relatively short careers do. Recent research suggests that possession of the apolipoprotein E4 (APOE) gene type predisposes boxers to the development of CTBI, which is very similar to Alzheimer’s disease (Jordan, Relkin, Ravdin, Jacobs, Bennett, & Gandy, 1997).

Other Clinical Issues

Overtraining and Burnout

Often due to chronically high training levels without periods of lower training loads, *overtraining* (McCann, 1985) refers to a negative response to training stress. The overtraining syndrome consists of a variety of psycho-physiological signs and symptoms. Often athletes push themselves to train so intensively because they do not feel as talented as others on their team but feel they can compensate by intensive, excessive training. The syndrome is known as overtraining because despite the lengthy and diligent workouts, the athlete’s performance actually drops off (particularly noticeable in running, cycling, or swimming). Physiological symptoms described in the literature (Callister, Callister, Fleck, & Dudley, 1990; Costill et al., 1988; Hackney, Pearman, & Nowacki, 1990)) include (a) elevated resting heart rate and blood pressure, (b) muscle soreness, (c) weight loss and loss of body fat, (d) changes in serum hormonal levels, (e) sleep disturbance, and (f) increased incidence of sickness and injury.

Asking the athlete to keep a training log can be a useful method to determine how much they are training and whether it is excessive. Consulting with the coach and parents can also be very helpful in making the diagnosis. Overtraining can certainly lead to fatigue and depression, so athletes need to be informed that by overtraining they are not increasing their performance potential but are increasing their potential for injury and illness.

Noakes (2000) makes the point that endogenous depression can be differentiated from depression secondary to overtraining by asking the athletes how they feel about training and exercising. The moderate to severely depressed athlete will have lost his or her interest in training, whereas the victim of overtraining will still
desperately want to exercise, only to become profoundly fatigued when doing so. The diagnosis of overtraining is confirmed when a reduction in training intensity yields a beneficial response. By contrast, exercise can be an effective therapeutic agent in preventing and treating mild to moderate depression (Morgan, 1985). In fact, the incidence of depression may be lower among active athletes than in the general population because of the athletes’ intense training. Both Derrick Adkins, the 1996 gold medalist in the 400 m hurdles, and Gerry Cooney, the former top heavyweight contender, feel that the intense training associated with their sports successfully warded off bouts of depression that they experienced, or started to experience, while competing (Kamm et al., 2001).

Adkins case is interesting in that fluvoxamine (Luvox), the only antidepressant that helped him, also slowed his times in the 400. Adkins’ psychiatrist had the creative job of titrating Derrick’s fluvoxamine dosage to adequately treat his depression without negatively impacting his running. The collaboration was successful, and Adkins won a gold medal before his hometown crowd in Atlanta, proudly circling Olympic Stadium with the American flag draped around his shoulders. Unfortunately, in the euphoria that followed the victory, Adkins, like many athletes, decided to stop his medication. He soon descended into deep depression again, a fact noticed by his mother who watched him on TV racing in Europe without his usual flair. In an effort to improve his times on the track rather than use fluvoxamine, Adkins had tried the serotonin precursor 5-Hydroxy-Tryptophan, an alternative nonprescription remedy. Though 5HT’s side effects were more amenable to good racing times, the benefits to the depression were not as robust (Kamm & Burton, 2001).

Career Termination

It is often said that a professional athlete dies twice. Certainly retirement is a major problem for a person whose identity is based primarily on their athletic prowess. When an athlete ends his or her career, by definition it is premature, and this makes an adverse reaction more likely. Over one-third of people in the general population who retire become depressed, and after 2 years, 50% of retirees are back in the workplace in some capacity (Atchley, 1975). Athletes fare even less well. They engage in denial, and a death and dying model can be useful in helping them grieve the loss of their career. The reaction tends to be most serious in the professional athlete, but a depression can follow the end of a college or high school career as well.

Kamm’s (2004) study of 152 retired boxers found that 14% had turned to alcohol or drugs to soothe the depression and anxiety attendant to giving up a sport that had been like a religion for a good part of their lives. Interestingly, those boxers who had been world champions or top contenders were less likely to have abused alcohol and drugs after retirement than their lesser-achieving counterparts. The study also described the Fighters’ Initiative for Support and Training (FIST), founded by former top heavyweight contender Gerry Cooney. FIST provides medical, psychological, and vocational assistance to this underserved population of “independent contractors” as they try to make the difficult transition from boxing to the real world.
Dreams

Occasionally, a patient may sheepishly relay a dream to the SMT. One does not have to be a psychiatrist to explore what the athlete feels the meaning of such a dream is. Dreams are important to explore since athletes, as a group, tend to be superstitious, and more than a few believe that dreams can foretell their future. For example, before he fought Lou Del Valle in their July 1998 bout, light heavyweight champion Roy Jones dreamt that the soft-punching Del Valle would knock him down. Though Jones won the fight, Del Valle did, in fact, knock him down, the first time in his life that Jones had ever been off his feet (Eskenazi, 1998). If Jones had shared this dream with a member of the SMT before the fight, the meaning could have been explored (i.e., possible feelings of vulnerability in the late stage of Jones’ career), and positive self-talk and imagery could have been suggested to counter the negative impact and memory of the dream.

Transference and Countertransference

An athlete’s attitude toward an SMT is apt to be a repetition of the attitude that the athlete has had toward past authority figures. Transference is the result of a set of expectations, beliefs, and emotional responses that a patient brings to the relationship with his or her doctor or therapist. It does not, therefore, reflect the reality of who a doctor—or other SMT member—is or how a doctor acts but rather what persistent experiences the athlete has had with all of the previous important authority figures in his or her life. If the athlete’s experience with authority has been generally positive, this attitude could range from one of basic trust, with the expectation that the SMT has the patient’s best interest at heart, to one of overidealization. Conversely, if the athlete’s early authority figures were inconsistent or harsh, the attitude may be one of basic mistrust, with an expectation that the SMT will be contentious and potentially abusive (Kaplan et al., 2003). Members of the SMT will do well to remember that they are probably neither as talented or “good” as an overidealizing athlete makes them out to be nor as “bad” or intrusive as an athlete who has been abused by authority figures complains that they are.

As physicians, psychologists, and trainers, we, too, have unconscious or unspoken expectations of patients—the phenomenon known as countertransference. We might think of patients as “good” when their expressed severity of symptoms correlates with an overtly diagnosable disorder. Athlete patients tend to be appreciated when they are compliant, do not challenge the treatment, are emotionally controlled, and are also appropriately grateful (Kaplan et al., 2003). If these expectations are not met, SMTs may blame patients and experience them as unlikable, untreatable, or “bad.” The SMT’s sense of job satisfaction may even be impaired by a string of such patients.

In working with particularly elite or famous athletes, the SMT must also guard against the dangers of “countertransference awe” and of “needing” the consultation and treatment to lead to improved performance, or remission of symptoms, so that the SMT can take credit for a great athlete’s career. The more elite and famous the athlete, the more the SMT must guard against the temptations of overidentification, basking in achievement by proxy or reflected glory, and using the athlete in the service of the SMT’s own narcissistic needs.
Conclusion

It is the hope of the author that the SMT member will, after reading this article, know more about the various psychiatric entities that exist in the athletic population. Moreover, it is hoped that the reader will be in a better position to assess athletes for psychiatric, neuropsychological, and other clinical issues, as well as to render accurate diagnoses. As each member of the SMT comes to better understand and appreciate the unique skill sets that the other members brings to the athletic encounter, a smoother more integrated approach to treatment of athletic problems will hopefully evolve.

Note

All examples that mention an athlete by name are a matter of public record and were not clients of the author. No confidentiality standards have been compromised by reporting such cases.

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