The pathophysiological effects of sport-related concussion have been well-documented in the literature,1-3 but the emotional and psychological effects of a concussion may not be sufficiently addressed by athletic trainers and therapists (ATs). An appreciation of the socio-emotional concussion sequela, such as feelings of helplessness and social isolation, can enhance the care that is provided.

The most widely accepted definition of a concussion is a traumatologically-induced alteration in mental status, which may or may not involve a loss of consciousness.4,5 A concussion is considered a traumatic brain injury (TBI) and is associated with a complex pathophysiological response. Confusion and/or memory loss are hallmark symptoms of a concussion, but initial symptoms are determined by the brain structures that are affected.6 The word “concussion” is derived from the Latin term “concutere,” which means “to shake violently.” An imbalance between sympathetic and parasympathetic neural activity can result in disruption of neurometabolic homeostasis,6 which can be manifested by maladaptive social responses such as frustration, anger, and sadness.

Sport-related concussions have gained widespread attention as a major public health issue that affects 1.6 to 3.8 million individuals annually in the U.S. and which cost an estimated $80 billion each year.4,8 A primary care sports medicine physician in Bergen County, New Jersey has estimated that he treats approximately 1800 concussion patients every year, which represents an average of 35 concussion patients per week (personal communication with T. Bottiglieri, MD, February 2012).

A study sponsored by U.S. Lacrosse and The Sports Science and Safety Committee found that the sport-related concussion incidence rate among high school athletes increased from 0.11 per 1000 athlete exposures in 1998 to 0.49 per 1000 athlete exposures in 2008, (Figure 1). This 4.6-fold increase from 1998 to 2008 represents an average yearly increase of 16.5%.9,10 Proposed explanations for the increased incidence rate include (a) better clinical recognition by better-trained concussion specialists,1 proposed explanations for the increased incidence rate include (a) better clinical recognition by better-trained concussion specialists,1 sports medicine practitioners, and neuropsychologists;2 (b) more aggressive play;3 and (c) heightened player athleticism (i.e., more speed derived from better conditioning results in greater energy transfer to the brain). Collegiate athletes are bigger and stronger than high school athletes, which some suggest plays a role in concussion risk.11

The concussed athlete can experience a variety of psychological difficulties that can prolong recovery. Knowledge of basic sport psychology concepts can facilitate successful management of post-concussion psychological difficulties. ATs provide social support for injured athletes, which is extremely important during the concussion recovery process.

Key Points
- The concussed athlete can experience a variety of psychological difficulties that can prolong recovery.
- Knowledge of basic sport psychology concepts can facilitate successful management of post-concussion psychological difficulties.
- ATs provide social support for injured athletes, which is extremely important during the concussion recovery process.
Athletes who have sustained a concussion have elevated risk for a second concussion, which can result in additional symptoms, increased symptom severity, prolonged recovery of normal function, and the possibility for occurrence of second-impact syndrome. The concussed athlete may experience a variety of psychological symptoms that can negatively affect daily function. Long-term effects may include depression, anxiety, psychosocial problems, physical and cognitive disturbances, and chronic traumatic encephalopathy (CTE). A concussed athlete who has a history of depression, anxiety, or other psychological problems, or one who continues to participate in contact sports or challenging cognitive activities prior to full recovery, may develop post-concussion syndrome (PCS). PCS is characterized by symptoms that persist for more than 4 weeks, but it can last for months, years, an individual’s lifetime, and it can be manifested by anger, rage, fear, confusion, and isolation.

Counseling for PCS Management and Recovery

ATs are typically focused on the physical aspects of injury rehabilitation, but psychological factors clearly play an important role in injury recovery. Psychosocial support, encouragement, and assurance that return to competition is safe is important for a confident return to full participation. An athlete engaged in post-concussion rehabilitation must focus on development of coping and relaxation skills, which can counteract feelings of helplessness and social isolation. ATs can teach athletes such psychological skills and can help reduce anxiety by providing information about symptoms.

ATs can play an extremely important role in concussion recovery. Research evidence clearly demonstrates that teaching relaxation and mental skills can reduce the incidence and duration of post-concussion symptoms. Athletes who have adverse emotional responses to concussion symptoms may experience a prolonged recovery that is associated with muscle tension, anxiety, changes in heart rate, and sleep disturbances.

Day-to-day interactions with athletes make ATs an important source of social support for injured athletes. Being available for conversation, showing concern by asking open-ended questions, and simply serving as a nonjudgmental and stable source of social support helps concussed athletes maintain confidence while removed from sport participation. Meaningful conversation is facilitated when the injured athlete doesn’t feel that he or she is labeled as concussed. The use