



PSYCHOLOGY OF SPORTS INJURIES

Daniel Gould, Ph.D.

University of North Carolina Greensboro
Department of Exercise & Sport Science
Greensboro, North Carolina

Linda M. Petlichkoff, Ph.D.

Department of Kinesiology
Boise State University
Boise, Idaho

KEY POINTS

- The stress of daily life and a lack of social support are more important than an athlete's personality in contributing to the risk of sports injuries.
- Coaches and parents who drive athletes too hard and/or fail to provide adequate psychosocial support can increase the likelihood that athletes will be injured.
- Athletes and their parents should be made aware that participating in a sport carries a risk of injury and that these risks can be minimized by appropriate actions.
- Coaches and athletic trainers can reduce the risk of injuries to athletes by taking steps such as minimizing the importance of winning "at all costs," increasing the athletes' self confidence, and teaching stress management skills to the athletes.
- In certain athletes, serious injuries can have devastating psychological effects. Athletic trainers and coaches must provide a sound social support system for their athletes to avoid these effects.

INTRODUCTION

Some athletes seem to be injury prone, whereas others are rarely on the sidelines for medical reasons. Intuitively, it seems likely that the most aggressive athletes are the most injured, but perhaps the reverse is true. Are there certain personality types that are more apt to be injured than others? When they are hurt, most athletes take their injuries in stride. Sports fans greatly admire seriously injured players who return to the game in record time in spite of obvious continuing discomfort. Still, a few athletes are known to have required psychiatric treatment during rehabilitation. Why does this difference exist? Fear of the outcome of an injury on pain and performance is surely an important factor in determining how fast rehabilitation occurs. Should coaches and athletic trainers use specific strategies to help athletes better cope emotionally with their injuries? Can these strategies accelerate the return of the athletes to competition? Each of our roundtable panelists has academic and/or clinical expertise in sports psychology. Daniel Gould and Linda Petlichkoff are university professors who teach courses, conduct research, and have published journal articles and books on sports psychology. Bill Prentice and Fred Tedeschi are athletic trainers with many years of experience in the college and pro ranks, respectively.

Bill Prentice, Ph.D., P.T., A.T.C.

Department of Exercise Science
University of North Carolina
Chapel Hill, North Carolina

Fred Tedeschi, M.A., A.T.C.

Sports Medicine Department
Chicago Bulls
Deerfield, Illinois

1. According to your experience and based on any scientific information that may be available, are there any key psychological factors or "personality types" that seem to be implicated in the incidence of sports injuries?

Gould: Few personality traits have been found to be associated with the onset of athletic injuries. Psychological stress, however, has been shown to predict increases in injury. Thus, stresses resulting from major life events, (e.g., moving to a new city or school or losing a loved one) as well as minor daily hassles such as having a hectic schedule have been associated with an increased risk of injury. Of course, psychological factors do not typically cause injury by themselves. Rather, they increase the risk of being injured when other physical factors such as muscle imbalances exist or when athletes are placed in injury-threatening situations (e.g., when physical contact is made in an awkward position). Stress is thought to increase the risk of injury because of the unwanted disruption in concentration or attention and increased muscle tension associated with heightened stress. Athletes especially prone to injury seem to be those who experience considerable life stress, who have little social support from others, and who possess few psychological coping skills.

Petlichkoff: I agree that personality is just one aspect of a complex interaction between an athlete's history of stressors (e.g., life events, daily hassles, and previous injuries) and the athlete's psychological coping responses (e.g., coping strategies, social support, and mental skills). Therefore, simply labeling athletes by personality may do more harm than good. Still, some psychological factors—high trait anxiety, sensation seeking, Type A behavior, high motivation, and single-mindedness—are associated with the occurrence of sport injuries.

Prentice: I think that individuals who like to take risks are often injury-prone. Other factors that may predispose an athlete to injury include being overly aggressive because of fear of failure or guilt over unobtainable or unrealistic goals; being reserved, apprehensive, detached, or overly sensitive; and being unable to cope with the stress associated with potential injuries.

Tedeschi: In my experience, I have not seen any difference in the rates of injury for introverted, less risk-tolerant athletes and those who are extroverted risk takers. However, once injured, more-introverted individuals tend to comply better with rehabilitation programs.

2. Is there any evidence that psychological attributes of coaches, parents, and others contribute to a greater or lesser incidence of sports injuries?

Tedeschi: Parents and coaches are strong influencers in the athlete's life. Consequently, they can have an effect on the incidence of injury. I have witnessed overbearing coaches and parents who have pressured athletes to compete while injured or to participate against their wills. In this situation, athletic trainers are valuable as trusted health care providers and as persons who can inform and intervene on the athlete's behalf.

Gould: Coaches and parents who place considerable stress on athletes can increase the likelihood of injury. Moreover, when coaches and parents adopt an attitude that injured athletes are worthless, they create an environment in which athletes will continue to participate while hiding their injuries, increasing the likelihood of further injury. Similarly, coaches who emphasize a strong will to compete and win, no matter what the athlete's physical status, and sacrificing one's body for the team can cause players to take unhealthy risks and become injured. Trust and open communication increase parents' and coaches' knowledge of both the occurrence of injuries and stress levels that could contribute to injuries.

Petlichkoff: Coaches play a direct role in the incidence of injuries by virtue of the facts that they determine how well the athletes are trained and conditioned, when the athletes are allowed to return to competition after injuries, and how effectively the athletes communicate with the sports medicine staff. Coaches also play an indirect role because their coaching philosophies and behaviors affect the extent to which their athletes take risks, play with pain, and train strenuously—all of which influence injury risk.

Prentice: I think it is more likely that coaches, parents, and others will influence how an athlete perceives an injury that has occurred, rather than contribute to the incidence of injury. To the athlete, the injury is real, but if parents and coaches impart an attitude that the injury is only a minor setback, then the athlete is more likely to adopt a similar attitude. If this causes the athlete to ignore serious injuries, it could result in great harm. On the other hand, if the injury is not serious, such attitudes transferred to the athlete could help hasten recovery from the injury.

3. Is there a psychological benefit to an early briefing of young athletes and their parents about the risks of injury at some point during their sports experiences?

Prentice: All athletes should understand that the nature of participation in sports dictates that at some point in time, injury is very likely to occur. But instead of stressing the inherent risks associated with sport, the focus should be on doing those things that can minimize the chances of injury such as making certain the athlete is fit, practicing safe sport techniques, and learning to recognize when your body is telling you that something is wrong. If the athletes develop an air of confidence that they have done as much as they can to reduce the likelihood of injury, perhaps their risk of injury will indeed be minimized.

Tedeschi: I agree wholeheartedly with Dr. Prentice's comments. As well, athletes also need to hear the benefits of sports participation on their long-term health and well-being. I have found that teenage as well as young adult athletes think they are "bullet proof" and immune from injury. This can lead to a false sense

of security and increased susceptibility to injury. Increased awareness of the risk of injury at a young age is beneficial.

Gould: In addition to having an awareness of physical risks such as muscle imbalances and the use of inappropriate techniques (e.g., head-first sliding in baseball or spearing in football), athletes and their parents should understand that psychological stress, low social support, and certain coaching and parenting practices (e.g., pushing athletes to take undue risks) can increase the risk of injury. Learning stress management skills is important for young athletes—for both enhancing performance and reducing injury risk.

4. Can you provide any tips for athletic trainers and coaches that might help optimize the psychological environment and minimize the incidence of sports injuries?

Petlichkoff: Athletic trainers should acquire some basic counseling skills, including becoming good listeners. They should learn to treat the whole athlete, not just the injury. They must communicate effectively because the manner in which the athletic trainer describes the injury or rehabilitation process to the athlete may determine to some extent how fast the athlete recovers. The athletic trainer should help the athlete set intermediate and long-term goals for eventually achieving full recovery.

Coaches should do everything they can to make injured athletes feel that they are important to the team. All too often coaches pay little attention to injured players. Coaches need to show that they care about the athlete's well-being and should insist that injured athletes not return to practice and competition until they are ready to play at minimal risk for further injury.

Prentice: Although athletic trainers are typically not educated as professional counselors or psychologists, they must nevertheless be concerned with the feelings of the athletes. No one can work closely with human beings without becoming involved with their emotions and, at times, their personal problems. The athletic trainer is usually a caring person and, as such, is placed in numerous daily situations in which close interpersonal relationships are important. The athletic trainer must have appropriate counseling skills to confront an athlete's fears, frustrations, and daily crises and should refer individuals with serious emotional problems to the proper professionals. Injury prevention includes dealing with both psychological and physiological attributes of the athlete. The athlete who enters a contest while angry, frustrated, or discouraged or while suffering from some other emotional disturbance is more prone to injury than is one who is better adjusted emotionally.

Tedeschi: It starts with athletes understanding that injury is a part of the game, and athletic trainers and coaches play a role in disseminating this message. I believe that an environment that is conducive to open communication is optimal. Also, I agree that coaches and athletic trainers need to understand the total athlete. This encompasses knowledge of the influencers, stressors, and motivators in the athlete's life. I think we all tend to gloss over these factors when we get into our seasons.

Gould: Athletic trainers and coaches can minimize the incidence of sports injuries by eliminating undue stress placed on athletes (e.g., by not stressing winning at any cost and by increasing the athlete's self confidence), by teaching athletes stress management skills, and by creating supportive social-psychological environments in which young athletes feel accepted

and free to voice their injury concerns. Teaching athletes how to distinguish between the “normal” pain and discomfort associated with training and “injury” pain is of vital importance. Athletes who do not learn to make this distinction often become seriously injured because they do not recognize the onset of minor injuries and do not modify their training regimens accordingly.

5. Are there any adverse effects of injuries on the psychology of some injured athletes?

Tedeschi: Generally speaking, injured athletes can experience feelings of vulnerability, isolation, and low self worth. Denial of the injury reality also comes in to play. All of these feelings can adversely affect the athlete and his rehabilitation from an injury. It then becomes important to identify and help the athletes cope with their feelings.

Prentice: Athletes don’t all deal with injury in the same manner. One athlete may view the injury as disastrous; another may view it as an opportunity to show courage; and still another may relish the injury to prevent embarrassment related to poor performance, to provide an escape from a losing team, or to discourage a domineering parent. If the injury is career-threatening, the athlete whose whole life has revolved around a sport may have to make major adjustments in how they perceive themselves as well as how they are perceived within their society. Many athletes have difficulty with emotional control when they sustain a serious injury. The injured athlete initially may be in shock and unable to grasp the full consequences of the injury. The athlete may not believe that he or she is vulnerable and not impervious to injury. There may be a loss of self-esteem, a sense of worthlessness, and self-reproach. In general, the injured athlete experiences a number of personal reactions besides a sense of loss. These may include physical, emotional, and social reactions.

Gould: Some degree of psychological distress and discomfort accompanies most major athletic injuries. However, more serious problems of poor psychological adjustment to injury are often preceded by various warning signs, including feelings of anger and confusion, an obsession with the question of returning to play, denial of the injury, exaggerated bragging about accomplishments, guilt about letting one’s team down, withdrawal from significant others, rapid mood swings, and a pessimistic attitude about the prognosis for recovery. When these warning signs are detected, the athlete should be referred to a sport psychologist or other mental health professional

Petlichkoff: A fairly predictable response to injury often occurs, and it consists of five sequential stages: (1) denial, (2) anger, (3) grief, (4) depression, and (5) reintegration. Athletes who fail to move sequentially through these five stages may suffer adverse psychological effects related to the injury. Such adverse effects are more likely to occur if the injury is a season-ending injury that has brought an unprepared athlete to the end of his or her athletic career.

6. What psychological characteristics have you observed in athletes who recover especially quickly or slowly from sports injuries?

Prentice: There are factors that are commonly seen among athletes going through adjustment to injury and rehabilitation. Severity of injury usually determines length of rehabilitation. Regardless of length of rehabilitation, the injured athlete has to deal with three reactive phases of the injury and rehabilitation

process: reaction to injury, reaction to rehabilitation and reaction to return to competition or career termination. These reactions can be cumulative in nature, depending on the length of rehabilitation. Other factors that influence reactions to injury and rehabilitation are the athletes’ coping skills, past history of injury, social support and personality traits. All athletes do not necessarily have all reactions nor do all reactions fall into the suggested sequence.

Tedeschi: I have found that athletes who deal with their feelings and focus on the future rather than the past have a tendency to advance through rehabilitation at an accelerated rate. Athletes who lack motivation, who are depressed or in denial have difficulty with the rehabilitation process. I feel that goal setting is a valuable tool for injured athletes, especially in the case of prolonged rehabilitation.

Petlichkoff: Athletes who have a high degree of hardiness, self-concept, good coping strategies, and mental skills are more likely to recover rapidly and fully from injury than athletes who lack these qualities. Some research suggests that “injury” is a socially acceptable way to remove oneself from an unpleasant situation. In fact, some athletes have caused their injuries so they could “drop out” of their sports.

Gould: Athletes who recover most quickly from injury tend to be highly motivated, take an active role in their recovery, and adhere to their rehabilitation protocol. Goal-setting techniques, healing imagery, positive self-statements, and stress management techniques have also been associated with quicker recovery from injury. A supportive social-psychological recovery climate—in which coaches remain in contact with the athlete, and athletic trainers and physicians show interest, empathy, and understanding—is associated with faster recovery from injury.

7. How can athletic trainers and coaches positively influence the psychological status of athletes who are recovering from injuries, perhaps thereby speeding their return to competition?

Gould: Coaches and athletic trainers can facilitate recovery from injury by providing social support for the injured athlete, e.g., by fostering contact and communication with the athlete and exhibiting empathy. As Dr. Prentice has said in response to an earlier question, they should also recognize that no two athletes will have the same injury recovery experience, and they should engineer the training environment to stress high-quality rehabilitation while at the same time exhibiting realistic expectations and patience. Steps should also be taken to ensure that the athlete is not isolated from the team and does not feel like he or she is less acceptable because of his or her injury. Coaches and athletic trainers should also teach specific coping skills such as goal setting, positive self-talk, healing imagery, and relaxation training. Finally, efforts should be made to educate the injured athlete about the injury and injury-recovery process.

Prentice: Dr. Gould has hit the nail on the head. Following injury, particularly one that requires long-term rehabilitation, the athlete may have problems adjusting socially and may feel alienated from the rest of the team. The athlete often feels that the coaches have ceased to care, that teammates have no time to spend with them, friends are no longer around, and their social life consists of time devoted to rehabilitation. The athlete may believe that there has been little support from coaches, and teammates. The athlete must understand that the coach cares but has no expertise in injury management and must be concerned

with getting the team ready without them. The athletic trainer is interested in rehabilitating injuries and becomes the primary social support mechanism. After injury, athletes need the support of athletic trainers, coaches and teammates. To prevent possible feelings of negative self-worth and problems of loss of identity for athletes, this support group needs to show interest in the athlete as a person as well as a team member.

Tedeschi: I believe that two things need to occur. First, coaches and athletic trainers need to be supportive of the total athlete and help him or her deal with the emotions being experienced. Second, including the injured athlete as an important part of the team is very helpful for speeding rehabilitation. I have seen coaches alienate injured athletes from the team to the point that the injured athlete loses interest in rehabilitation and/or in returning to competition.

SUMMARY

Contrary to what one might expect, it is not necessarily the most aggressive, risk-seeking athlete who is most likely to be injured in practice or competition. Rather, stressors such as family arguments, disagreements with teachers, or difficult relationships

with friends, coupled with an inability to adequately cope with these stressors, may predict the incidence of sports injuries. Coaches and parents of athletes who stress winning at all costs and who fail to provide adequate psychosocial support can increase the likelihood that athletes will be injured. These problems can be minimized when coaches, parents, athletic trainers, and athletes have open communications with one another. Athletes and their parents should meet with coaches and athletic trainers at the start of the season so that the risk of injury can be made clear to all and actions that can reduce those risks can be outlined. During the season, coaches and athletic trainers must be involved in both the psychological and physical development of the athletes. They should teach the athletes to distinguish between discomfort and the pain of injury. Athletes who have a high degree of self concept and good psychological coping skills are likely to recover more quickly from injury than their less confident and capable teammates. Coaches and athletic trainers can contribute to the athlete's self-confidence by providing counseling and other types of social support. Injured athletes should be treated as important members of the team to prevent any sense of isolation that may otherwise develop.

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SET GOALS TO IMPROVE YOUR PERFORMANCE AND SPEED RECOVERY FROM INJURIES

Whether you are trying to improve your performance, hoping to be selected to an elite team, or are recovering from a sports injury, you must have a plan to reach your full potential. Goal setting can provide specific strategies for designing practice plans, setting up rehabilitation programs, and identifying target due dates by which certain aspects of training for sports and/or rehabilitation from injuries should be achieved.

GOALSETTING BASICS

Goals help athletes in three specific ways.

- *Goals provide direction:* You must set goals so you know what you want to achieve and how you will do it.
- *Goals reflect improvement:* Short-term goals help you avoid losing sight of improvements in your performance or recovery if you are otherwise likely to focus solely on pursuing long-term or outcome goals.
- *Goals help identify areas of strengths and areas of performance that need improvement:* When you set goals in all aspects of your performance, you can greatly enhance your opportunity for success or full recovery from injury.

TYPES OF GOALS

- *Outcome goals* are concerned with the end result, e.g., winning a championship or placing in a tournament. Oftentimes, these goals are out of the athlete's control. If you focus on these only as long-term goals, you may not do what needs to be done on a short-term basis to optimize your performance or recovery from injury.
- *Performance goals* focus on measuring success in terms of marked improvements in relation to your previous performances or achievements. Examples include goals to achieve your "personal best" in performance, to improve your ability to flex or extend your elbow joint, and to increase the amount of weight lifted during rehabilitation from an injury.
- *Process-oriented goals* focus on what you must specifically do to be successful. Examples might be goals to attempt more shots in basketball, to increase time devoted to practicing skills, to develop mental toughness, or to add more exercise to a rehabilitation program. Process-oriented goals tend to be under the direct control of the athlete. This type of goal helps you think about how your skill improvement goals (i.e., performance goals) will be put together with what you want to achieve (i.e., outcome goals) into a systematic plan for success.

Set SMARTER Goals

For optimal achievement of your goals, you should set goal that are:

S	pecific
M	asurable
A	ceptable
R	ealistic
T	ime-phased
E	xciting
R	ecorded

■ STATE GOALS SO THEY ARE SPECIFIC AND MEASURABLE

Poor goal:

- I want to play better during competition.
- I want to recover from my injury so I can play again.

Good goal:

- I want to raise my shots-on-goal percentage by 20% by mid-season.
- I want to increase the strength of the muscles around my injured knee so that they are within 10% of the strength of the muscles in my good leg by mid-season so I can return to competition by the playoffs.

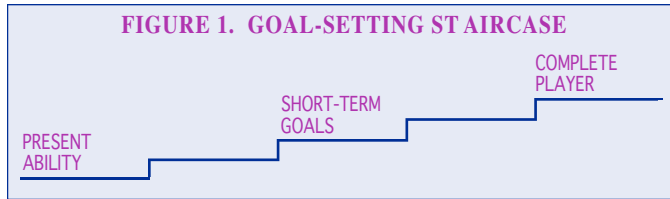
■ ACCEPTABLE GOALS ALLOW YOU, THE ATHLETE, TO BE INVOLVED IN SETTING THE GOALS

- Goals should be important to you.
- You must believe that you can achieve your goals.
- You must believe that you have control over the outcome.
- You must realize that you can only control your own performance. Winning a championship is a difficult goal to accept if you practice hard but get little or no playing time in the games.

■ GOALS SHOULD BE REALISTIC AND TIME-PHASED

- Goals should be achievable but challenging.
- For more difficult goals, you should set intermediate goals that are realistic to achieve.
- Set target dates for achieving your goals.
- Think of goal setting as a steady progression of achieving

short-term goals to reach your long-term goals. Generate a goal-setting staircase (Figure 1).



■ **EXCITING GOALS ALLOW YOU TO:**

- Feel good about your accomplishments.
- Be pleased about your performance rather than worry about the outcome.
- Be continually challenged.

■ **RECORD YOUR PROGRESS**

- Keep a journal to help you monitor your progress.
- Evaluate practices and games for improvements in your performance.
- Seek feedback from coaches, trainers, and physical therapists.
- Adjust your goals if situations change (for example, if you are injured or your role on the team changes).

■ **BEST TYPES OF GOALS TO SET—PERFORMANCE AND PROCESS**

- Win-loss records rarely reflect improvement.
- BUT, striving to win and playing your best helps to set process goals that focus on improving performance.

SETTING GOALS FOR REHABILITATION

- Talk to the sports medicine staff—athletic trainers, doctors, dieticians, and physical therapists—to gain an understanding of what to expect during the rehabilitation process.
- Based on the information provided and your desire to return to play, work with these individuals on goals related to the types of rehabilitation activities to be used, the appropriate intensity, frequency, and duration of the rehabilitation exercises, the number of rehabilitation sessions per day, week, and months that will be needed for full recovery, and then follow the goal-setting guidelines provided above.
- Adhere to your rehabilitation goals. Returning or progressing too fast may result in a slower recovery process.

SETTING GOALS FOR SKILLIMPROVEMENT

- Critically assess your current skills. What skills do you need to be successful at this level and to progress to the next level of competition? How much time will be required to improve those skills? Is there a target date when skills should be learned? If the skill involves a new technique, will you experience some performance decrement before you notice improvements in your performance?
- Based on answers to these and the guidelines stated above, establish a goal-setting staircase that assists you with reaching your newly established goals.

Following these simple goal-setting principles will help you measure success based on past performances and individual capabilities, rather than focusing on outcomes that may be out of your control.

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