



## The Mental Side of Human Performance

**A**fter completing this chapter you should be able to:

- define the topic of sport psychology;
- discuss the influence of personality on performance;
- describe the effect of sport on personality;
- explain the relationship between anxiety and performance;
- describe the effect of motivation on sport performance;
- explain the effects of the audience on athletic accomplishments.

The idea of a healthy mind in a healthy body dates back to ancient China and Greece. It is only in recent years, however, that the discipline known as **sport psychology** has become recognized as a major factor in the study of sport performance. This is somewhat surprising when one considers that research in this area actually dates back to the late 1800s, when a study showed that cyclists performed better in the presence of an audience than when they competed alone.

The growth of sport psychology over the past 30 years has occurred for two major reasons. First, the scientific body of knowledge relating to the area has expanded so greatly that different branches of the subject have begun to emerge as well. For example, sport psychology textbooks traditionally cover topical areas such as techniques for improved sport performance and social and psychological considerations, as well as theoretical issues. A second reason for the increased interest in sport psychology can be attributed to popular coverage of the discipline. Many professional and amateur athletes now seek advice from sport psychologists, and this is reported frequently in the media.

The value of the discipline remains contentious. Goran Ivanisevic, a professional tennis player, was once quoted as saying, “You lie on a couch, they take your money, and you walk out more bananas than when you walk in.” Others do not share this skepticism: research indicates that the majority of Olympic athletes believe that working with a sport psychologist has improved their performance. Champion athletes and gold medal winners who have spoken publicly about the value of sport psychology have done much to dispel any doubts that remain.

Consider the following scenarios:

- The best basketball player in history retires in the prime of his career, stating that he no longer feels motivated to compete.
- A high school volleyball player performs perfectly in practice but does poorly in competition.

- Because of one bad call from the referee, an athlete loses his cool and vows to quit soccer forever.
- The varsity basketball team wins almost all home games but loses most of the away games.
- A top-ranked tennis player drops out of the world rankings for over a year, then returns to peak form.

All these examples share several common characteristics. First, they are all recent real-life examples from the world of sport; second, they all have psychological explanations; and finally, they pose the question whether their outcomes would have been different with the intervention of sport psychology. This chapter provides the necessary tools that can help prevent the occurrence of similar behavioral problems.

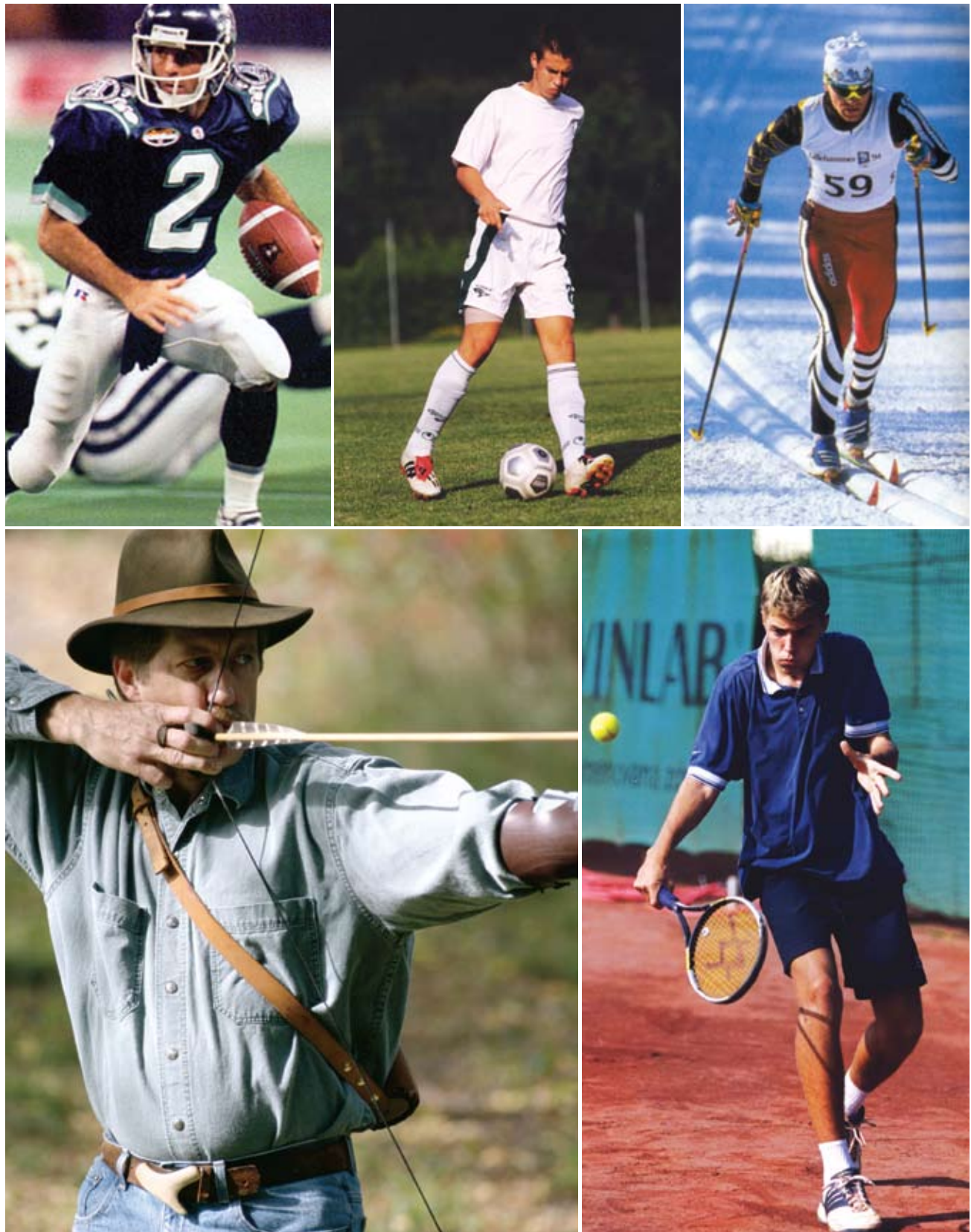
In this chapter, you will be introduced to the discipline of sport psychology and learn firsthand of its value in promoting both improved performance and satisfaction in the participant. Perhaps the best place to start is by examining the relationship between personality and performance.

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## Personality and the Athlete

**Personality** is best defined as “that pattern of characteristic thoughts, feelings, and behaviors that distinguishes one person from another and that persists over time and situations.” The study of personality and the role it can play in successful athletic performance has interested sport psychologists for decades. But the interest is not only academic. Almost everyone, amateur and professional alike, would be interested in discovering the answers to the following questions:

- Does personality determine sport preference, or does a particular sport mold our personality?



**Figure 18.1** For decades, sport psychologists have attempted to identify psychological differences among participants across a variety of sports.

- Do athletes possess different personality characteristics than nonathletes?
- Do winners possess different personality profiles than losers?
- Can personality be changed, or does it remain relatively fixed throughout involvement in sport?

The search for answers to these and similar questions has resulted in a deluge of personality studies in the sport environment (Figure 18.1). Over 1,000 studies were conducted during the 1960s and 1970s at the height of academic research into personality. In spite of all this research, we still have only limited knowledge about the relationship between personality and sport performance. In this section, we will highlight the major findings to date.

## Comparing the Personalities of Athletes and Nonathletes

One of the most common sport personality research themes concerns the extent to which athletes and nonathletes differ in their personality profiles. Early research suggested that athletes were more stable and extroverted. These early studies also reported that athletes were more competitive, dominant, self-confident, and achievement oriented. Athletes have also been found to be more psychologically well adjusted and often display higher levels of self-esteem than do nonathletes. Research has also revealed that, compared with nonathletes, athletes hold more conservative political views, are more authoritarian, and demonstrate higher levels of persistence.

## Comparing Personality Profiles of Athletes Differing in Skill Level

Sufficient evidence now exists to suggest that elite athletes can be distinguished from lesser skilled athletes when psychological states are considered. The **Profile of Mood States (POMS)** has identified

### What Is Your Observation?

Think about some of the best athletes in your school. What are some of the personality differences you have noticed between these athletes and other classmates who are nonathletes? What do *you* think is the reason for these differences? Discuss this question with some of your closest friends, and compare answers.

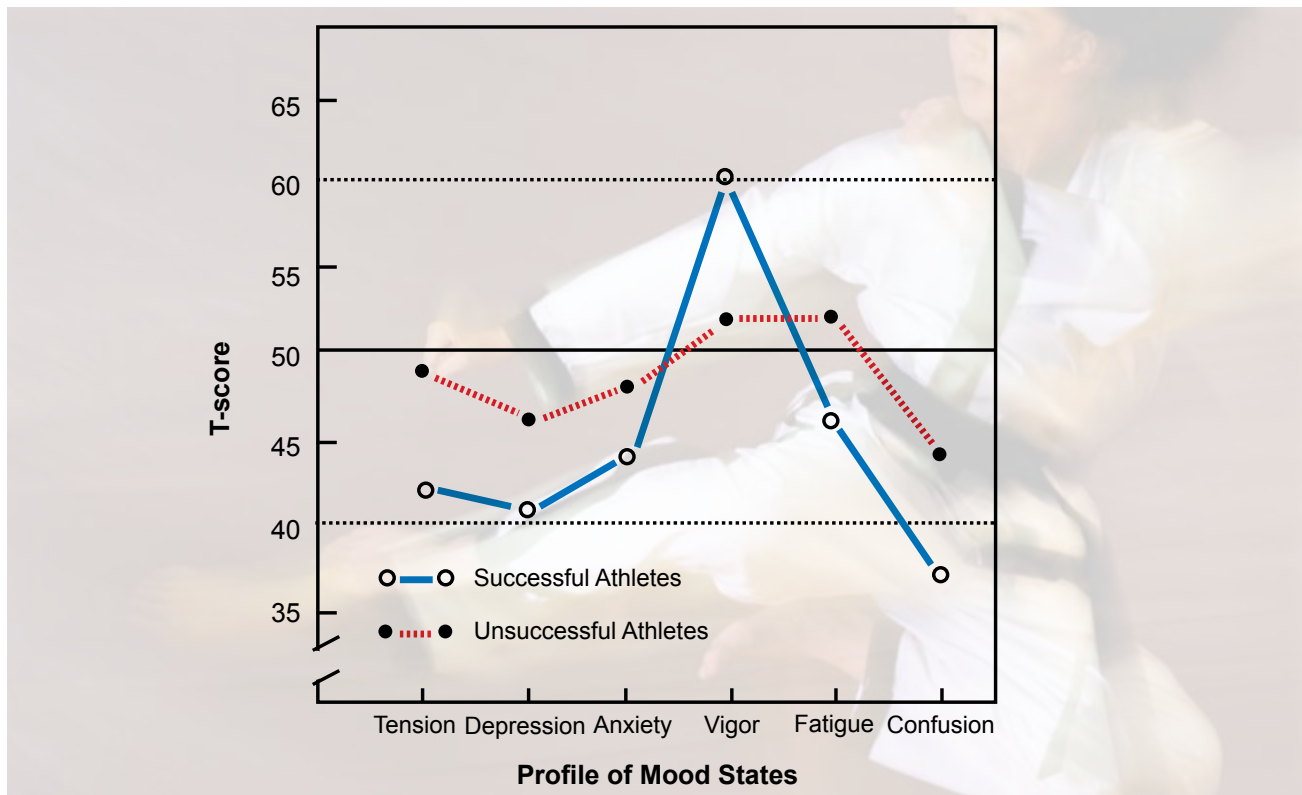
In summary, although many differences between athletes and nonathletes such as those mentioned in the text have been documented, a clear pattern of differences has yet to emerge. This fact is due at least in part to several methodological shortcomings of sport personality research.

As a second exercise, how would you describe your own personality to someone you have just met for the first time? Would you consider yourself outgoing or shy, happy or sad, aggressive or passive, anxious or relaxed, tough-minded or somewhat compliant, independent or dependent? Answer these questions honestly, and then come up with a thumbnail sketch of your own personality profile.

an “iceberg” profile in elite athletes, illustrated in Figure 18.2.

Careful examination of Figure 18.2 indicates that successful athletes are well below unsuccessful athletes in tension, depression, anger, fatigue, and confusion. They are markedly higher, however, in the mood state of vigor. This elevated vigor score causes the elite profile to resemble an iceberg. In the case of lesser skilled individuals, the profile can be described as rather flat.

Although it is possible to distinguish between the successful athlete and the unsuccessful athlete in terms of mood *states*, it is not yet possible to distinguish between successful and unsuccessful athletes in any particular sport using personality *traits*. For this reason, it is important to understand the difference between personality traits and personality states. **Personality traits** refer to psychological characteristics of the athlete that remain relatively stable over time. **Personality states**, on the other hand, represent



**Figure 18.2** Psychological profiles of successful and unsuccessful athletes.

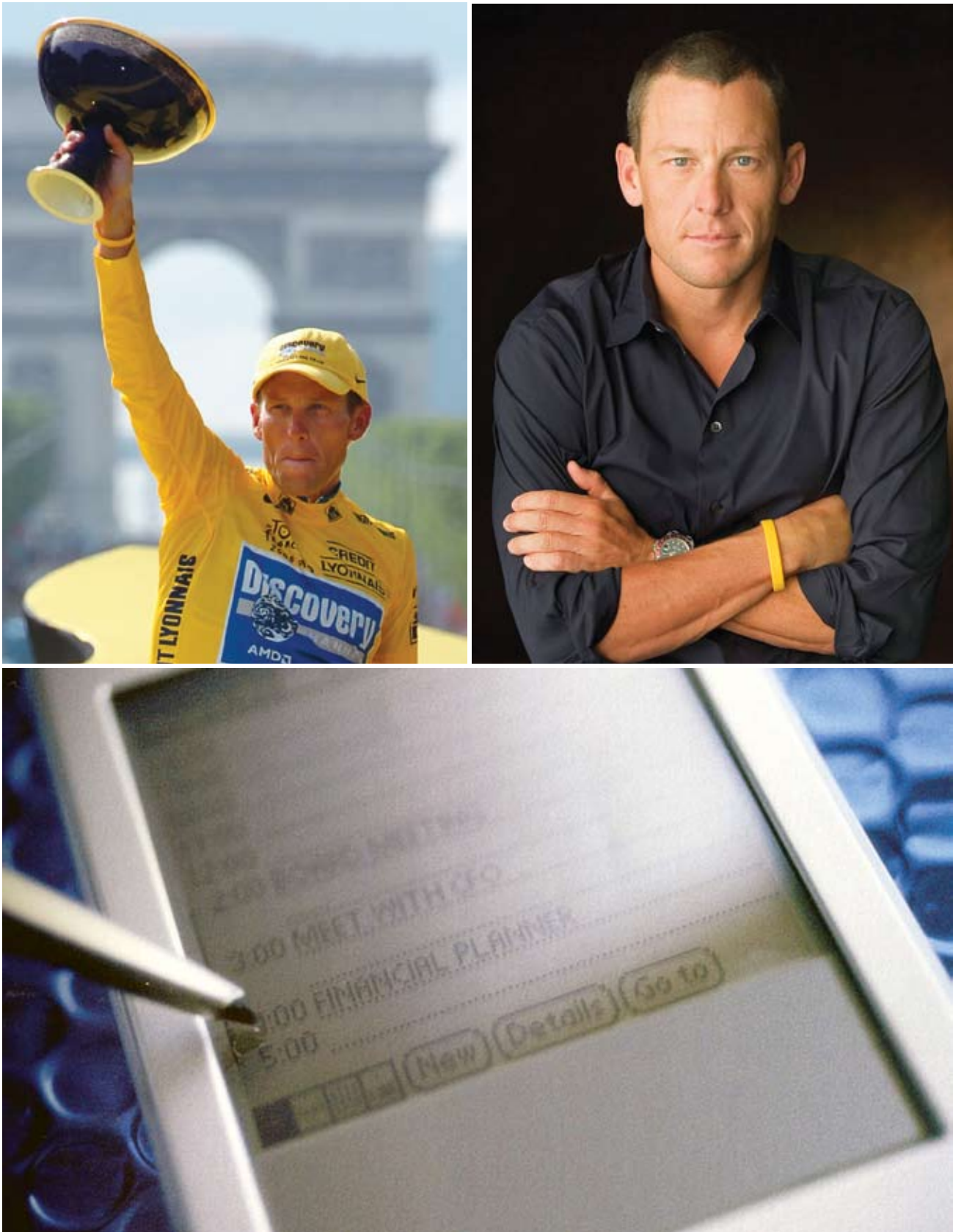
“right now kinds of feelings” that are situation specific. Although a long-standing disagreement known as the state–trait controversy has argued the relative merits of studying states versus traits, the best approach appears to be one that considers personality traits, personality states, and situation-specific factors. This compromise is called the **interactional theory** and is the prevalent way of currently conducting sport personality research.

## Developmental Effects of Sport on Personality

Earlier in this chapter, you learned that athletes and nonathletes have been shown to differ in certain personality dimensions such as extroversion, independence, self-confidence, and anxiety. This has led many researchers to question whether these differences are due to the athletic experience or whether certain personality traits bring about an involvement in sports. Although a definitive

response would appear impossible, available evidence tends to support the latter position. This **gravitational hypothesis** suggests that individuals who possess stable, extroverted personalities tend to gravitate toward the sporting environment. It is important to remember, however, that research has shown that participation in physical activity can enhance personality development as well.

For example, it is easy to agree that athletes continue to learn while they participate in sports. But it also makes sense that what is learned can be transferred to other interests in life. For example, while children play, they are laying the foundations for future behavior and maybe even developing personality traits as well. After all, playing is also a vehicle for learning. Moreover, skills learned in one sport might easily be transferred to another sport. This is why many NHL players are also excellent golfers. Learning that takes place in the sporting environment can also have an impact on other interests in life. Many athletes often go on to



**Figure 18.3** A sporting background can transfer positively to a successful career in business.



become leaders in their future vocations because of the skills they developed in their sporting backgrounds (Figure 18.3).

In summary, research in sport psychology shows that:

- Athletes tend to be more extroverted, independent, and self-confident than nonathletes; they also tend to be less anxious.
- Elite athletes can be distinguished from lesser skilled athletes by means of the iceberg profile; it is not possible, however, to distinguish between winners and losers.
- Individuals with certain personality traits tend to gravitate toward sports; sport also has the potential to enhance certain personality traits.

What effect do you feel sport has played in your life?

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## Anxiety and Athletic Performance

Before examining this experimental evidence, it is important to address the following questions:

- What is the difference between arousal, stress, and anxiety?
- Is all stress and anxiety bad for an athlete?
- What causes some athletes to “choke?”
- What can be done to help an athlete deal with stress and anxiety?

## Arousal, Stress, and Anxiety

An interesting story is told about an African hunter who loses his weapon while being pursued by a lion. Running as fast as he can, with the lion in close pursuit, the hunter spots a tree limb almost 10 feet off the ground. At the last second, he jumps with all his strength, hoping to reach safety. He misses the limb by jumping too high, but catches it on the way down! This anecdote

illustrates very well the phenomenon of arousal, which can sometimes produce amazing feats of strength, power, and endurance.

### Arousal

**Arousal** can be described as a physiological state of readiness and psychological activation. The neurophysiology of arousal involves the autonomic nervous system. A good example of this function is the feeling you get when you are frightened by a loud noise or confronted by a growling dog. This is really the body’s way of preparing you for **fight or flight**.

### Stress

**Stress** has been best described as the “nonspecific response of the body to any demand made upon it.” Stress, like arousal, is an unemotional bodily response to some type of stressor. The stressor could be in the form of physical exercise, joyful excitement, or fear of bodily harm. Stress, then, can be either positive or negative. Positive or good stress is called **eustress**. An example of eustress would be winning a lottery. Bad stress, on the other hand, is referred to as **distress**. Receiving a failing grade on a midterm test would reflect distress. It is very important to remember that whether stress is seen as good or bad depends upon the individual’s personal interpretation of the situation.

### Anxiety

**Anxiety** can be described as the tension and worry that results from distress. Anxiety is a negatively charged emotional state characterized by discomfort and nervousness. Generally speaking, there are two forms of anxiety. **Trait anxiety** is a personality characteristic that is relatively stable over time, predisposing the individual to be anxious across a wide variety of situations. **State anxiety**, on the other hand, refers to a “right now” kind of anxiety that is situation specific. Research has revealed that state anxiety is made up of two distinct components. **Cognitive state anxiety** is the psychological component of state anxiety and is caused by fear of failure or fear of negative social

## Competitive State Anxiety Inventory-II (CSAI-II) – Mini-version

Name:

Date:

Sex: M F

Directions: A number of statements that athletes have used to describe their feelings before competition are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now – at this moment. There are no right or wrong answers. Do not spend too much time on any one statement, but choose the answer that describes your feelings right now.

- |   |   |   |   |   |
|---|---|---|---|---|
| 1. I am concerned about this competition.                                   | 1 | 2 | 3 | 4 |
| 2. I feel nervous.  | 1 | 2 | 3 | 4 |
| 3. I feel at ease.  | 1 | 2 | 3 | 4 |
| 4. I have self-doubts.  | 1 | 2 | 3 | 4 |
| 5. I am concerned that I may not do as well in this competition as I could. | 1 | 2 | 3 | 4 |
| 6. My body feels tense.   | 1 | 2 | 3 | 4 |
| 7. I feel self-confident.   | 1 | 2 | 3 | 4 |
| 8. I am concerned about choking under pressure.                             | 1 | 2 | 3 | 4 |
| 9. My heart is racing.  | 1 | 2 | 3 | 4 |
| 10. I'm confident about performing well.                                    | 1 | 2 | 3 | 4 |
| 11. I feel my stomach sinking.  | 1 | 2 | 3 | 4 |
| 12. I feel mentally relaxed.  | 1 | 2 | 3 | 4 |
| 13. I'm concerned that others will be disappointed with my performance.     | 1 | 2 | 3 | 4 |
| 14. My hands are clammy.  | 1 | 2 | 3 | 4 |
| 15. I'm confident about coming through under pressure.                      | 1 | 2 | 3 | 4 |

Figure 18.4 The CSAI-II mini-version.