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Burnout and Overtraining

After reading this chapter, you should be able to

1. define overtraining, staleness, and burnout;
2. discuss different models of burnout;
3. describe the causes of overtraining and burnout;
4. identify the symptoms of overtraining and burnout;
5. explain the research evidence of burnout in sport; and
6. describe the treatment and prevention of burnout.

The pressure to win and train year-round with vigor and intensity has increased dramatically in recent years, in large part because of the tremendous financial rewards, publicity, and status achieved by successful coaches and athletes. There used to be separate seasons and off-seasons for various sports, whereas now one season tends to run into the next, leaving little time for an extended rest. Even in the off-season, athletes lift weights and do other physical fitness activities to keep in shape and get bigger and stronger for the upcoming season. In addition, many sports now have specialized training camps or academies where youngsters attend school and train (usually away from parents) with the hope of later obtaining a college scholarship, professional career, or Olympic medal. The theory is that more training is better, you have to start training early, and you must train year-round if you are to compete at a high level.

But the price of this unrelenting focus on training and winning can be overtraining and subsequent burnout. And it is not only competitive athletes and coaches who overdo it and burn out. Exercisers, in their quest to feel and look better, sometimes go too far, overtrain, and burn out. Support personnel, too, such as officials and certified athletic trainers, get caught up in the pressures to win, which can lead to increased stress and potential burnout. And with budget problems plaguing many schools, physical educators are asked to do more with less and to work longer hours, which makes them susceptible to burnout. Several quotes describe overtraining and the pressures that can lead to burnout:

> "It's a long, long grind. It's either preseason practice, the season itself, postseason weight training, or recruiting. The demands to win can also be very stressful. When we were successful, there was pressure and high expectations to stay successful. When we were losing, there was pressure to start winning real soon. This schedule and pressure

> can wear you down and make you just want to leave everything behind for awhile."
>
> —College football coach

> "I didn't have an option to choose not to do that event after making the team . . . . The timing was very poor and that contributed to overtraining and my performance was probably 80% at the Games due to fatigue and lack of recovery."
>
> —Olympic athlete

Overtraining and burnout have become significant problems in the world of sport and physical activity, short-circuiting many promising careers. Therefore, coaches, exercise leaders, health care providers, and other administrative personnel need to better understand the symptoms and causes of burnout and learn strategies that help reduce the possibility that burnout will occur. Let's start by specifying what we mean by overtraining and burnout.

Definitions of Overtraining, Staleness, and Burnout

Some confusion still arises with respect to common definitions for the related terms *overtraining, burnout,* and *staleness.* We provide a set of definitions that represent our viewpoint, although we recognize that not all sport and exercise psychologists would define these terms exactly the same way.

Overtraining

Periodized training is the deliberate strategy of exposing athletes to high-volume and high-intensity training loads that are followed by a lower training load, known as the *rest* or *taper* stage (McCann, 1995). The goal in periodized training is to condition athletes so that their performance peaks at a specific date or in a particular time frame (usually before major competitions or championships). Coaches purposefully overload and taper athletes. Thus, the scientific and artistic challenge for athletes and coaches is to slowly increase the training load so that optimal adaptations accrue and negative side effects, such as injury and staleness, do not (O'Connor, 1997).

Overtraining refers to a short cycle of training (lasting a few days to a few weeks) during which athletes expose themselves to excessive training loads that are near or at maximal capacity. Overloading athletes is a normal part of the physical training process. That is, in accordance with principles of exercise physiology, one intentionally overloads athletes by having them experience higher training volumes (e.g., they swim or run more meters or lift more weight than normal). After rest and recovery, the body adapts to the overload and becomes stronger or more fit, and these changes result in improved performance. Unfortunately, the overload process is far from perfect and is highly individualistic, and attempts to purposefully overload athletes can sometimes result in negative consequences. If the training volume is too great or if the athlete is affected by a lack of rest or other physical or psychological stressors, maladaptations occur and overtraining results in deteriorated performance. This negative overtraining syndrome is defined as excessive, usually physical overload on an athlete without adequate rest, resulting in decreased performance and the inability to train at normal levels (U.S. Olympic Committee, 1998). Hence, the process of overloading one's body can result in positive adaptation and improved performance or maladaptation and decreased performance.

KEY POINT One athlete's overtraining might be another athlete's optimal training regimen.

Using the work of Kentta (2001) and Kentta and Hassmen (1998), we can view overtraining as a process that unfolds over time (figure 21.1). As you can see, this process is begun by overloading the athlete (demanding training designed to improve performance) through overtraining. This results in short-term (from 72 hours to 2 weeks) impaired performance, labeled an overreached state. When overtraining optimally taxes the performer and after proper rest, the body adapts and supercomposition or positive overtraining and improved performance result (box A). However, if the overtraining demand and overreached state are excessive and the body does not properly adapt, maladaptations or negative overtraining and poor performance result (box C). Negative overtraining leads first to staleness and, if continued over time without adequate rest and recovery, to a more severe state of burnout. It is also possible that the overtraining will not improve or decrease performance—only maintain it (box B).

The difference between overtraining and periodized training depends largely on individual differences and capabilities. What is overtraining (detrimental) for one athlete can be positive or optimal training for another. For example, Olympic great Mark Spitz, who broke

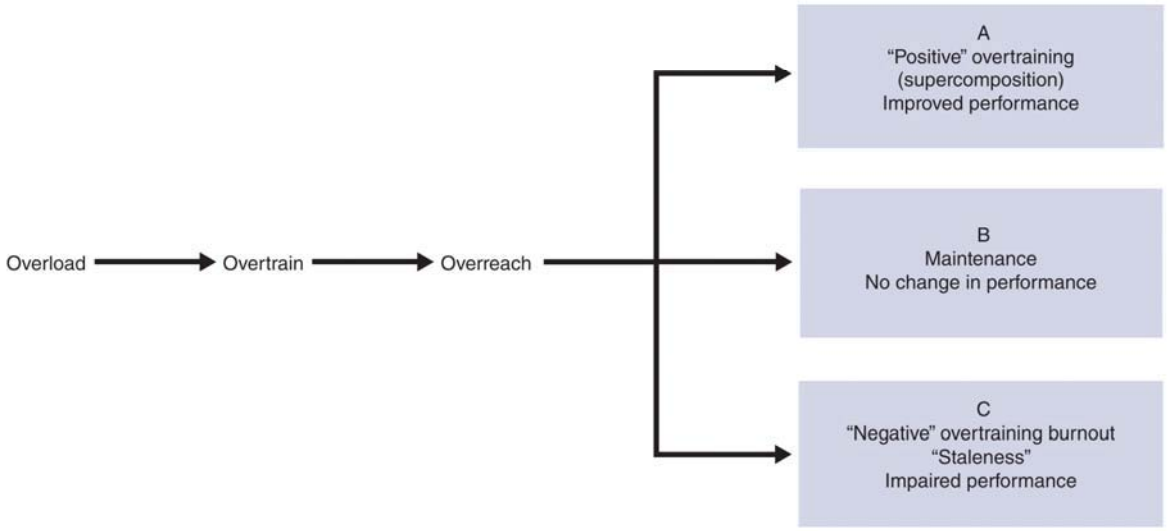


FIGURE 21.1 The overtraining process.
Based on Kentta et al. 2001.

seven world records in swimming and won seven gold medals, never trained more than 10,000 yards a day. On the other hand, Vladimir Salnikov, a Soviet Olympic swimming champion, trained at 2-week schedules called "attack mesocycles," which involved swimming up to 20,000 meters (21,880 yards) a day. His distances would be excessive for many elite swimmers, but they apparently facilitated Salnikov's performance (Raglin, 1993). Evidence also shows that overtraining is not just about the physical training volumes and intensities athletes experience: Psychological and social stresses and the amount and type of rest athletes experience greatly influence the overtraining and periodization process (Gustafsson, Kentta, & Hassmen, 2011).

The exercises prescribed for athletes vary substantially, and the most talented performers are not necessarily the ones with the greatest capacity to endure periods of overtraining. Furthermore, it has been demonstrated that athletes of similar capacity respond differently to standard training regimens: Some resist the negative effects of intensive training, whereas others are quite vulnerable. Thus, a particular training schedule may improve the performance of one athlete, be insufficient for another, and be downright damaging for a third.

Staleness

The American Medical Association (1966) has defined **staleness** as "a physiological state of overtraining which manifests as deteriorated athletic readiness" (p. 126). Thus, staleness is seen as the end result or outcome of overtraining when the athlete has difficulty maintaining standard training regimens and can no longer achieve previous performance results. The truly stale athlete has a significant reduction (5% or greater) in performance for an extended period of time (2 weeks or longer) that occurs during or after a period of overtraining and fails to improve in response to short-term reductions in training (O'Connor, 1997). The principal behavioral sign of staleness is impaired performance, whereas the principal psychological symptoms are mood disturbance and increases in perceptual effort during exercise. It has been reported that about 80% of stale athletes are clinically depressed.

KEY POINT A stale athlete has difficulty maintaining standard training regimens and can no longer achieve previous performance results.

Burnout

Burnout has received more attention than overtraining or staleness in many anecdotal reports as well as research investigations focusing on burnout (e.g., Black & Smith, 2007; Dale & Weinberg, 1990; Gould, Tuffey, Udry, & Loehr, 1996a,b; Gustafsson, Kentta, Hassmen, & Lindquist, 2007; Isoard-Gautheur, Guillet-Descas, & Duda, 2012; Raedeke & Smith, 2004; Vealey, Udry, Zimmerman, & Soliday, 1992).

Still, no one universally accepted definition of burnout exists. After reviewing the literature, Gould and Whitley (2009) defined burnout as

> "a physical, emotional, and social withdrawal from a formerly enjoyable sport activity. This withdrawal is characterized by emotional and physical exhaustion, reduced sense of accomplishments, and sport devaluation. Moreover, burnout occurs as a result of chronic stress (a perceived or actual imbalance between what is expected of an athlete physically, psychologically, and socially and his or her response capabilities) and motivational orientations and changes in the athlete. (p. 3)"

The following are characteristics of burnout:

- *Exhaustion, both physical and emotional.* The exhaustion takes the form of lost energy, interest, and trust.
- *Feelings of low personal accomplishment, low self-esteem, failure, and depression.* This is often visible in low job productivity or a decreased performance level.
- *Depersonalization and devaluation.* Depersonalization is seen as the individual being impersonal and unfeeling. This negative response to others is in large part attributable to mental and physical exhaustion. Whereas depersonalization characterizes burnout in helping professionals such as counselors, coaches, and teachers, Raedeke and Smith (2001) found that depersonalization in athletes takes the form of devaluation of the activity—the athletes stop caring about their sport and what is important to them in it.

Unlike what happens in other phases of the training stress syndrome, once a person is burned out, withdrawal from the stress environment is often inevitable. In sport, burnout differs from simply dropping out because it involves such characteristics as psychological and emotional exhaustion, negative responses to others, low self-esteem, and depression.

Athletes drop out of sport participation for many reasons, and burnout is just one of them. In fact, it appears that few athletes and coaches completely drop out of sport solely because of burnout, although they often exhibit many of the characteristics of burnout. For example, despite feeling burned out, athletes often remain in their sport for such reasons as financial

Burnout can manifest in many ways, including exhaustion, depression, staleness, and withdrawal.

rewards (e.g., scholarships) and parental or coach pressures and expectations. Individuals typically discontinue sport involvement only when the costs outweigh benefits relative to alternative activities. Athletes and coaches who discontinue sport involvement as a consequence of the high cost of excessive long-term stress are typically viewed as being burned out.

Frequency of Overtraining, Staleness, and Burnout

Although no large-scale, systematic studies have been conducted on the epidemiology of overtraining, staleness, and burnout, what we know from research suggests that these are not trivial problems. For example, a survey revealed that 66% of college varsity athletes from the Atlantic Coast Conference believed they had been overtrained (the average was two experiences during their collegiate careers); almost 50% of all respondents indicated that it was a bad experience. In addition, 72% of the athletes reported some staleness during their sport seasons, and 47% reported feeling burned out at some point during their collegiate career (Silva, 1990). Gould, Greenleaf, Chung, and Guinan (2002) reported that as many as 18% of U.S. Olympians overtrained in preparation for their Olympic performance. In an interview study (Cohn, 1990) of 10 high school golfers, all said they had burned out of golf at some time during their careers, resulting in 5 to 14 days of discontinued participation. Gustafsson, Kentta, Hassmen, and Lindquist (2007) studied 980 elite adolescent athletes and discovered that 1% to 9% of females and 2% to 6% of males had symptoms of high-level burnout. When the most stringent criteria for severe burnout were used, 1% to 2% of these young athletes fell into this category.

Other research showed that 60% of female and 64% of male elite distance runners had at least one episode of staleness in their running careers, whereas staleness was reported in 30% of subelite highly trained distance runners (Morgan, O'Connor, Ellickson, & Bradley, 1988; Morgan, O'Connor, Sparling, & Pate, 1987). Additional research (Raglin, Sawamura, Alexiou, Hassmen, & Kentta, 2000) has shown that staleness is a problem for 34% of adolescent swimmers from different cultures. Moreover, Kentta, Hassmen, and Raglin (2001) found that 37% of 272 adolescent Swedish athletes training at sport high schools experienced staleness; individual-sport athletes (48%) had higher levels than team-sport athletes (30%). Although more common in elite athletes, staleness is not confined to these athletes, as has been commonly assumed. Staleness is a problem for athletes in all sports and for athletes from various cultures. Raglin and Morgan (1989) showed that of swimmers who developed staleness during their freshman year, 91% became stale in one or more subsequent seasons. Yet only 30% of the swimmers who did not become stale as freshmen developed the disorder in a subsequent season. Apparently, once an athlete has staleness, subsequent bouts become more probable.

Studies on the frequency of burnout in teachers, coaches, certified athletic trainers, and other fitness professionals are sparse. In one of the few studies conducted in the area, Raedeke (2004) found that 49% of swimming coaches surveyed had moderate or high levels of emotional exhaustion. This certainly suggests that exercise and sport science professionals, like coaches, are at risk for burnout.

Models of Burnout

Six sport-specific models of burnout have been developed to help explain the burnout phenomenon. Each model contains some interesting and useful information concerning the various factors affecting burnout as well as individuals' responses to burnout. All have received some scientific support and should be considered when attempting to understand the complex process of burnout.

Cognitive–Affective Stress Model

Smith (1986) developed a four-stage, stress-based model of burnout in sport (figure 21.2). In Smith's model, burnout is a process involving physiological, psychological, and behavioral components that progress in predictable stages. In turn, each of these components is influenced by level of motivation and personality.

In the first stage, termed **situational demands**, high demands are placed on the athlete, such as high volumes of physical practice or excessive pressure to win. Typically, when the demands of a situation outweigh potential resources, stress occurs, which over time can lead to burnout. In the second stage, which Smith labeled **cognitive appraisal**, individuals interpret and appraise the situation. Some individuals will view the situation as more threatening than others will. For example, a football coach whose team loses three games in a row may get uptight and fear that he

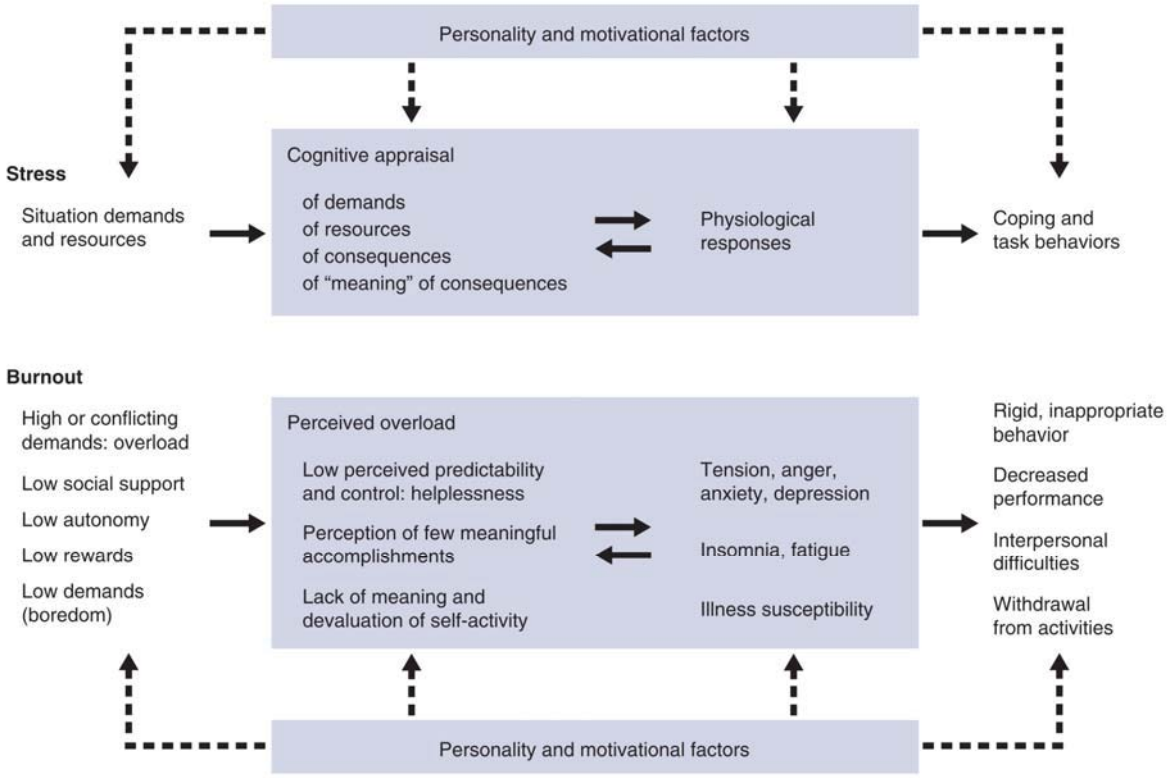


FIGURE 21.2 Smith's cognitive–affective model of athletic burnout.

Adapted, by permission, from R. Smith, 1986, "Toward a cognitive-affective model of athletic burnout," *Journal of Sport Psychology* 8(1): 40.

will lose his job, whereas another coach in the same situation may see the losing streak as a challenge and an opportunity to show that the team can come back from adversity. The third stage focuses on **physiological responses**. If you appraise a situation as harmful or threatening, then over time, as your perception becomes chronic, stress can produce physiological changes such as increases in tension, irritability, and fatigue. Typically, those who have athletic burnout feel emotionally depleted and, having little positive emotion, develop a susceptibility to illness and lethargy. In the fourth stage, **behavioral responses**, the physiological response leads to certain types of coping and task behaviors, such as decreased performance, interpersonal difficulties, and eventual withdrawal from the activity. Finally, Smith argued that reaction to stress in sport is moderated by personality and motivation and that an individual's unique personality and motivational orientations often determine whether the person will burn out or cope. Research has generally supported Smith's cognitive–affective stress model. In a study of junior tennis burnout, Gould, Tuffey, Udry, and Loehr (1996b, 1997) concluded that Smith's model provided a good explanation for the cases of burnout examined. Gustafsson, Kentta, Hassmen, Lindquist, and Durand-Bush (2007) and Cresswell and Eklund (2007) found further support for the cognitive–affective stress model.

KEY POINT The concept of cognitive appraisal reflects the idea that nothing is either good or bad, but thinking makes it so. People differ in how they respond to prolonged stress in sport and exercise settings.

Negative-Training Stress Response Model

Silva's (1990) model for explaining burnout focuses more on responses to physical training, although it recognizes the importance of psychological factors. Specifically, Silva suggested that physical training stresses the athlete physically and psychologically and that it can have both positive and negative effects.

Positive adaptation is a desirable outcome of training, as when an athlete overloads the body by doing lots of sprint work in order to become faster. Too much training, however, can result in negative adaptation. This negative adaptation is hypothesized to lead to negative training responses, such as overtraining and staleness, which eventually will result in burnout. The research has revealed that physical training is certainly involved in the burnout process (Kentta & Hassmen, 1998; Kentta et al., 2001), supporting the general predictions of the negative-training stress response model. However, the intensity of training, along with a variety of psychological and social stressors and recovery factors, must be considered. In addition, researchers have identified some cases of athlete burnout that were not driven by physical overtraining (Gould et al., 1997).

Unidimensional Identity Development and External Control Model

The models by Smith (1986) and Silva (1990) focus primarily on stress, whereas Coakley's (1992) model is more sociological. Although Coakley agreed that stress is involved in burnout, he argued that it is simply a symptom. He believes that the real cause of burnout, especially in young athletes, is related to the social organization of high-performance sport and its effects on identity and control issues. In particular, Coakley contended that burnout occurs because the structure of highly competitive sport does not allow youngsters to develop a normal identity: They don't get to spend enough time with their peers outside of the sporting environment. Thus, young athletes focus on and identify almost exclusively with success in sport, and when they have an injury or lack of success, the associated stress can ultimately lead to burnout. Coakley also contended that the social worlds of competitive young athletes are organized in such a way that their control and decision making are inhibited. In essence, coaches and parents make most of the decisions and exert wide-ranging control in most organized competitive youth sport settings, leaving young athletes powerless to control events and make decisions about the nature of their experiences and the direction of their own development. Once again, this leads to stress and potentially burnout. Coakley (1992) based his original model on informal interviews with young athletes from a number of sports. Black and Smith (2007) directly tested Coakley's predictions in 182 swimmers and provided some support for Coakley's contentions. Gould and colleagues (1997) also provided some support for the model's predictions in qualitative interviews with junior tennis players.

Commitment and Entrapment Theory

Although most researchers have conceptualized burnout to be closely related to stress, another viewpoint explains burnout in the context of sport commitment. Specifically, drawing on the sport commitment work of Schmidt and Stein (1991), Raedeke (1997) argued that athletes commit to sport for three reasons: because they want to participate, because they believe they have to participate, or both. He argued that athletes who are prone to burnout feel "entrapped" by sport when they do not really want to participate in it but believe they must maintain their involvement. They maintain their involvement even though they would rather not, for a number of reasons—because their self-identity is so tied to being an athlete that they would feel personally lost without sport, because they lack attractive alternatives to sport, or because they believe they have invested too much time and energy in sport to stop participating. According to this view, then, burnout occurs when athletes become entrapped in sport and lose motivation but continue to participate.

Using this approach, Raedeke (1998) studied more than 200 competitive swimmers. He showed that some swimmers who were no longer attracted to swimming—feeling little enjoyment or benefit but high costs—still believed they had to participate because of social pressure from others and their perceived lack of control over the situation. Compared with swimmers who did not feel entrapped, these swimmers were most likely to burn out and experience a decreased commitment to swimming. These findings support the **entrapment theory** and suggest that coaches and parents should ensure that athletes enjoy their participation and that it remains fun, encourage and support the athletes but not pressure them, and make sure the athletes are involved in or have input into decision making regarding practice and competition.

Self-Determination Theory

Sport psychologists have also applied self-determination theory as an explanation of sport burnout (e.g., Cresswell & Eklund, 2006; Lemyre, Treasure, & Roberts, 2006; Perreault, Gaudreau, Lapointe, & Lacrois, 2007). In fact, this has been the most prevalent

approach to studying burnout in recent years. Recall from chapter 6 that according to self-determination theory, people have three basic psychological needs: autonomy, competence, and relatedness. When these needs are met, a person's motivation and psychological well-being are maximized (Deci & Ryan, 1985) and the person is less likely to burn out. Individuals who do not have these basic needs met will be more prone to burnout.

Perreault and colleagues (2007) found support for the self-determination theory explanation of sport burnout using 259 student-athletes from a Canadian sports school. As predicted, they found that satisfaction of the basic needs (autonomy, competence, and relatedness) was associated with lower levels of athlete burnout. Studies conducted with elite rugby players (Cresswell & Eklund, 2005a,b; Lemyre, Hall, & Roberts, 2008; Lemyre, Roberts, & Stray-Gundersen, 2007) also showed that self-determined forms of motivation were negatively related to athlete burnout. Quested and Duda (2011) conducted a longitudinal study that examined antecedents of burnout in elite dancers and found that burnout was predicted by satisfaction of basic needs, supporting the predictions of self-determination theory. A statistical review by Li, Wang, Pyun, and Kee (2013) of the literature showed that key components of self-determination theory (e.g., basic psychological needs, intrinsic motivation, extrinsic autonomous regulation, and amotivation) were all significant predictors of overall burnout and its three dimensions: reduced sense of accomplishments, physical and emotional exhaustion, and sport devaluation. Although these findings are very encouraging, the athletes tested were typically characterized by low levels of burnout. Additional research is needed to further verify the findings in athletes with high levels of burnout.

Integrated Model of Athlete Burnout

After reviewing the existing literature and the previously discussed theories on burnout in athletes, Gustafsson, Kentta, and Hassmen (2011) developed an integrated model of athlete burnout. As the name suggests, this model integrates the previous models for the purpose of creating a more complete conceptual understanding of the burnout research and theory. Depicted in figure 21.3, this model shows that the burnout process can best be understood by examining its antecedents, such as excessive training and school and work demands (the box on the left); its early signs, such as mood disturbances and diminished motivation, which can turn into full-fledged burnout manifested in physical and emotional exhaustion, feelings of reduced accomplishment, or sport devaluation (the large box in the middle); and ultimately the maladaptive consequences of burnout, such as partial or complete withdrawal from sport or impaired immune function (the box on the right). The model also shows that entrapment has a major influence and provides an excellent explanation for burnout in many athletes (the box on the top). Finally, the model depicts that certain personality, coping, and social environment factors (e.g., perfectionistic personality characteristics, trait anxiety, low autonomy, ego-oriented motivational climates) have been shown to influence the burnout process in athletes (the box on the bottom).

Factors Leading to Athlete Overtraining and Burnout

We now discuss specific factors that lead to or cause overtraining and burnout. Before turning to the research evidence, we consider some anecdotal reports.

Anecdotal Reports

Anecdotal evidence regarding why some athletes overtrain and even burn out at a relatively young age is plentiful. Some players start as early as 5 years of age, and others are pressured to turn pro when they are barely teenagers. Tennis phenomenon Jennifer Capriati turned pro at age 13 and, as a result of a clothing contract, was a millionaire before she even hit a ball as a professional. Her early fame and fortune might have been partly to blame for her dropping out of tennis and experimenting with drugs. She later made a successful comeback, which she attributed to reduced stress and more parental support versus parental and sponsor pressure. The names Vince Cartier, Curtis Beck, and Eric Hulst (all elite junior runners) are probably less familiar. These athletes were national champions as teenagers, only to become burned out and discontinue their participation in competitive sport a few years after setting national records or winning junior division titles. In these highly competitive environments, young athletes practice 25 to 30 hours a week and have little time off for vacation. In fact, one study found that young athletes who specialized in one sport exhibited higher levels of emotional exhaustion

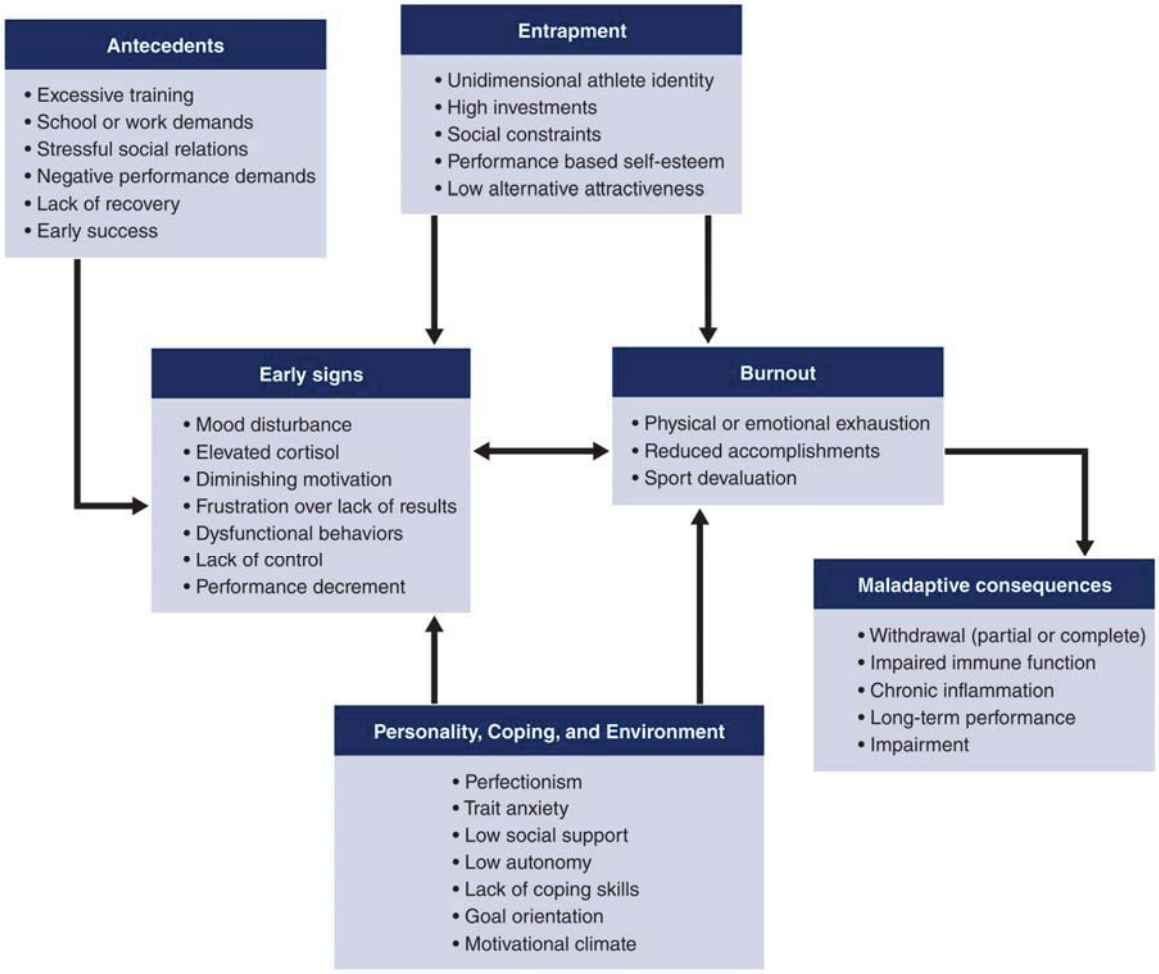


FIGURE 21.3 An integrated model of athletic burnout.

Reprinted from "Athlete burnout: An integrated model and future research directions," H. Gustafsson, G. Kentta, and P. Hassmen, *International Review of Sport & Exercise Psychology*, 4(1): 10, 2011, reprinted by permission of publisher (Taylor & Francis Ltd, http://www.tandf.co.uk/journals).

than those who sampled and played multiple sports (Stracchan, Côté, & Deakin, 2009).

KEY POINT Athletes are starting to train at younger ages, which can negatively affect their home and family life.

Besides so early a start and the pressures and expectations placed on young athletes, training in most sports now involves year-round workouts, and off-seasons become ever shorter. In sports such as tennis, gymnastics, and swimming, there really is no off-season. For ice skating, tennis, golf, and gymnastics, specialized training camps and academies have been developed where young athletes live, attend school, and train. This extended time away from home can put great strains on youngsters, who typically cannot maintain a normal home and family life. Given these excessive psychological and physical demands, it is no wonder that some athletes burn out.

KEY POINT In many sports athletes train virtually year-round, and the intensity of training loads makes it almost impossible to compete successfully in more than one sport.

Overtraining Research Evidence

Later in this chapter we discuss the research on overtraining and changes in athlete mood states. However, at this point we note that a number of investigators

have found a link between the volume of an athlete's physical training and overtraining responses. That is, overtraining symptoms increase as the volume of physical training increases, and overtraining symptoms decrease when physical training volume decreases.

Although physical training volume is certainly related to overtraining, other investigators have linked nonsport stress to the onset of overtraining, For example, Meehan, Bull, Wood, and James (2004) studied the overtraining syndrome in five competitive endurance athletes. The athletes were diagnosed as overtrained when a consistent decrease in performance was observed in the absence of any medically diagnosed disease. Each specific case was explored using a medical examination, questionnaires assessing life stress and coping responses, and in-depth individual interviews. Results revealed that although these overtrained athletes all reported high motivation toward training and competition and demanding training and competition schedules, all had considerable nonsport stress resulting from such things as occupational and educational demands, finances, and living arrangements. The authors concluded that "nonsport stress appears to make an important contribution to the experience of those athletes diagnosed with the overtraining syndrome" (p. 154). Tobar (2012) also found that overtraining was related to mood disturbances in both male and female swimmers, but these effects were dependent on the athletes' levels of trait anxiety. Thus, the psychological effects of overtraining vary depending on the individual's psychological make-up.

The research on sport science overtraining, then, demonstrates that sources of physical and psychological stress in an out-of-sport venue contribute to overtraining. Monitoring these stress sources and how they influence specific athletes has important implications for preventing overtraining in athletes.

Burnout Research Evidence

Although a wide variety of factors have been hypothesized to lead to burnout, until recently few empirical data substantiated these contentions. However, a number of studies (Cresswell & Eklund, 2004; Gustafsson, Kentta, Hassmen, Lindquist, & Durand-Bush, 2007; Harlick & McKenzie, 2000; Kjormo & Halvari, 2002; Lai & Wiggins, 2003; Raedeke & Smith, 2004) have examined factors leading to burnout in athletes, and several reviews of the research have been published (Cresswell & Eklund, 2006; Goodger, Gorley, Lavallee, & Harwood, 2007; Gould & Whitley, 2009; Raedeke, Smith, Kenttta, Arce, & de Francisco, 2014). Raedeke and Smith (2004) found significant relationships between burnout, the amount of stress athletes feel, and their social support and coping. Lai and Wiggins (2003) found that burnout increases across the season in soccer players, whereas Kjormo and Halvari (2002) found that a lack of free time to spend with significant others and role conflict influenced the burnout levels of Norwegian Olympians. Harlick and McKenzie (2000) showed that parental pressure was related to burnout in New Zealand tennis players, whereas Cresswell and Eklund (2005a,b) linked athlete autonomy, competence, social support, and money hassles to burnout in New Zealand rugby players. Gustafsson, Kentta, Hassmen, Lindquist, and Durand-Bush (2007) found that burnout was related to early sport success and resulted in high expectations for athletes to live up to as well as a chronic lack of mental and physical recovery. Other factors found to be related to burnout include harmonious and obsessive passion (Curran, Appleton, Hill, & Hall, 2011), a lack of hope (Gustafsson, Skoog, Podlog, Lundqvist, & Wagnsson, 2013), and peer-related motivational climate (Smith, Gustafsson, & Hassmen, 2010). Although this research shows that a wide variety of factors are associated with burnout in athletes, these studies should be viewed with some caution. Most of the studies suffer from the fact that the athletes studied had low to moderate (vs. high) levels of burnout. We cannot be sure whether athletes exhibiting high levels of burnout would have had the same types of antecedent factors.

Gould and colleagues (1996a,b, 1997) conducted one of the few studies that examined potential causes of high levels of burnout in athletes. This series of studies conducted on competitive youth tennis players revealed that an interaction of personal and situational factors, including these categories, causes burnout:

- *Physical concerns.* These include injury, overtraining, feeling tired all the time, lack of physical development, erratic performance, losing, and getting beat by people you used to beat.
- *Logistical concerns.* These include the travel grind as well as the demands on time that tennis players believed could dominate their lives, leaving them little or no time with friends or at school.
- *Social or interpersonal concerns.* These include dissatisfaction with social life, negative paren-

tal influences (e.g., being "suffocated" by one's father or mother), and competing with a sibling for a parent's attention. Other dissatisfactions were identified in the tennis world, such as a negative team atmosphere, cheating by competitors, and unhelpful coaches.

• *Psychological concerns.* By far the most frequently noted factor, accounting for more than 50% of the reasons given for burnout, psychological concerns include unfulfilled or inappropriate expectations such as an overemphasis on rankings, a realization that a professional career was unlikely, and feeling a lack of improvement or talent. Lack of enjoyment, another theme, was characterized by coach and parental pressure to practice and win, pressure to win or maintain scholarships, self-pressure to win and play well, and being uncertain of parental support. Motivational concerns included wanting to try other sport and nonsport activities as well as simply being "sick" of tennis and lacking motivation.

In summary, Gould and colleagues (1996b) suggested that two "strains" of burnout exist. The dominant strain is social–psychological and is further divided into substrains of athlete perfectionism and situational pressure. Specifically, some young athletes are such perfectionists that this eventually predisposes them to or puts them at risk for burnout (even in situations that are not considered unusually demanding by most tennis professionals). In other cases athletes are placed in situations in which others, particularly parents, generate tremendous psychological pressure. Stress results from having expectations to win in an effort to please others and feel worthy. A strain of burnout that surfaces much less frequently is physically driven. In these cases athletes cannot meet the demands for physical training placed on them, which results in considerable physical and psychological stress and then burnout.

Individual Differences

Although there are common factors related to burnout, burnout is a unique personal experience. People attempting to help athletes cope with feelings of burnout must recognize and appreciate these variations. Figure 21.4 provides what Gould and colleagues (1997) called a "motivational map" depicting the varying reasons three athletes gave for discontinuing or curtailing their involvement in tennis. This figure shows that the players did not burn out for only one reason; rather, there were multiple causes. For example, the three players shared such reasons as overtraining, not having fun, having social concerns, and pressure from others. Other reasons, such as injury, erratic play, and disliking travel, were specific to a particular athlete.

Symptoms of Overtraining and Burnout

Overtraining and burnout are physical and psychological in nature. Some common symptoms of overtraining include physical fatigue, mental exhaustion, grouchiness, depression, apathy, and sleep disturbances. Symptoms of burnout include a loss of interest, lack of desire to play, physical and mental exhaustion, lack of caring, depression, and increased anxiety. "Signs and Symptoms of Overtraining and Burnout" presents research summarizing the characteristics of overtraining and burnout (Gould et al., 1996b; Hackney, Perlman, & Nowacki, 1990).

DISCOVER Activity 21.1 helps you learn more about athletic overtraining and burnout.

Overtraining and Mood States

It is assumed that overtraining affects athletic performance and mental health; a few researchers have asked how. For example, Morgan, Brown, Raglin, O'Connor, and Ellickson (1987) investigated the relationship between overtraining and psychological mood states. To measure mood, they administered the Profile of Mood States (POMS; McNair et al., 1971) to 400 competitive swimmers during different parts of the training and competitive season. The POMS measures six transitory emotional states: tension, depression, anger, vigor, fatigue, and confusion. After analyzing the data from studies done over a 10-year period, the researchers concluded that mood state disturbances increase as the training stimulus increases in a dose-responsive manner. The heavier the training (in this case, the swimming distance each week), the greater the mood disturbance. This mood disturbance included increased depression, anger, and fatigue and decreased vigor. Conversely, reductions in training load are associated with improvements in mood (Raglin, Eksten, & Garl, 1995; Raglin, Stager, Koceja, & Harms, 1996).

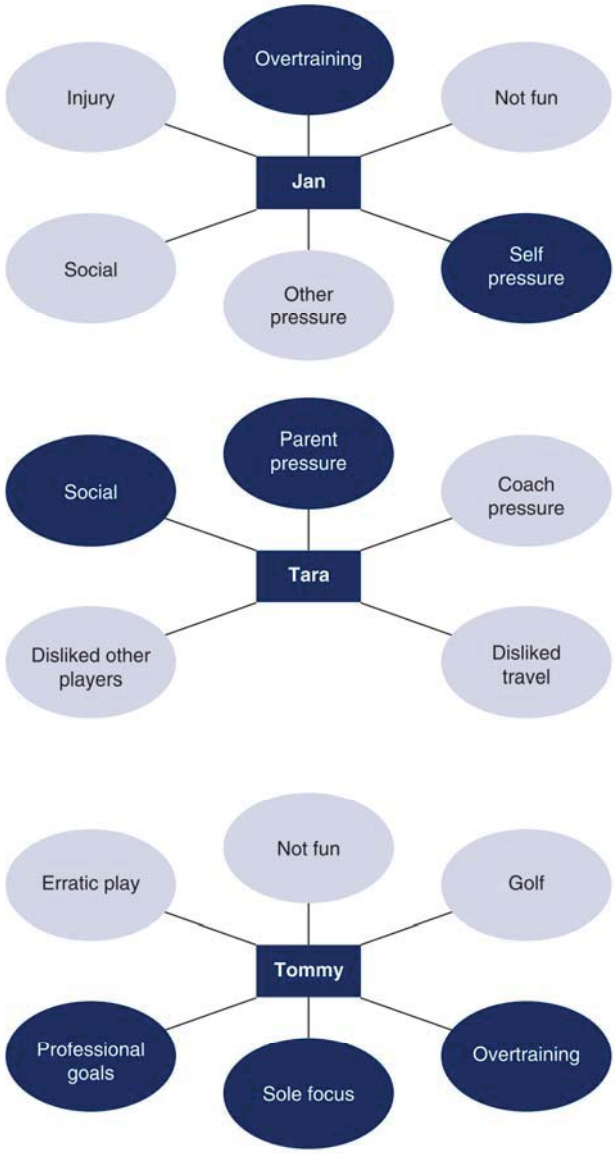


FIGURE 21.4 Individual differences in athlete burnout.

KEY POINT Athletes have increased mood disturbance under especially heavy training workloads, especially over time. The heavier the workload, the greater the mood disturbance.

The psychological mood profile of successful athletes also differed from that of unsuccessful athletes. Specifically, top-level athletic performers had what Morgan called an iceberg profile (see chapter 2). The iceberg profile shows that, compared with the population average, more successful athletes tend to score higher on vigor and lower on anxiety, depression, fatigue, and confusion (figure 21.5). Interestingly, when athletes are overtrained and become stale because of the increased training demands, they display an inverted iceberg profile; that is, the negative states of depression, anger, fatigue, confusion, and tension become elevated and vigor is decreased. A stepwise increase in the swimmers' mood disturbances coincided directly with increases in swimming training. Subsequent decreases in the training regimen (i.e., tapering off) were associated with improvements in mood state.

Signs and Symptoms of Overtraining and Burnout

Overtraining	Burnout
Poor performance	Low motivation or energy
Apathy	Concentration problems
Lethargy	Loss of desire to play
Sleep disturbance	Lack of caring
Weight loss	Sleep disturbance
Elevated resting heart rate	Physical and mental exhaustion
Muscle pain or soreness	Lowered self-esteem
Mood changes	Negative affect
Elevated resting blood pressure	Mood changes
Gastrointestinal disturbances	Substance abuse
Retarded recovery from exertion	Changes in values and beliefs
Appetite loss	Emotional isolation
Overuse injuries	Increased anxiety
Immune system deficiency	Highs and lows
Concentration loss	

From "Physiological profiles of overtrained and stale athletes," A. Hackney, S. Perlman, and J. Nowacki, *Journal of Applied Sport Psychology,* 21(1): 21-33, 1990, adapted by permission of the publisher (Taylor & Francis Group, Ltd http://www.tandf.co.uk/journals).

KEY POINT Successful athletes exhibit high levels of vigor and low levels of negative mood states—an optimal combination. Overtrained athletes show an inverted iceberg profile, with pronounced negative states.

Overtraining and Performance

One well-controlled study addressed the effects of increased training loads on mood states and performance of Olympic judoists (Murphy, Fleck, Dudley, & Callister, 1990). The conditioning-training volume

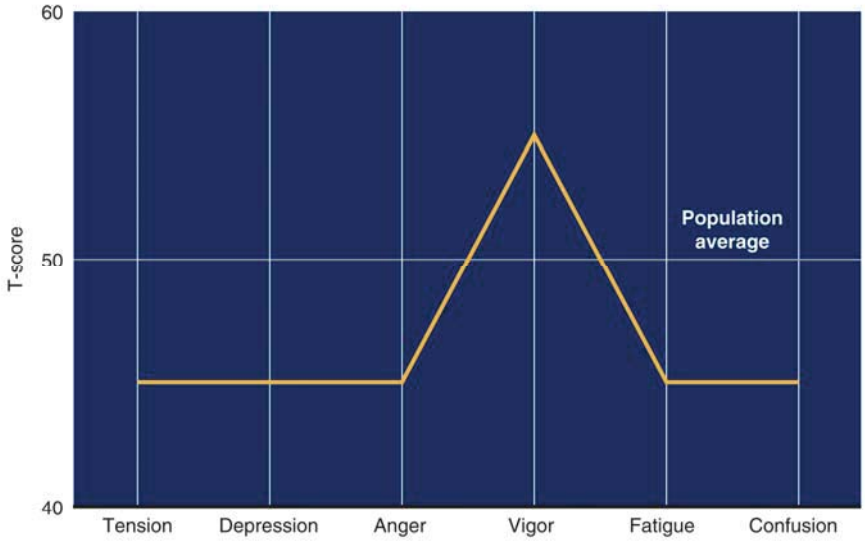


FIGURE 21.5 The iceberg profile of psychological mood states in successful athletes.

was increased for 4 weeks and then the sport-specific training volume was increased for 2 weeks. The increased volume of conditioning training did not increase negative mood state, whereas the increased volume of sport-specific training increased levels of anger and anxiety. (No signs of clinical distress, such as depression or irrational thinking, were evident.) However, decreases in the physical performance measures of strength and anaerobic endurance occurred during both the conditioning and sport-specific training sessions. This study shows that overtrained and stale athletes are at risk of developing mood disturbances, which can result in decreased performance levels and dropout. In another study, Kellman and Gunther (2000) examined changes in stress and recovery in elite German rowers preparing for the Olympic Games. Results revealed that physical components of stress (e.g., lack of energy, soreness, and injury) as well as recovery factors (e.g., being in shape) were correlated with the length of daily training sessions. Most interesting was the finding that interpersonal processes in the team (e.g., conflicts) were reflected in training stress and recovery. These studies, then, show that sport and exercise professionals should carefully monitor how much training athletes require. The old strategy "more is better" may backfire in the long run.

Ways to Measure Burnout

Probably the best way to study burnout would be to find people who are leaving sport because they feel burned out and compare them with athletes who are currently participating in sport and exercise but are not feeling burned out (as was done by Gould et al., 1996b). However, it is difficult to locate these people, and many burned-out players remain in sport for reasons such as money, prestige, or pressure from a coach or parent. Therefore, researchers have developed a paper-and-pencil method for measuring burnout. The most widely used and accepted instrument in general psychology is the Maslach Burnout Inventory (Maslach & Jackson, 1981), which measures both the perceived frequency and intensity of the feelings of burnout. The inventory measures three components of burnout:

- *Emotional exhaustion.* This includes feelings of emotional overextension and exhaustion.
- *Depersonalization.* This appears as an unfeeling and impersonal response to other people in one's environment. Feelings toward people are detached, and there is a sense of just going through the motions.
- *Low sense of personal accomplishment.* This refers to a decreased feeling of competence and achievement in one's work with people. Low feelings of achievement often result in perceived lack of ability to control situations.

KEY POINT The Maslach Burnout Inventory has been used with professionals in a variety of potentially stressful occupations, including nurses, lawyers, social workers, physicians, psychologists, police officers, counselors, and probation officers. It has been especially useful in studying teachers, whose work environment typically includes long hours, excessive expenditure of mental and emotional energy, and high expectations from principals and parents.

Coaches and athletes face similar stressors in competitive sport: long hours of practice, great expenditure of physical and mental energy, and performance pressures on game days. However, only recently has empirical research focused on burnout in competitive sport. Some of this research has adapted Maslach's Burnout Inventory to sport (Weinberg & Richardson, 1990). In an especially encouraging development, Raedeke and Smith (2001) constructed the Athlete Burnout Questionnaire, a 15-item instrument that provides three burnout subscale measures: emotional and physical exhaustion, reduced sense of accomplishment, and sport devaluation. The scale has been shown to have good reliability and validity and allows researchers to study athlete burnout with a strong assessment tool. It is the most widely used burnout instrument in sport settings today.

Burnout in Sport Professionals

We now turn to some of the major findings regarding burnout in competitive sport. Studies have examined burnout not only in athletes but also in certified athletic trainers, officials, and coaches.

Burnout in Certified Athletic Trainers

Few people are aware of the long hours that athletic trainers put in before and after games and during practice. Certified athletic trainers at the high school or college level are often responsible for several teams and work in the training room or on the field most of

the day. Coaches pressure trainers to prepare athletes for game day, which adds stress. Gieck, Brown, and Shank (1982), who were the first to study how burnout affects athletic trainers, demonstrated that trainers indeed have great job stress. Many trainers reported that being at the beck and call of several teams made it difficult to devote enough quality time to individuals. Trainers with type A personalities (i.e., excessive anxiety about time urgency) were especially prone to burnout.

KEY POINT Trainers with type A personalities (individuals who are prone to experience excessive anxiety about time urgency) are more likely to burn out than are their type B counterparts (who generally live at lower stress levels and have a more laid back approach).

Some trainers believe that they are more likely to feel burned out when their several roles become blurred (i.e., *role ambiguity*) (Capel, 1986). For example, trainers often play the role of counselor and friend, which can conflict with their official role. Also, athletic trainers who feel more in control of their situations (i.e., *internal locus of control*) have less burnout than do colleagues with little sense of control (i.e., *external locus of control*).

KEY POINT Role conflict and role ambiguity are related to burnout in both trainers and sport officials.

Seasoned professional certified athletic trainers are not the only ones who become burned out. A study of more than 200 graduate assistant certified athletic trainers found that this student population is at risk for burnout as a result of the time needed to fulfill their academic and clinical duties (Mazerolle, Monsma, Colin, & James, 2012).

Burnout in Officials

Officials also face great stress, and they receive little compensation for the stress other than the satisfaction of a job well done. This leads to high turnover rates and a shortage of officials. Evidently, the fear of failure is the strongest predictor of burnout in sport officials (Taylor, Daniel, Leith, & Burke, 1990). In a study focusing on sources of stress, officials reported that making bad calls is a major stressor related to perceived burnout and that players, coaches, and spectators are more likely to evaluate officials negatively than positively (Anshel & Weinberg, 1995b). It is hypothesized that this increased stress can lead to higher levels of burnout in officials. In addition, like athletic trainers, officials who have role conflicts also have higher levels of perceived burnout.

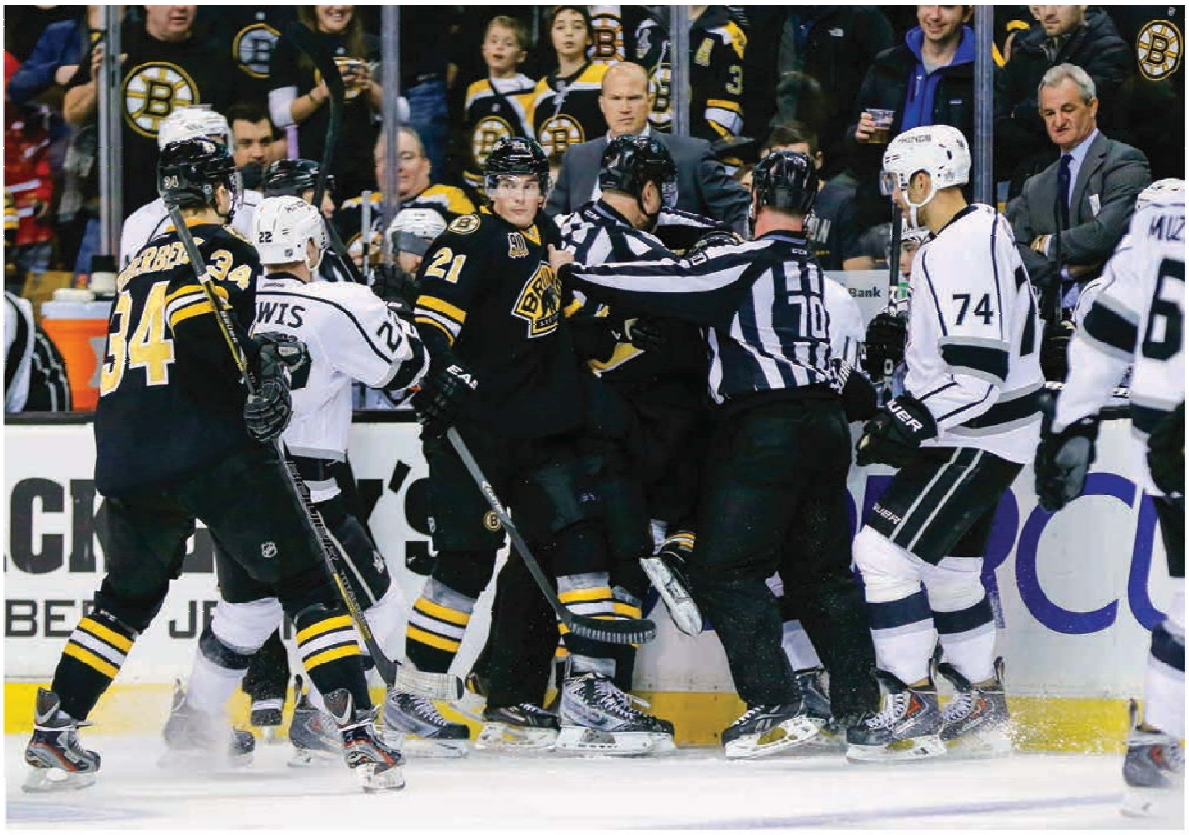
Burnout in Coaches

Coaches are prime candidates for burnout. The wide variety of stressors that coaches report include the pressure to win, administrative and parental interference or indifference, disciplinary problems, need to fulfill multiple roles, extensive travel commitments, and intense personal involvement. Research also revealed that burned-out coaches were viewed by their athletes as providing less instruction, training, and social support (Price & Weiss, 2000). Another study revealed that burnout in coaches stems from issues generated from both work and home and that coaches who had difficulties handling the high performance demands of elite sport and who lacked the tools to facilitate recovery were particularly prone to burnout (Lundkvist, Gustafsson, Hjalm, & Hassmen, 2012). Thus, burnout affects the on-the-field actions of coaches and results from both personal and situational factors. Let's look at some of the research examining the specific factors related to burnout in coaches.

Sex Differences

Most studies (Caccese & Mayerberg, 1984; Kelley, 1994; Kelley, Eklund, & Ritter-Taylor, 1999; Kelley & Gill, 1993; Vealey et al., 1992) have shown that females have higher levels of perceived burnout than males do, although some studies (e.g., Dale & Weinberg, 1990) do report higher levels of burnout in males. It has been suggested that female coaches perceive increased levels of stress and burnout because they are expected not only to fulfill coaching responsibilities but also to nurture their athletes. Athletic administrators may need to re-examine the differential demands placed on female coaches and possibly make some changes to ensure that roles and responsibilities are equitable with those placed on male coaches.

Looking at coaches of men's and women's sports (not the sex of the coach per se), Hjalm, Kentta, and Gustafsson (2007) found that 71% of coaches of elite women's soccer teams had moderate to high levels of emotional exhaustion compared with 23% of coaches of men's teams. The authors suggested that this difference may be the result of smaller support staffs and different leadership demands. They further suggested



Fred Kfoury/Icon SMI

Stressful jobs, long hours, and low compensation can all lead to burnout in officials.

that coaches of women's teams were at higher risk of burnout.

Differences in Age and Experience

Studies have indicated that younger and less experienced coaches tend to have higher levels of perceived burnout than do older coaches (Dale & Weinberg, 1990; Kelley & Gill, 1993; Taylor et al., 1990). Of course, coaches who feel extremely high levels of stress and burnout have probably already quit coaching. Thus, the older coaches who remain likely have good coping skills for handling stressors in their environment. Researchers thus face the problem that coaches who have truly burned out (i.e., are out of the profession) are unavailable for study.

Coaching Style

In an investigation of high school and college coaches, Dale and Weinberg (1990) found that those with a consideration style of leadership (i.e., caring and people oriented) had higher levels of perceived burnout than did those with an initiating structure style of leadership (i.e., goal oriented and authoritarian). It may well be that coaches who develop closer personal ties with their athletes suffer greater burnout because they care more. This is not to say that coaches should care less—rather, they should be aware that this style requires a lot of energy, emotion, and time, which can take a toll in the long term.

KEY POINT Young coaches appear to have higher levels of perceived burnout than older coaches, partly because some older coaches have already burned out of the profession.

Entrapped Coaches

In tests of the entrapment theory of burnout, coaches feeling higher levels of entrapment have been found to report significantly higher levels of emotional exhaustion (Raedeke, Granzyk, & Warren, 2000). Entrapped coaches were also found to show decreased commitment and interest in coaching (Raedeke, 2004).

Thus, coaches who do not really want to coach but believe they must maintain their involvement for some reason are at higher risk of burnout.

Social Support

Coaches who report higher levels of satisfaction with social support have lower levels of perceived stress and burnout (Goodger et al., 2007; Kelley, 1994; Kelley & Gill, 1993). Some coaches need reminders to seek out satisfying social support during times of high stress and to become more aware of the importance of social support in their personal and professional lives.

KEY POINT Coaches who are more caring and more oriented toward people appear to be more vulnerable to perceived burnout than goal-oriented, authoritarian coaches.

Burnout in Fitness Instructors, Administrators, and Physical Education Teachers

There is no reason to believe that fitness instructors, administrators, and physical educators are less susceptible to stress and burnout than other sport and exercise professionals are. Research in nonsport settings with teachers and others in the helping professions has shown significant levels of burnout. After all, these professionals are often asked to do more with less, help others, and cope with hectic schedules. Although sport psychologists have not extensively studied fitness instructors, administrators, and physical educators, people in these positions should also take steps to prevent burnout.

Treatment and Prevention of Burnout

The goal in studying overtraining, staleness, and burnout is to learn how to develop programs and strategies that help sport personnel prevent these conditions or at least treat them effectively. We offer the following suggestions.

- *Monitor critical states in athletes.* Factors such as stress levels, stress sources (on and off the field), training volumes, and recovery activities have all been shown to be involved in overtraining and burnout. Although more research is certainly needed

Reducing Burnout in Young Tennis Players

In interviewing burned-out tennis players, Gould and colleagues (1996b) asked what advice the players would give parents, coaches, and other players to help prevent burnout. Some of the players' suggestions include the following:

Advice for Other Players

Play for your own reasons.

Try to make it fun.

Balance tennis and other things.

Take time off and relax.

Advice for Parents

Recognize what is an optimal amount of "pushing."

Give support, show empathy, and reduce the importance of outcome.

Involve players in decision making.

Lessen involvement.

Advice for Coaches

Have two-way communication with players.

Use player input.

Cultivate personal involvement with players.

Understand players' feelings.

to determine exactly how these factors are involved, it is clear that they can be important signs that athletes are becoming overtrained or burned out. Personal trainers, coaches, sports medicine specialists, and athletes themselves must monitor such states so that athletes in the early stages of overtraining and burnout can be identified and helped.

• *Communicate.* When professionals constructively analyze their feelings and communicate them to others, burnout is less likely and is less severe if it does occur. Coaches, athletes, officials, certified athletic trainers, and physical education teachers should be encouraged to express their feelings of frustration, anxiety, and disappointment and to seek out social support from colleagues and friends. In fact, social support networks should be developed so they can be tapped when necessary. Self-awareness and preparation early on might prevent burnout later.

• *Foster an autonomy-supportive coaching style.* Evidence has shown that type of coaching style is related to athlete burnout. Specifically, the use of controlling coaching styles has been shown to more likely to lead to burnout whereas the use of autonomy-supportive coaching styles has been shown to less likely lead to burnout (Isoard-Gautheur, Guillet-Descas, & Lemyre, 2013). Paying attention to the coaching style athletes experience, then, can help us predict who might be more likely to burn out.

• *Set short-term goals for competition and practice.* Setting short-term goals and incentives for reaching them provides feedback that the athlete is on the right course and enhances long-term motivation. Meeting short-term goals is a success, which can enhance self-concept. Toward the end of the season it is particularly important to include fun goals. Most of an athlete's time is taken up by practice rather than competition, so fun goals should be incorporated there. For example, if a team has been working really hard, the coach could say that the goal of practice is to simply have fun. She might let a soccer team play basketball or relax the game so that there are no rules. These activities provide a break and reduce monotony. Similarly, exercisers trying to maintain a regular program of physical activity need short-term goals to keep them motivated and provide them with feedback concerning their progress in meeting their long-term goals.

• *Take relaxation breaks.* It is essential for mental and physical well-being to take some time off from jobs and other stresses. The business world has vacations, holidays, and weekends away from work. But in competitive sport and the fitness industry, many people work under continuous pressure almost year-round. The myth that more is better is still afloat when it comes to practice and workouts. Time off is seen as falling behind your opposition. Yet the weekly grind of practice and competitions produces mental and physical fatigue. In truth, cutting back on training loads and intensities as a way to treat or prevent burnout is associated with increases in positive mental health. The key here is to develop balance in life.

• *Learn self-regulation skills.* Developing psychological skills such as relaxation, imagery, goal setting, and positive self-talk can ward off much of the stress that leads to burnout. For example, setting realistic goals can help athletes manage time for balancing professional and personal lives. People who overtrain in sport or exercise usually do so at the expense of their family and personal lives. By setting realistic goals, you have time for both sport and exercise and other responsibilities, which will help you avoid the burnout syndrome.

Time-Out

An Olympic athlete used to live and train in southern California, where the weather is typically good year-round. In that sunny, warm environment, she said she always felt guilty for missing a practice or taking a day off, but with her year-round training regimen she found herself getting injured often and feeling stressed and somewhat burned out. She moved to the middle of the United States, where the weather was more variable—often extremely hot in the summer and extremely cold in the winter. When the weather was very bad, she either took the day off or shortened her workout. To her surprise, the days off did not hurt her performance; her performance actually improved because she avoided injury and started to regain her enthusiasm. This led her to schedule relaxation or "off" days into her training.

• *Keep a positive outlook.* It is easy for officials to let news or social media commentary and criticism from coaches, spectators, and players get them down. Even when they officiate a great game, the losing coach may be upset and blame them. The antidote for officials is to focus on what they do well. A positive focus means working on the things you can control in order to get better and not dwelling on unwarranted criticism. One way to accomplish this is to seek people who provide social support (e.g., other colleagues).

• *Manage postcompetition emotions.* Although many coaches and athletes know to control pregame anxiety and tension, few consider what happens after competition. The final buzzer does not necessarily stop the intense psychological feelings aroused by the competition. Emotions often intensify and erupt

It's Not Just How Hard You Train, It's How You Recover!

Early research on overtraining in athletes focused primary attention on the training loads involved. However, more recent efforts have addressed not only how hard, long, and frequently the athlete trains but also how he goes about recovering after training bouts. To avoid overtraining or staleness and burnout and to optimize performance, training recovery should be systematically planned and implemented (Kellmann & Gunther, 2000). Another suggestion is that the recovery method used should match the source of overload stress (Kentta & Hassmen, 1998). So if an athlete is primarily overtrained as a result of the physical load (meters run, weight lifted), physical strategies such as nutrition, hydration, and massage might be best. However, if the overload results from psychological and social factors, methods such as visualization and dissociation through watching a favorite movie might be best. Of course, overtraining often results from a combination of physical, psychological, and social stressors, so it is often best to use several methods. The model that follows can help guide individuals' efforts by matching the recovery strategy to the type of overload source.

OVERLOAD SOURCE: PHYSICAL STRESSOR

Recovery strategy—nutrition and hydration

Eat more carbohydrate

Stay hydrated

Recovery strategy—active rest

Low-intensity training in a different sport

Stretching

Recovery strategy—rest

No physical activity

Passive rest

Sufficient sleep

OVERLOAD SOURCE: PSYCHOLOGICAL OR SOCIAL STRESSOR

Recovery strategy—relaxation and emotional support

Flotation tanks, massage, sauna

Visualization

Time-out

Minimize nontraining stressors (e.g., limit work hours)

Progressive muscle relaxation

Recovery strategy—thought management methods

Dissociation (e.g., watch movie)

Negative thought replacement

into postgame quarrels, fights, drinking binges, and other destructive behaviors. On the other hand, some athletes become depressed, despondent, and withdrawn after losing or performing poorly. Henschen (1998) suggested some ways for coaches to handle postcompetition stress in athletes:

- Provide a supportive atmosphere immediately after the contest.
- Concentrate on your players' emotions, not your own.
- Try to be with your team (not on the radio or television) after a contest.
- Provide an unemotional, realistic assessment of each athlete's performance.
- Talk to all team members, even those who did not play.
- Once athletes have dressed, have a group activity for the team (e.g., postgame meal, swimming, bowling, movie).
- Keep athletes away from well-meaning but demanding peers and parents.
- Do not allow team members to gloat over success or be depressed over a loss.
- Begin preparation for the next opponent at the very next practice.

• *Stay in good physical condition.* Your body and mind have a reciprocal relationship: Each affects the other. Chronic stress usually takes a toll on your body, so it's critical that you take good care of yourself through diet and exercise. Eating improperly, gaining weight, or losing too much weight only contributes to low self-esteem and self-worth and feeds into the burnout syndrome. When you feel particularly stressed, make a special attempt to stay in good physical condition to help your mental state stay strong.

LEARNING AIDS

SUMMARY

1. **Define overtraining, staleness, and burnout.**
   Overtraining refers to a short cycle of training (lasting a few days to a few weeks) during which athletes expose themselves to excessive training loads that are near or at maximal capacity. Staleness is the end result of overtraining, a state in which athletes have difficulty maintaining their standard training regimens and performance results. Burnout is another, more exhaustive psychophysiological response of withdrawal from excessive training and competitive demands.
2. **Discuss different models of burnout.**
   Six sport-specific models of burnout have been developed to help explain the burnout phenomenon. The cognitive–affective stress model presents a four-stage process of burnout involving situational demands, cognitive appraisal of the situation, physiological responses, and coping behaviors. The negative-training stress response model focuses more attention on responses to physical training, although psychological factors are also seen as important. The unidimensional identity development and external control model is more sociological, viewing stress as a symptom of social and societal factors. The commitment and entrapment theory contends that athletes and coaches who are prone to burnout feel "entrapped" by sport when they do not really want to participate in it but believe they must maintain their involvement for such reasons as maintaining their identity or because they have so much invested in their involvement. Self-determination theory holds that people have three basic psychological needs (autonomy, competence, and relatedness) and that individuals are more likely to burn out when these needs are not met. Finally, the integrated model builds from the five previous frameworks and offers a comprehensive understanding of what is known about antecedents, signs and symptoms, consequences, and factors related to burnout such as entrapment, the environment, personality, and coping resources.
3. **Describe the causes of overtraining and burnout.**
   The causes of burnout and overtraining fall into four general categories: physical concerns (e.g., injury, a high frequency and intensity of training), logistical concerns (e.g., travel grind, time demands), social–interpersonal concerns (e.g., dissatisfaction with social life, negative parental influences), and psychological concerns (e.g., inappropriate expectations, lack of enjoyment).

4. **Identify the symptoms of overtraining and burnout.**
   Some common symptoms of overtraining include apathy, mood changes, muscle pain, and appetite loss. Some common symptoms of burnout include a lack of caring, emotional isolation, and increased anxiety.
5. **Explain the research evidence of burnout in sport.**
   Although the interest in burnout originally focused on athletes, recent research has examined burnout in other sport professionals such as coaches, officials, and athletic trainers. In general, these people share much in terms of the causes of burnout and their reactions to it.
6. **Describe the treatment and prevention of burnout.**
   Several strategies have been developed to help prevent or reduce the probability of burnout in sport and exercise settings. These include setting short-term goals for practices and competitions, taking relaxation breaks, keeping a positive outlook, and learning self-regulation skills.

KEY TERMS

periodized training	burnout	physiological responses
overtraining	situational demands	behavioral responses
staleness	cognitive appraisal	entrapment theory

REVIEW QUESTIONS

1. Discuss the research regarding the frequency of overtraining, staleness, and burnout in athletes.
2. Define the terms *overtraining, staleness,* and *burnout,* pointing out similarities and differences.
3. Using research by Gould and colleagues, discuss five causes of burnout in athletes, including the importance of individual differences.
4. Use Morgan's iceberg profile to discuss the relationship between psychological mood and performance.
5. Describe Raedeke's entrapment theory of sport burnout.
6. Discuss the findings of research on burnout among athletic trainers and officials.
7. Discuss the effect of sex, age, experience, and social support on the susceptibility and reactions to burnout that coaches have.
8. Describe three antidotes, or treatments, for burnout and overtraining in sport.

CRITICAL THINKING QUESTIONS

1. This chapter presents six models of burnout in sport: the cognitive–affective stress model, the negative-training stress model, the unidimensional identity development and external control model, the commitment and entrapment theory, self-determination theory, and the integrated model. Describe the similarities and differences among these models. Use these models to determine three things you would do if you were a coach to prevent burnout in your athletes.
2. Gould and colleagues conducted in-depth interviews with young tennis players who had left the game early because they felt burned out. Drawing on the findings from that study, discuss five pieces of advice that you might give coaches, parents, and athletes for avoiding burnout.

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PART VII

Facilitating Psychological Growth and Development

Can participation in sport and physical activity lead to psychological growth and character development?

Unfortunately, this subject has become big news over the past several years as many athletes (young and old) are getting noticed for their poor on- and off-the-field behaviors. Dealing with these attitudes effectively as a coach and as an athlete is critical to both improving performance and, more importantly, enhancing personal growth and well-being. Hopefully, learning some of the mental skills discussed throughout this text will help you improve this situation and provide athletes, exercisers, and coaches with tools for creating a more positive environment while highlighting the positive aspects of sport and exercise participation. This effort will make the sport and physical activity experience more positive for participants. In addition, a number of researchers suggest that if sport is done right, the lessons learned transfer to other life situations as well.

As we have learned, one focus of sport and exercise psychology is helping people enhance performance through the use of mental skills. But this represents only part of the field. Sport and exercise psychology also deals with how psychological development and well-being occur as consequences of participation in sport and physical activity. The chapters in this part deal with three main topics of psychological development and well-being that are important to both society and sport and exercise psychology.

Chapter 22 examines children's psychological development through sport participation, looking at such important issues as the levels of stress that youngsters experience, the development of their self-esteem, and effective coaching practices for helping kids. Chapter 23 focuses on the important topic of aggression in sport. Unfortunately, the number of incidents of aggression has grown recently, with athletes (and sometimes coaches) losing control of their emotions both on and off the playing field and displaying a variety of aggressive and abusive behaviors. In this chapter you'll read about the causes underlying aggression among athletes and spectators as well as some recommendations that might lessen unwanted aggression. In chapter 24, after defining character and good sporting behavior, we discuss issues of moral development and sporting behavior in sport and physical activity contexts. Finally, we describe new programs in physical education targeted at enhancing moral development.

VIEW Dr. Dan Gould introduces part VII of the text in the Introduction activity.

JOURNEY This activity allows you to reflect on whether exercise has been a positive force in your personal development, and why.

22

Children and Sport Psychology

After reading this chapter, you should be able to

1. discuss the importance of studying the psychology of the young athlete,
2. explain the major reasons children participate in and drop out of sport,
3. discuss the importance of peer relationships in youth sport,
4. describe stress and burnout effects in young athletes,
5. identify and explain how to apply effective coaching practices with youngsters, and
6. discuss the role of parental involvement in youth sport.

As many as 45 million children participate in sport in the United States. What motivates them? Is competitive sport too stressful for them? Why do so many youngsters drop out of sport after the age of 12? Is there something wrong with how they're being coached? These are among the important questions we try to answer in this chapter.

Most people think of sport psychology as something that applies principally to elite athletes. In fact, youngsters compose the greatest population of sport participants, and since the mid-1970s a growing number of highly committed sport psychologists have devoted their careers to examining the important psychological issues in children's sport participation. Their work has major implications for creating safe and psychologically healthful sport programs for children.

Importance of Studying the Psychology of Young Athletes

In the United States alone, an estimated 45 million children under the age of 18 years are involved in school and extracurricular physical activity programs, ranging from youth basketball and baseball to cross-country skiing and rodeo (Ewing & Seefeldt, 2002). Sport participation has been found to represent 66% of all out-of-school activities for youths (Duffett & Johnson, 2004). Some of sport psychology's most important contributions, therefore, are potentially to children's sport.

Many children are intensely involved in organized sport. On average, they participate in their specific sport 11 hours weekly for an 18-week season (Gould & Martens, 1979). Sport is one of the few areas in children's lives in which they can participate intensively in an