

Available online on 15.10.2018 at <http://jddtonline.info>

Journal of Drug Delivery and Therapeutics

Open Access to Pharmaceutical and Medical Research

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Review Article

STRESS MANAGEMENT TECHNIQUE FOR ATHLETES DURING SPORTS: A CRITICAL REVIEW

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ABSTRACT

Stressors have a major influence upon mood, our sense of well-being, behavior, and health. Acute stress responses in young, healthy individuals may be adaptive and typically do not impose a health burden. However, if the threat is unremitting, particularly in older or unhealthy individuals, the long-term effects of stressors can damage health. This paper attempts to look at the strategies for sports coaches in managing stressful situations in sports competitions. This paper therefore, writes in the introduction, the concepts of stress, competition based stress, management, stress management in sports, stress in sports psychology. The paper also examines the sources of stress. It looks critically at the levels of stress in competitive sports. The relationship between psychosocial stressors and disease is affected by the nature, number, and persistence of the stressors as well as by the individual's biological vulnerability (i.e., genetics, constitutional factors), psychosocial resources, and learned patterns of coping. Psychosocial interventions have proven useful for treating stress-related disorders and may influence the course of chronic diseases. The paper also highlights some specific stress management strategies which sports coaches have to employ to aid excellent performance in sports competition. It also identifies the educational implications of stress management in sports competitions.

Keywords: Psychosocial stressors, Stress responses, Sports, psychosocial interventions, Stressor interactions, Stress management.

Article Info: Received 04 Sep, 2018; Review Completed 30 Sep 2018; Accepted 03 Oct 2018; Available online 15 Oct 2018



Cite this article as:

Bhadauriya B, Tripathi R, Stress management technique for athletes during sports: a critical review, Journal of Drug Delivery and Therapeutics. 2018; 8(5-s):67-72 DOI: <http://dx.doi.org/10.22270/jddt.v8i5-s.1956>

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INTRODUCTION

The wider the usage of the term 'stress', the more elusive its meaning. Modern definitions of stress all recognise that it is a personal experience caused by pressure or demands on an individual, and impacts upon the individual's ability to cope or rather, his/her perception of that ability. Work-related stress occurs when there is a mismatch between the demands of the job and the resources and capabilities of the individual worker to meet those demands. Subjective and self reported evaluations of stress are just as valid as 'objective' data, such as statistics on accidents or absenteeism.

A recent report by the National Association of Mental Health distinguishes between stress and pressure, where pressure can be defined as a subjective feeling of tension

or arousal that is triggered by a potentially stressful situation. However, where pressure exceeds an individual's ability to cope, the result is stress¹⁻².

Stress and common mental health problems typically have complex and multiple causes and cannot be attributed solely to events in the workplace. Certainly, unemployment is as bad or worse for our health, while the fact of having a job, however imperfect it may be, brings positive psychological effects.³ Barley and Knight argue that the rise in the popularity of stress amongst the general public is largely attributable to its 'broad based explanatory value, as it can be invoked to account for a variety of negative environmental factors, feeling states, physical sensations and cognitions'.⁴ Cooper suggests that it is, in part, a result of an increasingly modern and mobile society, where traditional ties of community,

family, neighbors, friends etc. are no longer so strong.⁵ Furthermore, during the 1990s, we have seen a rise in imposed stress as a result of massive downsizing in companies in both the private and public sectors. This has resulted in heavier workloads, job insecurity and a changing balance between men and women in the workforce.⁶ Other factors might include greater pressure, a faster pace of life and increased materialism in industrial and post-industrial societies. However, given the 'high levels of mortality and morbidity in many non-industrialized societies, it is very hard to see any basis for the claim that such a lifestyle is any less stressful'⁷⁻⁸.

In sports psychology, stress is seen as a form of arousal which is specifically -linked with specification task expectation of the demand which a situation places on individual performing in competitive sports. Stress is viewed from different perceptiveness. Some psychologists or teachers or even the coaches consider stress management to be an 'essential ingredient for excellent performance. Other believes that stress has devastating effects on performance psychological point of view; stress could be good or bad. This depends on its level and the caliber of the person affected. Stress is a central concept for understanding both life and evolution. All creatures face threats to homeostasis, which must be met with adaptive responses. Our future as individuals and as a species depends on our ability to adapt to potent stressors. At a societal level, we face a lack of institutional resources (e.g., inadequate health insurance), pestilence (e.g., HIV/AIDS), war, and international terrorism that has reached our shores. At an individual level, we live with the insecurities of our daily existence including job stress, marital stress, and unsafe schools and neighborhoods. These are not an entirely new condition as, in the last century alone, the world suffered from instances of mass starvation, genocide, revolutions, civil wars, major infectious disease epidemics, two world wars, and a pernicious cold war that threatened the world order. Although we have chosen not to focus on these global threats in this paper, they do provide the backdrop for our consideration of the relationship between stress Management during Sports.

A widely used definition of stressful situations is one in which the demands of the situation threaten to exceed the resources of the individual⁹. It is clear that all of us are exposed to stressful situations at the societal, community, and interpersonal level. How we meet these challenges will tell us about the health of our society and ourselves. Acute stress responses in young, healthy individuals may be adaptive and typically do not impose a health burden. Indeed, individuals who are optimistic and have good coping responses may benefit from such experiences and do well dealing with chronic stressors¹⁰. In contrast, if stressors are too strong and too persistent in individuals who are biologically vulnerable because of age, genetic, or constitutional factors, stressors may lead to disease. This is particularly the case if the person has few psychosocial resources and poor coping skills. In this chapter, we have documented associations between stressors and disease and have described how endocrine-immune interactions appear to mediate the relationship. We have also described how psychosocial

stressors influence mental health and how psychosocial treatments may ameliorate both mental and physical disorders. There is much we do not yet know about the relationship between stress and health, but scientific findings being made in the areas of cognitive-emotional psychology, molecular biology, neuroscience, clinical psychology, and medicine will undoubtedly lead to improved health outcomes¹¹. Stress' management in sports competition may be seen as the way or ways of handling of stress of the athletes during sports participation. Stress management in sports simply means how one Copes, controls and reduces the occurrence of the negative conflict of stress. It is clear that stress is part and parcel of all sports competitions, therefore different approaches should be sought in coping with this effect. It must be realized that coping with the stress of sports competition is more of cognitive functions that is mental and body control. This therefore needs constant practice and assessment to ensure that athletes are practicing the correct techniques that suit them best in coping with the stress of competition, which has been one of the major problems confronting our athletes in this country¹².

SOURCES OF STRESS

It is well known that first depressive episodes often develop following the occurrence of a major negative life event. Furthermore, there is evidence that stressful life events are causal for the onset of depression¹³. A study of 13,006 patients in Denmark, with first psychiatric admissions diagnosed with depression, found more recent divorces, unemployment, and suicides by relatives compared with age- and gender-matched controls¹⁴. The diagnosis of a major-medical illness often has been considered a severe life stressor and often is accompanied by high rates of depression. For example, a meta-analysis found that 24% of cancer patients are diagnosed with major depression¹⁵.

Scanlan (1978) reported that the two potential sources of stress were the intrapersonal factor of competitive trait anxiety and the situational variable of win-loss. The competitive trait anxiety (CTA) is a stable personality disposition that reflects the tendency, to perceive competitive situations as threatening to self-esteem. This competitive trait anxiety was a significant source of Pre-competition stress and that of Win-loss was the major cause of post competition stress. Fun as one of the intrapersonal factors of competitive situations was found to be associated with post-competition stress. It is said that fun and stress are inversely related, and that this relationship holds true for losing as well as winning players. The situational source of post-competition stress is defeat, with state anxiety levels even fluctuating with the degree of success or failure attained. In other words, the sources of competitive stress among others include the hopes of someone (athlete), what he or she hopes to get or achieve or win in the competition. The fear of failure, anger, frustration, dissatisfaction, anticipation of success, increase in task, behaviour, crowd demand, muscular tension, over confidence, over motivation, injury, discomfort, inability to cope with sensory information, temperature intolerance, that is inability to tolerate heat, cold, attitude and humility are sources of

stress. Others could be lack of sleep, poor nutrition, uncertainty, lack of realization, inability to estimate the actual performance response, break down of personal play or performance form¹⁶⁻¹⁹.

PSYCHOLOGICAL ASPECTS OF STRESS

The most widely studied stressors in children and adolescents are exposure to violence, abuse (sexual, physical, emotional, or neglect), and divorce/marital conflict. McMahon et al. also provide an excellent review of the psychological consequences of such stressors. Psychological effects of maltreatment/abuse include the dysregulation of affect, provocative behaviors, the avoidance of intimacy, and disturbances in attachment. Survivors of childhood sexual abuse have higher levels of both general distress and major psychological disturbances including personality disorders. Childhood abuse is also associated with negative views toward learning and poor school performance. Children of divorced parents have more reported antisocial behavior, anxiety, and depression than their peers. Adult offspring of divorced parents report more current life stress, family conflict, and lack of friend support compared with those whose parents did not divorce. Exposure to nonresponsive environments has also been described as a stressor leading to learned helplessness²⁰⁻²¹.

Studies have also addressed the psychological consequences of exposure to war and terrorism during childhood. A majority of children exposed to war experience significant psychological morbidity, including both post-traumatic stress disorders (PTSD) and depressive symptoms. For example, Nader et al. found that 70% of Kuwaiti children reported mild to severe PTSD symptoms after the Gulf War. Some effects are long lasting: found that 43% of Lebanese children continued to manifest post-traumatic stress symptoms 10 years after exposure to war-related trauma. Exposure to intense and chronic stressors during the developmental years has long-lasting neurobiological effects and puts one at increased risk for anxiety and mood disorders, aggressive dyscontrol problems, hypo-immune dysfunction, medical morbidity, structural changes in the CNS, and early death²².

CAUSES OF STRESS

Stress is caused by various factors - not all of which are work-related of course, (which incidentally doesn't reduce the employer's obligation to protect against the causes of stress at work). Causes of stress - known as stressors - are in two categories: external stressors and internal stressors.

External stressors- physical conditions such as heat or cold, stressful psychological environments such as working conditions and abusive relationships, eg., bullying.

Internal stressors- physical ailments such as infection or inflammation, or psychological problems such as worrying about something.

From the above, it is easy to see that work can be a source of both external and internal stressors.

Stressors are also described as either short-term (acute) or long-term (chronic):

- Short-term 'acute' stress is the reaction to immediate threat, also known as the fight or flight response. This is when the primitive part of the brain and certain chemicals within the brain cause a reaction to potentially harmful stressors or warnings (just as if preparing the body to run away or defend itself), such as noise, over-crowding, danger, bullying or harassment, or even an imagined or recalled threatening experience. When the threat subsides the body returns to normal, which is called the 'relaxation response'. (NB The relaxation response among people varies; i.e, people recover from acute stress at different rates.)
- Long-term 'chronic' stressors are those pressures which are ongoing and continuous, when the urge to fight or flight has been suppressed. Examples of chronic stressors include: ongoing pressurized work, ongoing relationship problems, isolation, and persistent financial worries²³⁻²⁵.

LEVEL OF STRESS IN COMPETITIVE SPORTS

To the sport and exercise psychologist, stress is neither an event (stressor), a physiological response, nor a stressor-response chain. All those concepts miss the key psychological component the individual and more specifically, the individual's perceptions and cognitions. Stress is what you think it is. Thought, or cognition, is the key element differentiating a psychological approach from some others.

The following illustration from work captures the key aspects of most psychological models:

Stressor → Perception and Appraisal of Threat → State Anxiety

First, there is the stressor (e.g., competition, heat, fatigue). Then come perceived threat, or the appraisal process. Without this perception ("I think I'm stressed") there is no stressor. This appraisal is neither automatic nor as simple as it appears, but this perceived threat is what elicits the stress response. State anxiety is the response Spielberger highlights and is the response studied most by sport and exercise psychologists.

In all human Endeavour and all activities, there must be certain degree of stress which stimulates an individual to action or actions. The level of stress in competitive sports include

- Low
- Moderate and
- high-excessive levels of stress

RELAXATION TECHNIQUES THAT ZAP STRESS FAST

As earlier explained, stress management in sports competition may be seen as the way or ways of handling stress among the athletes during sports participation. Stress management which involve coping with stress in

sports competition is more important than proposing for an elimination of stress. Rushall (1.985) in Eze (2002) listed some specific stress management methods or techniques which had aided excellent performance in sports competition as follows:

- (i) Positive thinking towards ones expected achievement.
- (ii) Mental practice of the skill .or pattern of play as a perception of self as a spectator and as a perception self as active participant
- (iii) Mental rehearsal the skill is mentally rehearsed over and before the actual physical performance.
- (iv) Imagery practice this involves going through the process of imagining its perfect form. There and blocking out any stress provoking thought.
- (v) Development self confidence before and during the competition and engaging in positive self statement.
- (vi) Eliminating inhibitory messages and statements.
- (vii) Developing the awareness of muscles this may be the kinaesthetic sense through practically going over a skill without actual performance.
- (viii) The coach or teacher should adhere to the use of cueing words for example- hit, jump, volley, kick harder, drive in anticipation for an action and calming down words like relax, cool it down and concentrate.
- (ix) Believing in oneself and one's ability is very effective in managing stress.
- (x) Meditation -this requires mental and body discipline and mental concentration.
- (xi) Relaxation -this assists the conservation of energy.
- (xii) Bio-feedback - this enhances self regulation. It is claimed that optimal self regulation is the key to successful sports performance as the individual is not struggling with his movement, no muscular tension; perfection is experienced through graceful movement which minimizes outlay of movement. The under lining process is to move the athlete from an external locus of control to an internal one.

Special attention should be given to the athletes with low level of stress because they easily show signs of fatigue. For concentration and blocking out stress provoking thought, the implication for coach or physical educator is to provide activities that should be interesting to them, he allows the athletes to choose games that they like to engage in before the actual competition²⁶⁻²⁹.

Meditate: A few minutes of practice per day can help ease anxiety. "Research suggests that daily meditation may alter the brain's neural pathways, making you more resilient to stress. It's simple. Sit up straight with both feet on the floor. Close your eyes. Focus your attention on reciting -- out loud or silently -- a positive mantra such as "I feel at peace" or "I love myself." Place one hand on your belly to sync the mantra with your breaths. Let any distracting thoughts float by like clouds.



Figure 1: Practice of yoga

Breathe Deeply: Take a 5-minute break and focus on your breathing. Sit up straight, eyes closed, with a hand on your belly. Slowly inhale through your nose, feeling the breath start in your abdomen and work its way to the top of your head. Reverse the process as you exhale through your mouth. "Deep breathing counters the

effects of stress by slowing the heart rate and lowering blood pressure," psychologist Judith Tutin, says. She's a certified life coach in Rome, GA.

Be Present: "Take 5 minutes and focus on only one behavior with awareness," Tutin says. Notice how the air feels on your face when you're walking and how

your feet feel hitting the ground. Enjoy the texture and taste of each bite of food. When you spend time in the moment and focus on your senses, you should feel less tense.

Reach Out: Your social network is one of your best tools for handling stress. Talk to others -- preferably face to face, or at least on the phone. Share what's going on. You can get a fresh perspective while keeping your connection strong.

Tune In to Your Body: Mentally scan your body to get a sense of how stress affects it each day. Lie on your back, or sit with your feet on the floor. Start at your toes and work your way up to your scalp, noticing how your body feels. "Simply be aware of places you feel tight or loose without trying to change anything," Tutin says. For 1 to 2 minutes, imagine each deep breath flowing to that body part. Repeat this process as you move your focus up your body, paying close attention to sensations you feel in each body part.

Decompress: Place a warm heat wrap around your neck and shoulders for 10 minutes. Close your eyes and relax your face, neck, upper chest, and back muscles. Remove the wrap, and use a tennis ball or foam roller to massage away tension.

Laugh Out Loud: A good belly laugh doesn't just lighten the load mentally. It lowers cortisol, your body's stress hormone, and boosts brain chemicals called endorphins, which help your mood. Lighten up by tuning in to your favorite sitcom or video, reading the comics, or chatting with someone who makes you smile.

Crank up the Tunes: Research shows that listening to soothing music can lower blood pressure, heart rate, and anxiety. "Create a playlist of songs or nature sounds (the ocean, a bubbling brook, birds chirping), and allow your mind to focus on the different melodies, instruments, or singers in the piece," Benninger says. You also can blow off steam by rocking out to more upbeat tunes or singing at the top of your lungs!

Get Moving: You don't have to run in order to get a runner's high. All forms of exercise, including yoga and

walking, can ease depression and anxiety by helping the brain release feel-good chemicals and by giving your body a chance to practice dealing with stress. You can go for a quick walk around the block, take the stairs up and down a few flights, or do some stretching exercises like head rolls and shoulder shrugs.

Be Grateful: Keep a gratitude journal or several (one by your bed, one in your purse, and one at work) to help you remember all the things that are good in your life. "Being grateful for your blessings cancels out negative thoughts and worries," says Joni Emmerling, a wellness coach in Greenville, NC³⁰⁻³¹.

CONCLUSION

Stress management in sports competition means how someone copes, controls and reduces the occurrence of the negative conflict of stress. The main sources of stress are the hopes of the athlete; what he hopes to achieve or win in the competition; the fear of failure, anger, frustration, injury, discomfort which he would like to avoid. Other stressful situation includes crowd's demand, muscular tension, over motivation and inability to cope with sensory information. The teacher/coach should increase the control of emotion in individual athlete and group situations. The Coach/Teacher should adhere to the use of cueing words, Participants should be grouped together for the purpose of reducing excessive level of stress and should concentrate and block out stress provoking thought. Special attention should be given to the athletes with low level of stress; imagery practice should be adhered to. Mental rehearsal should be observed by the athletes before the actual physical performance.

ACKNOWLEDGEMENT

The authors wish to thank the management of VNS Institute of physical Education & management Bhopal for supporting to this work. Author wish to wish to thanks colleagues in department of physical education & management for their co-operation in carrying out to complete this review.

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