



ISSN: 2456-0057

IJPNPE 2018; 3(1): 1284-1285

© 2018 IJPNPE

www.journalofsports.com

Received: 09-11-2017

Accepted: 11-12-2017

**Nithin Nazarudeen**

MPhil Scholar, Directorate of Sports, S.R.M Institute of Science and Technology, Chennai, Tamil Nadu, India

**Jayasingh Albert Chandrasekar**

Assistant Professor, Directorate of Sports, S.R.M Institute of Science and Technology, Chennai, Tamil Nadu, India

**Ahamed Faiz PA**

MPhil scholar SRM IST Chennai, Tamil Nadu, India

## Overtraining and burnout in athletes

**Nithin Nazarudeen, Dr. Jayasingh Albert Chandrasekar and Ahamed Faiz PA**

### Abstract

The paper will lead to provide an in-depth account of athletes experiences of, and experts' perspectives on, overtraining and its negative outcomes. I referred interviews with athletes and sports experts, including coaches, sport doctors, scientists, and psychologists across a variety of sports. The interviews were focussed on identifying personal and situational risk factors for overtraining behaviours and outcomes. When an athlete pushes the body beyond limits for a specific period of time, it will adapt to the situation—and fitness improves. This is known as functional overreaching. When an athlete overreaches for too long without sufficient rest, adaptation can stall and damage can occur. At this point, the longer an athlete continues to push beyond limits, the worse the damage and the longer it will take to recover. Beyond this, definitions of the various degrees of overtraining shift from study to study. Many experts consider overtraining a continuum while others question the link between overreaching and overtraining (Halsom & Jeukendrup, 2004). In reviewing a wide range of literature, it appears the most widely accepted theory is best explained by the European College of Sports Medicine, who break the process down into two stages (Kreher & Schwartz, 2012). Non-functional Overreaching (NFO) is the first stage. This level of training overload that can be recovered from in weeks to months. Complete recovery is possible. Overtraining Syndrome (OTS) – if NFO is ignored, it can evolve into OTS, which entails worse symptoms and performance decrement in excess of 2 months. This can take months or years to recover from—if recovery is achieved at all.

**Keywords:** overtraining, burnout in athletes, overtraining, negative outcomes

### Introduction

In our society, highly-driven young athletes often struggle with overtraining syndrome. Young players are surrounded by pressure to perform in sports so it is easy to see how a young athlete could push themselves too hard in training in their quest for greatness. When asked the question what they aspire to be when they grow up, a large number of young athletes respond that they dream of being an Olympic or professional player. While this is a worthwhile and lofty positive goal, there can occasionally be a downside. Many young athletes will take training and competing too far.

### Burnout or overtraining

Burnout or overtraining syndrome occurs when an athlete has worsening performance despite intense training. It is believed to result from a multitude of factors, such as constant high levels of physiologic or emotional stress, fatigue, immune system failure, or insufficient recovery time.

### Symptoms of overtraining syndrome

1. Decreased sports performance
2. Chronic muscle or joint pain
3. Mood changes
4. Elevated resting heart rate
5. Fatigue
6. Lack of enthusiasm or ambition
7. Difficulty completing usual routines
8. Sleep disorders (more or less sleep than usual)
9. Decreased appetite and/or weight loss

### Correspondence

**Nithin Nazarudeen**

MPhil scholar, Directorate of Sports, S.R.M Institute of Science and Technology, Chennai, Tamil Nadu, India

- 10. Increased injuries, illness, or infections
- 11. Playing one sport, but competing on multiple teams at once
- 12. Year-round participation without an “off season”
- 13. “Type A” personality including ambitious, determined,

- driven, intense
- 14. Low self-esteem and high anxiety levels
- 15. Parental or coaching pressure to train and compete at a higher level



**Stages of overtraining**

**Stage 1: Functional Overtraining**

The first stage of overtraining is not usually accompanied by classical problems but by very subtle or subclinical ones. This may include a seemingly minor plateau or slight regression in training performance most easily observed when measuring heart rate vs. pace (the MAF Test). Interestingly, this stage is sometimes accompanied by a sudden or dramatic improvement in competitive performance that may convince the athlete that training is progressing well. This temporary improvement may be due to an abnormal overactive sympathetic nervous system. (This may be followed by a physical injury, marking the start of the second stage of overtraining.)

**Stage 2: Sympathetic Overtraining**

As overtraining progresses, the imbalances described above worsen. Specifically, the sympathetic part of the nervous system becomes overactive. This results in the classic sign of an increased resting heart rate. Many athletes become aware of this if they regularly measure their morning heart rate, or train with a monitor. Often associated with this is restlessness and over-excitability.

**Stage 3: Parasympathetic Overtraining**

Chronic overtraining can lead to more serious hormonal, neurological and mechanical imbalances, worsening aerobic function, athletic performance and other factors that impact overall health.

Eventually, the sympathetic nervous system becomes exhausted, and most if not all hormone levels are significantly reduced, including cortisol.

**Methods used for reducing burnout in athletes**

- Break the year, month and week into training and resting periods.

- Cross-training; focus on conditioning, weight lifting, strength training, flexibility, or core strengthening varying the type of training to include exercise like yoga, pilates and swimming.
- Schedule in strict periods of rest to ensure full rehabilitation from injury.
- Plan for slow progression and avoid rapid increase in workload or intensity.
- Concentrate on themes such as fun, sportsmanship, fitness, skill acquisition, safety, or education.
- Be sure to check in with the athlete frequently. Ask about sport motivation. Is it still fun?
- Focus on appropriate nutrition, hydration, and sleep.

**References**

1. Overtraining and glycogen depletion hypothesis. Snyder AC *et al.* Med Sci Sports Exerc, 1998.
2. Training of rowers before world championships. Steinacker JM *et al.* Med Sci Sports Exerc, 1998.
3. Overtraining and the BCAA hypothesis. Gastmann UA, *et al.* Med Sci Sports Exerc, 1998.
4. Maximizing performance and the prevention of injuries in competitive athletes. Scott WA *et al.* Curr Sports Med Rep, 2002.