

# 1) Overtraining causes and prevention



Source: [www.mysportscience.com](http://www.mysportscience.com), author: Asker Jeukendrup

## 2) The overtraining continuum

### Overtraining continuum

Difference between overreaching and overtraining is the amount of time needed for performance restoration (not the type or duration of training stress or degree of impairment).



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Halson & Jeukendrup Sports Med. 2004;34(14):967-81  
Meeusen et al MSSE 2013 45(1):186-205

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## 3) The overtraining symptoms

### Performance

Decreased performance

Without a drop in performance there is no overreaching/overtraining

### Fatigue

Fatigue  
Chronic muscle soreness  
Early onset of fatigue  
Decreased aerobic capacity  
Inability to complete workouts  
Delayed recovery  
Decreased muscular strength

### Physiology

Increased resting heart rate  
Increased sleeping heart rate  
Changes in heart rate variability  
Heart palpitations  
Increased submaximal heart rate

### Immune function

Frequent upper respiratory tract infections  
Frequent colds  
Long recovery periods

### Mood

Mood Disturbance  
Irritability  
Irritability  
Loss of motivation  
Loss of enthusiasm  
Loss of competitive drive  
Depression



### Blood

Lower testosterone levels  
Higher cortisol levels  
Lower maximal lactate  
Lower submaximal lactate  
Chronically high creatine kinase

### Sleep

Insomnia  
Disturbed sleep

### Gastro-intestinal

Excessive weight loss  
Loss of appetite  
Absence of menstruation  
Constipation or diarrhea

This list of symptoms is not exhaustive

## 4) 4 Steps to Turn off Stress and Accelerate Your Recovery



Source: 4 Steps to Turn off Stress and Accelerate Your Recovery, author: Joel Jamieson, link to full article: [here](#)