

UNIVERSITY SPORTS MEDICINE

Overtraining

Many athletes train hard in order to succeed at their chosen sport. They log many miles, spend many hours at the gym, and work hard day after day. They are driven to achieve their athletic goals. However, too much training can actually lead to a decline in performance. This decline is due to a condition called *overtraining*.

What is overtraining?

There are two types of overtraining: overreaching and overtraining (staleness).

- Overreaching is the first phase of overtraining and may be reversed more easily. Overreaching is unusual muscle soreness that occurs when an athlete does not allow for a sufficient amount of recovery time between hard workouts. This usually occurs after several consecutive days of hard training.
- Overtraining or staleness occurs when an athlete ignores the signs of overreaching and continues to train. Many athletes believe that weakness or poor performance signals the need for even harder training. So they continue to push themselves. This only breaks down the body further. It is very difficult to recover from overtraining and can require weeks or months of time *off*. This can be challenging for someone whose life revolves around training and competing. It is important to identify overreaching early.

Athletes are more susceptible to breakdown and overtraining if there are other stressors present in their lives: work, school, relationships, etc. An athlete should use “down time” from training to work on evaluating and balancing these other important aspects of life.

What are the major warning signs and symptoms of overtraining?

Training related

- Unusual muscle soreness after a workout, which persists with continued training
- Inability to train or compete at a previously manageable level
- “Heavy” leg muscles, even at light exercise intensities
- Delay in recovery from training
- Performance plateaus or even declines
- Thoughts of quitting or skipping training sessions



Lifestyle-related

- Prolonged general fatigue
- Inability to relax or poor quality sleep
- Things once enjoyable are no longer
- Increase in tension, depression, anger or confusion
- No energy, decreased motivation, moodiness

Health-related

- Increased occurrence of sickness
- Constipation, diarrhea
- Irregular menstrual cycle or loss of menstrual periods
- Increased blood pressure and morning pulse
- Weight loss, appetite loss

Once overtraining has been diagnosed, what can be done?

Once you recognize the signs and symptoms of overtraining, talk with your coach, athletic trainer, and doctor. Working as a team, these sports medicine professionals can give you some guidelines for recovery. Their guidelines will probably include the following:



Rest

You may be instructed to temporarily STOP or reduce your training. You may also be asked to forego an upcoming competition. These are some of the most important steps to recovery.

Nutrition

- Examine your eating habits. Have you been depriving your body of the calories, protein, vitamins and minerals it needs for high quality and high-intensity training?
- Work with a dietitian to provide your body with the energy and nutrients that it needs for healing.

Gradually resume training:

- Your doctor and coach will help you determine when your body is ready to begin training again. Your signal to resume full training is renewed interest and the ability to train hard with normal responses.
- Start low and go slow! Your training volume may be reduced by 50-60%. Increase about 10% each week.

Even though it may be difficult, you must use the same discipline developed during training to comply with the recommendations of your sports medicine team. The more closely you follow their guidelines, the sooner you'll be back in the gym, at the track, or on the field.

How can overtraining be prevented?

Exercise

- Listen to your body. Work closely with your coach and let him or her know how you're feeling.
- Keep a training log which records your feelings of well-being as well as the amount of exercise.
- Balance your training with recovery time for optimal performance. Adequate rest is *not* a sign of weakness. Give yourself at least one complete rest day each week. Alternate hard and easy training days for a specific activity. Utilize cross-training or other forms of "active rest". Gradually increase your training load.
- If you find yourself becoming obsessed with training, exercising when injured or in pain, or feeling guilty if you go a day without vigorous exercise, talk with someone about these feelings.

Nutrition

- Inadequate carbohydrate and protein intake can lead to decreased muscle glycogen stores, muscle fatigue and poor muscle repair. Work with a dietitian to evaluate your food habits and make sure you're getting enough of these important nutrients. Most athletes need at least 55% of their calories from carbohydrates. They also need 6 to 12 ounces of high quality protein every day (depending on activity level and weight).
- Make sure your calorie intake matches your body's need for energy (for both training and muscle repair).
- Avoid nutrient deficiencies which can make you more prone to infections.
- Dehydration contributes to muscle fatigue. Drink a *minimum* of 8 glasses of non-alcoholic, non-caffeinated beverages daily. Your urine should be plentiful and light in color.

Stress Reduction

- Remember that everyone has a different ability to cope with stress. When the stress in your life exceeds your personal ability to cope with it, your body will begin to break down.
- Seek help from a mental health professional to work through important emotional issues related to your training, job, family, social life, body image, finances, travel and time.
- Rearrange your priorities to reduce the effects of non-training-related stressors.

Adapted from information developed by the Woman's Sports Medicine Center, Hospital for Special Surgery, New York. 2003, University of Colorado Hospital, Denver