



Tips to Avoid Overuse Injuries and Burnout

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Let's face it. Sports in general are becoming more competitive. Staying on top of your game requires increasing dedication to time spent in training and conditioning. An emphasis on competitive success has become widespread, resulting in increased pressure to begin high-intensity training at young ages. A sense that "more is better" has permeated youth sports culture. However, with increased time and intensity of training also comes the risk of burnout and injury due to overuse.

Overuse Injuries

Overuse injuries generally occur due to repetitive submaximal loading of the musculoskeletal system – when rest is not adequate to allow for structural adaptation to occur. Such injury may involve muscles, tendons, bones, joint cartilage or growth plates. When recovery between loading exposures is sufficient, tissue adaptation occurs to accommodate the imposed stress. However, excessive stress and/or an inadequate recovery period can overwhelm the ability of tissue to remodel, resulting in a weakened, damaged structure. Most overuse injuries will resolve with a period of rest and cause no long-term sequelae, but some may lead to lasting issues, causing difficulty with return to play.

Some risk factors for overuse injuries include:

1. History of prior injury – prior injury is a strong predictor of future overuse injury
2. Adolescent growth spurt – overuse injuries appear to be more common during periods of rapid growth
3. Workload – while it is very difficult to define specific workload thresholds, one study showed that training more than 16 hours per week was associated with a significantly increased risk of injury
4. Scheduling – such as multiple competitive events in a short period of time
(As a side note, the structure of the USSF Development Academy takes this into consideration with the appropriate game-to-training ratio to ensure players are getting adequate rest.)

Although specific risk factors exist, in reality most overuse injuries result from a complex interaction of multiple risk factors in specific settings coupled with an inciting event.

Burnout

Burnout is another risk of overtraining. It can be viewed as a training stress syndrome and results from too much training with too little recovery. Burnout can start with what is known as "staleness," in which an athlete has a clear drop in motivation and a plateau in performance. Progressing beyond staleness, true burnout can develop, which has been defined as a response to chronic stress, in which a young athlete ceases to participate in a previously enjoyable activity. The young athlete may withdraw from the sport because they perceive it is not possible to meet the physical and psychological demands of the sport.

A few warning signs of burnout are:

- Changes in emotions (e.g., irritability, moodiness, disinterest), cognitive functioning (e.g., difficulties concentrating)
- Decreases in strength and coordination
- Physiological changes (e.g., appetite loss, increased resting heart rate)
- Greater susceptibility to illness.



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Particular elements thought to contribute to burnout include:

- Extremely high training volumes and demands
- Demanding performance expectations (imposed by self or others)
- Personal characteristics such as perfectionism, need to please others and non-assertiveness.

Recommendations to minimize the risk of overuse injury/burnout include:

1. First of all, be aware of the risk of overtraining and the potential for burnout in today's competitive sports environment. Be especially mindful during the adolescent growth spurt.
2. Do not play on more than one team at the same time.
3. Limit training time to less than 16 hours per week.
4. Vary training regimen and cross-train so as to provide varying stresses to your body.
5. Get adequate sleep and hydration (ages 6-13 should get 9-11 hrs./night; ages 14-17 should get 8-10 hrs./night)
6. Look for enjoyable activities other than sports for a mental diversion from the stresses of sports.
7. Practice stress reduction techniques such as meditation, visualization and breathing techniques. Many apps are currently available to assist with this.

While the level of competition in today's sport, especially at the elite club level is high, it is key to balance the inherent training demands with time for rest and recovery. It is important to maintain a lifelong love for the "beautiful game" and stay healthy to be able to continue to play it as long as you would like. More is better continues to be emphasized in the world of sport, but the reality is that sometimes, less is more.

References:

"Overuse Injuries and Burnout in Youth Sports: A Position Statement from the American Medical Society for Sports Medicine." – published in Clin J Sport Med (Jan 2014)

"Sociodemographic predictors of sports injuries in adolescents." – published in Med Sci Sports Exerc (2008)

NCAA Website - <http://www.ncaa.org/health-and-safety/sport-science-institute/understanding-student-athlete-burnout>

National Sleep Foundation Website - <https://sleepfoundation.org/media-center/press-release/national-sleep-foundation-recommends-new-sleep-times>