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Sport Injury and Rehabilitation

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Overuse injuries and overtraining among child and adolescent athletes are a growing problem. An overuse injury is micro-traumatic damage to a bone, muscle or tendon that has been subjected to repetitive stress without sufficient time to heal or undergo the natural reparative process.

Overuse injuries can be classified into 4 stages:

1. Pain in the affected area after activity
2. Pain during the activity
3. Pain during that activity that restricts performance
4. Chronic, unremitting pain even at rest.

Research has shown that the incidence of overuse injuries in young athletes has risen with participation rates amongst North America. Up to 50% of all injuries related to youth sport stem from overuse.

The risks of overuse injuries in children or adolescent athletes are high for several reasons but mainly because the growing bones of young athletes simply cannot handle as much stress as the mature bones of adults. For example, a young soccer player who has poor running mechanics is more at risk for injuries within the lower body or a young baseball pitcher who has not learned the proper throwing technique is at risk for elbow and shoulder injuries.

So What?



Q: How much is too much?

A: There are no scientific guidelines that define how much exercise is beneficial compared with what might be harmful. However, injuries tend to be more common during peak growth velocity, and are more likely to occur if underlying biomechanical problems are present. Sport-specific drills that use a variety of exercises similar to the sport, such as water running for a soccer player, may provide similar fitness but less stress on the body.



Q: What should I do if I'm injured?

A: First and foremost, the athlete should rest. Continued participation will increase tissue damage at the site of injury. Athletes should ice the area for 12-20 minutes and remove the ice for the remainder of the hour. The body part should be elevated during icing to prevent blood pooling. Compression is important to reduce and control swelling and will provide some pain relief. The acronym "RICE" is a good way to remember rest, icing, compression, and elevation. If necessary, the athlete should see a physiotherapist.



Q: Am I at risk for anything in particular?

A: Female soccer players are especially susceptible to knee injuries. Anterior Cruciate Ligament (ACL) injuries are the most common in this group. Females are 4x more likely to tear their ACL. This injury may occur from the knee twisting when the kicking foot is planted, a blow to the side of the knee, or over extension of the knee. A ligament can be partially or completely torn. In either case ACL rehabilitation is a lengthy process and proper care will increase the chances of a smooth recovery.



Q: I'm already going to Physiotherapy. Is there anything else I can do?

A: Psychological factors play a significant role in the sport injury rehabilitation process. Confidence, anxiety, motivation and focus have proven to be very influential and all build off of each other. For example, low confidence can lead to decreased motivation, increased anxiety and diminishing focus. It is important to monitor all areas to ensure proper rehabilitation. Although research in this field is young, studies have shown that psychological factors regarding sport injury rehabilitation is relevant and can increase the speed of returning to play and decrease further risk of injury.