

Overuse Injury in Young Athletes: Prevention and Response



There are mainly two types of injuries: acute injuries and overuse injuries.

- **Acute injuries** usually occur in a single, painful event, such as:
 - o ankle sprain
 - o hamstring muscle strain
 - o shoulder dislocation
 - o wrist fracture
- **Overuse injuries** are the result of repetitive smaller injuries to the tendons, bones, and joints, such as:
 - o Achilles tendinitis
 - o jumper's knee
 - o runner's knee
 - o shin splints
 - o youth pitching elbow
- Overuse injuries are more common in sports but generally occur over time, making detection of such injuries more difficult.
- Rapid acceleration of the intensity, length, or frequency of physical activity is usually the cause of overuse injuries.

Prevention

- **Warm up:** Proper technique is critical in avoiding overuse injuries.
 - o Approximately 10 minutes of jogging (or any light activity) before play will increase circulation to cold muscles, making them more flexible and less prone to strain or tear.
 - o Studies show an active warm-up is tied to better athletic performance than a warm-up consisting only of stretching.
- **Stretching:** Regular stretching can improve muscle flexibility and reduce the risk of an injury.
 - o Stretch before and after play, including all major muscle groups, holding each stretch for 20 to 30 seconds.
 - o Make sure the athlete does not bounce while stretching.

• Respond quickly and responsibly to signs of injury

- o Pain is a sign of injury, stress, or overuse.
- o If pain does not go away after a day or two of rest, consult your child's doctor.
- o The sooner an injury is recognized, the sooner proper treatment can begin (which can mean a shorter recovery time and faster return to sport).

• Rest: Allow a proper amount of time for rest and recovery with both games and practice.

- o A child should have at least one to two days off from play each week.
- o An "off-season" is important too—a minimum of 10 weeks of rest from any given sports each year.

• Encourage participation in a variety of sporting activities

- o This helps balance muscle development, prevent burnout in the child, and decrease the risk for an overuse injury.

• Begin any new activity or sport slowly

- o Having the child participate in a pre-season conditioning program is a good approach.
- o Increase distance or duration gradually— no more than 10% per week.

• Use the recommended protective equipment

- o Make sure the child wears his safety equipment consistently, especially sports that require a helmet.
- o Be sure sports equipment fits properly and is in good condition.

At Increased Risk

- Children and teens are at increased risk for overuse injuries because growing bones are less resistant to stress.
- Young athletes may be unaware of the symptoms of an overuse injury, making it difficult to notice and make necessary changes.

- Some kids are more at risk for overuse injuries than others; differences between strength and flexibility around certain joints, body alignment and previous injuries can put a child at risk for an overuse injury.
- The playing surface and type of sports equipment used may also lead to an overuse injury.

Response: When an Overuse Injury Strikes

A complete physical history and exam by a sports medicine specialist is necessary for diagnosis. Here are some additional practical steps for treating, or reducing the severity of, an overuse injury:

- Perform proper warm-up routines before and after play
- Learn about sport-specific proper training and techniques
- Reduce the intensity, length, and frequency of practices/competition
- Adopt a hard/easy workout schedule and cross-train with other sports or activities to keep up physical fitness
- Use ice for any general aches and pains
- Use anti-inflammatory medications (consult health care professional)

Special Considerations

- A child should return to play only when clearance is given by a health care professional.
- To learn more about overuse injuries related to a specific sport, visit the American Orthopaedic Society for Sports Medicine at www.STOPSportsinjuries.org
- To learn more about knee injury prevention through Santa Monica Orthopaedic Group's PEP Program (Prevent Injury and Enhance Performance), go to www.smogknee.com/pepprogram.html