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

- **Acute injuries** usually occur in a single, painful event, such as:
  - ankle sprain
  - hamstring muscle strain
  - shoulder dislocation
  - wrist fracture

- **Overuse injuries** are the result of repetitive smaller injuries to the tendons, bones, and joints, such as:
  - Achilles tendinitis
  - jumper's knee
  - runner's knee
  - shin splints
  - 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.
  - 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.
  - 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.
  - Stretch before and after play, including all major muscle groups, holding each stretch for 20 to 30 seconds.
  - Make sure the athlete does not bounce while stretching.

- **Respond quickly and responsibly to signs of injury**
  - Pain is a sign of injury, stress, or overuse.
  - If pain does not go away after a day or two of rest, consult your child's doctor.
  - 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.
  - A child should have at least one to two days off from play each week.
  - 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**
  - 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**
  - Having the child participate in a pre-season conditioning program is a good approach.
  - Increase distance or duration gradually—no more than 10% per week.

- **Use the recommended protective equipment**
  - Make sure the child wears his safety equipment consistently, especially sports that require a helmet.
  - 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