



What are overuse injuries?

Overuse injuries occur when athletes play or practice too much. Repeating moves again and again during practice or playing game after game can make muscles, ligaments, tendons and bones susceptible to strains, sprains and fatigue. When athletes don't take enough time off to rest and heal, these minor problems can develop into chronic injuries. Examples of overuse injuries include elbow soreness when a baseball pitcher throws too many overhand pitches, hip pain when a rower trains too often and wrist sprains when a gymnast works to perfect specific moves through repeated practice.

Overuse injuries are of particular concern for young athletes. According to the STOP Sports Injuries organization, about 50 percent of the sports injuries affecting middle school and high school athletes each year are overuse injuries. The organization also reports that the rate of overuse injuries is increasing, while the average age of children afflicted with overuse injuries is going down.

Fortunately, there are steps athletes can take to reduce the risk of overuse injuries: focus on overall fitness, take time to recover between games and practices and stop playing when tired or in pain.

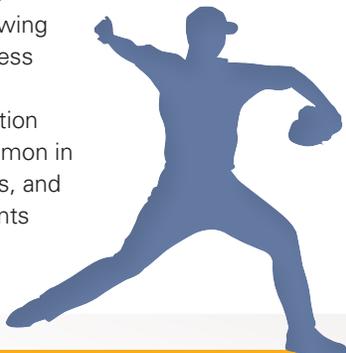


Player Safety

Common overuse injuries

Shoulders are susceptible to overuse injuries in sports like swimming, baseball, softball, tennis and volleyball. In these activities, too much strain in one direction can be put on the shoulder, rotator cuff (muscles and tendons that stabilize the shoulder) and upper back, resulting in shoulder aches and pains.

Elbows can sustain overuse injuries when repeated throwing or swinging motions put stress on ligaments, muscles and tendons. Pain and inflammation affecting the elbow are common in baseball, softball, golf, tennis, and track and field throwing events (javelin, discus, shot put).



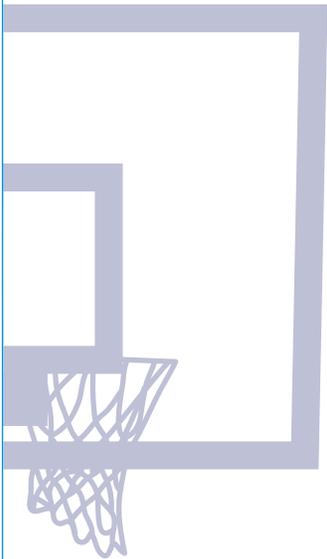
Stress fractures affecting the shin bones and bones in the feet are common among distance runners and athletes who run or jump regularly on hard surfaces like artificial turf. They can also occur in the lower back of dancers and gymnasts.



Patellar tendinitis is marked by aching pain below the knee. It occurs when the patellar tendon, which provides strength to the knee, becomes inflamed from too much jumping and landing.

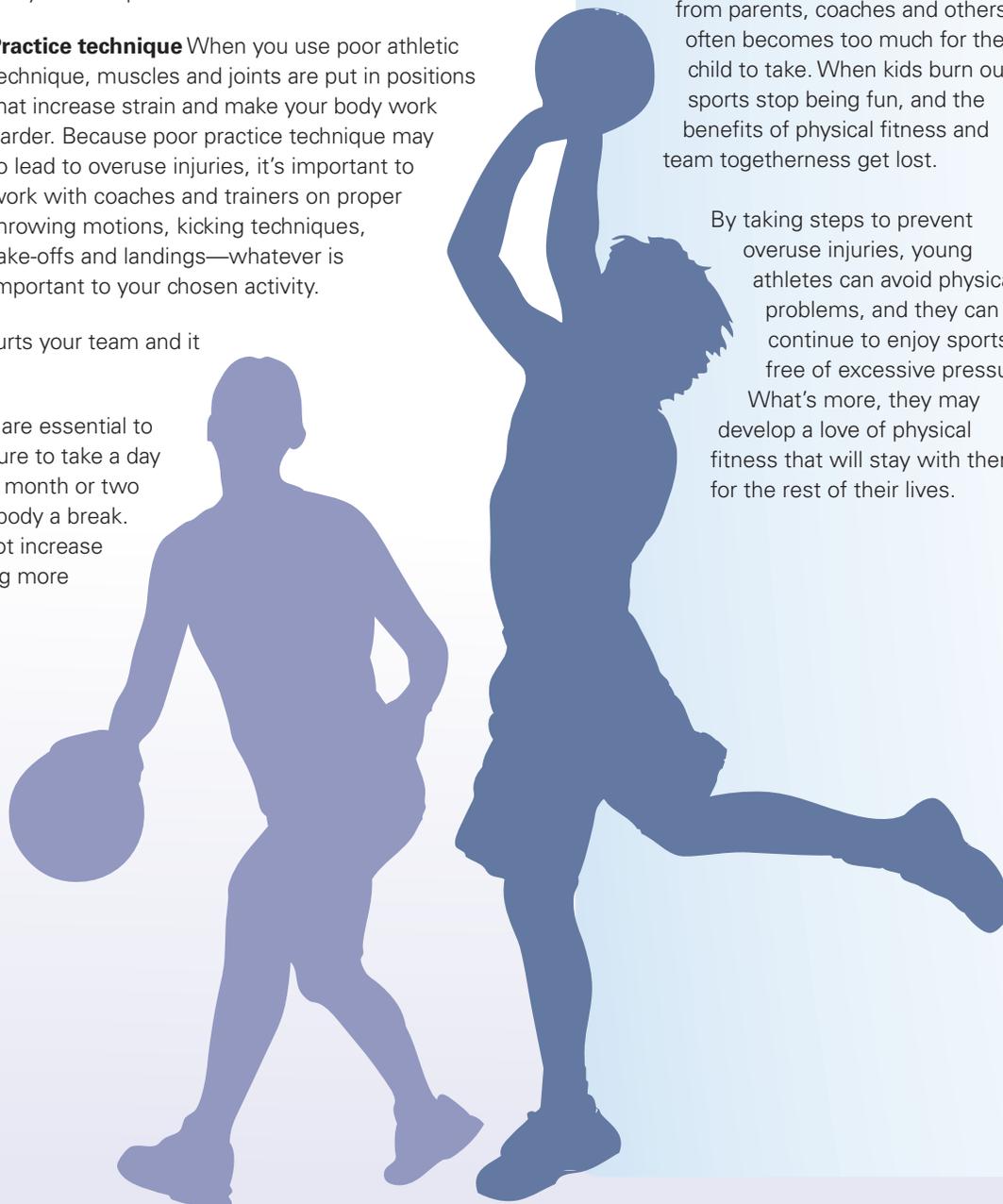
Achilles tendinitis, which is marked by pain and inflammation to the Achilles tendon in the upper ankle, affects many athletes who jump often, such as basketball and volleyball players.

How can you prevent overuse injuries?



- **Be strong** It's important to train for your individual sport, but it's better to get in shape and stay in shape, especially if you're a young athlete who is still developing physically. Working the same muscles over and over can lead to overuse injuries, while working a range of muscles throughout your body will reduce the risk. Try different sports ("cross-train") throughout the year to improve overall fitness.
- **Practice technique** When you use poor athletic technique, muscles and joints are put in positions that increase strain and make your body work harder. Because poor practice technique may lead to overuse injuries, it's important to work with coaches and trainers on proper throwing motions, kicking techniques, take-offs and landings—whatever is important to your chosen activity.

- **If it hurts, stop** Playing in pain hurts your team and it hurts yourself. Don't be a hero.
- **Take time off** Rest and recovery are essential to preventing overuse injuries. Be sure to take a day or two off each week, and take a month or two off between seasons. Give your body a break. Follow the 10 percent rule: Do not increase the amount or intensity of training more than 10 percent per week.

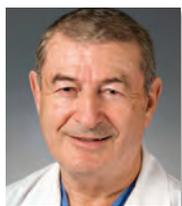


Beware of Burnout

Did you know that about 70 percent of young athletes give up on youth sports by age 13?

Young athletes may experience emotional problems by practicing too much, playing the same sport all the time or pushing themselves to be perfect. Pressure from parents, coaches and others often becomes too much for the child to take. When kids burn out, sports stop being fun, and the benefits of physical fitness and team togetherness get lost.

By taking steps to prevent overuse injuries, young athletes can avoid physical problems, and they can continue to enjoy sports, free of excessive pressure. What's more, they may develop a love of physical fitness that will stay with them for the rest of their lives.



**Reviewed by Lyle Micheli, MD, Director, Sports Medicine Division
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This piece is part of an informational series on sports injury prevention produced by the Orthopedic Center/Sports Medicine Division at Boston Children's Hospital. For materials on preventing injuries in other sports, call 617-355-3501 or visit bostonchildrens.org/sportsmed.



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