



# Sports medicine

Injury prevention in sports

## Stay in the game with injury prevention

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While a lot of talk goes into treatment and recovery from injuries, an overlooked part of sports medicine is injury prevention. There has been a significant amount of research looking at ways to prevent

injuries; however, the results have not always given us clear-cut ways to prevent injury. Take stretching, for example. There have been a lot of scientific studies looking at the benefits or lack of benefits from stretching. Out of all these studies there has been no clear consensus as to whether stretching prevents injuries or even when you should stretch during a workout or game. The recommendations are usually that you stretch after you warm up, but after that there is no real data supporting stretching prior to exercise.

What we do know is that the most common injuries are of the lower extremity, involving the ankle and the knee. These are typically soft-tissue injuries such as joint sprains, ligament injuries and cartilage damage. These injuries are especially common in sports like soccer, basketball and football. There has been a significant amount of research into injury prevention in general, but there are few solid recommendations that have come out of this research.

## Balance training for injury prevention

One point on which the research agrees: proprioception training reduces the chances of injury. Proprioception is the sense of one's body position and the amount of effort and movement. Our body has small specialized nerve receptors that provide feedback to the brain allowing it to help control and balance our body during activity. By performing certain repeatable jumping and balancing exercises on a regular basis our body can become conditioned to improve our proprioception over time. Research has shown that these specific exercise programs have been shown to decrease knee

and ankle injuries specifically. The most commonly cited and discussed type of proprioception training is involved in the prevention of anterior cruciate ligament (ACL) injuries. These ACL prevention programs have been validated and work at preventing ACL injuries in the athletic population. While there is not a lot of data to suggest that proprioception therapy helps prevent ankle injuries, there is very good scientific data that shows once an ankle is injured; proprioception therapy can decrease the risk of re-injury.

## Staying safe from overuse injury

Other ways to prevent injury in youth and adolescent athletes are to avoid overuse injuries. Common overuse injuries, such as growth-plate problems and stress fractures, can be seen with children who are on multiple teams or who have recently increased their participation level significantly (e.g., from a recreation league to a travel team). These injuries may be seen with a minor trauma, but are more commonly caused by overuse in children ages 8 to 13. Stress fractures are also a result of overuse. They will usually affect the lower extremity in an older population, ages 12 to 16. These bone injuries can take a significant amount of time to heal and will usually result in the loss of a season.

## Treating overuse injuries

The best treatment is to prevent these overuse injuries by slowly increasing strenuous athletic activity and making sure to give yourself an off season for recovery. When something starts to hurt, a short period of rest early on may prevent a longer period of downtime if the condition is allowed to get worse.

Contact one of our sports medicine experts at **855-MD-SPORT** to conduct a full evaluation if a sports-related injury occurs.