

Soccer Injury Prevention

Ease into soccer play, prevent sports injuries

Preparation for spring and summer activity is heating up. Baseball to soccer, organized sports to recreational activities, young, euphoric Minnesotans are cleaning the cleats and oiling gloves as they ready for a sunny season of sporting fun.

Unfortunately for some, it won't be easy to overlook a byproduct of this seasonal euphoria affecting millions of children and youth annually: sports injury. For the one in 10 athlete aged 5-17 who will be injured this year, it'll likely be a season to forget.

Injuries among young athletes are on the rise, according to the National Youth Sports Foundation; it attributes 40 percent of all childhood injuries to sports or recreation. Growing sports participation is cited as a factor.

Many injuries are preventable, says Jim Rakow, ATC/R, a certified athletic trainer and sports conditioning specialist at the Minneapolis Sports Medicine Center, a sports medicine provider. Rakow, who has worked with athletes across the Twin Cities metro area says: "Adult supervision, pre-season conditioning, an understanding of growth plate risk factors and fitted equipment can reduce injury."

Slow down, ease in to play

The good news is that most soccer injuries can be prevented. Research shows that proper pre-season and in-season sport-specific training can help to improve performance and reduce, even eliminate, the number of soccer-related injuries by as much as 25 percent. Proper conditioning can also help to diminish the impact of an injury and help return athletes to the game more quickly.

Parents and coaches play a role in preventing soccer injury. "Everyone is eager to get outside and be active, often leading to injuries that are a result of too much, too soon," Rakow says. Many youth don't understand the concept of training for sports, or transitioning from winter to spring and summer activities. In addition to pre-season conditioning, adults can help children take a deep breath and move into seasonal activity progressively.

Symptoms of "too much, too soon" often surface early in the season, and include ankle, shin and knee pain. Proper warm up and cool down, stretching, rest, ice and practices 60 minutes in length are remedies for these early complaints, says Rakow. "Pain lasting more than two weeks warrants a visit to a doctor."

Pre-season Soccer Conditioning

A progressive, pre-season conditioning program should include a soccer-specific full-body warm-up, leg and core strengthening, agility and balance drills, plyometric jump training and stretching. Pre-season, coaches are encouraged to spend more practice time laying the foundation for in-season play by building leg and core strength and agility skills, helping young bodies to acclimate to soccer-specific motion after a lengthy off-season.

Leg strengthening: Research shows that strength training can reduce soccer-related injuries by as much as 50 percent. Not only that, strength-training can help improve coordination and confidence, contributing to improved performance on the field. Partner "wall sits," lunges to the front and side, bridges and heel raises are examples of soccer-specific strengthening exercises.

continued



Partner Wall Sit

This exercise helps to strengthen the front and back of the thighs and the buttock muscles, all necessary for stability and power. This is a great exercise to start pre-season.



Single Leg Balance

Standing on a level surface, raise one leg off of the ground and hold for 30 seconds. Repeat with the other leg. Coaches can introduce players to this exercise pre-season and add a simulated header or kicking motion later in pre-season.

Core strengthening: A strong core translates into more efficient movement, better power, balance, strength and endurance, all important to developing soccer skills and performance. Examples of core exercises include abdominals crunches to the center and side that strengthen the abdominal muscles on the front and sides of the body. Opposite arm and leg lifts while lying on the stomach help build low-back strength.

Plyometric jump training: A combination of speed and strength leads to power, an integral component to soccer. Jumping, bounding and hopping can be improved using plyometrics, a training method that uses explosive muscle contractions to simulate those needed on the field. Pre-season plyometrics include tap and tuck jumps, which prepare players for full body jumps during a game.

Growth plate injuries unique to young athletes

Young athletes are not skeletally mature and are susceptible to growth plate injuries. Repetitive motion and vigorous activity can stress growth plates located near the ends of leg and arm bones, disrupting growth cartilage necessary to skeletal formation. Marked by knee pain that worsens over time, Osgood-Schlatter disease can occur in teens and children during growth spurts, explains Rakow.

Water, water, water

Heat-related injuries respond well to water and common sense. This is the case in both spring and summertime activities. According to Rakow, "Most kids are chronically dehydrated. Worse, they opt for pop when thirsty, which can further dehydrate." Young athletes don't sweat as efficiently adults; young bodies absorb more heat, raising core body temperature before breaking a sweat. Heat and dehydration can lead to heat exhaustion and heat stroke.

Water, sports drink and juice breaks during competitive and recreational soccer games as well as practices are a must. Eight ounces every 20 minutes is standard, says Rakow, and more following games. Attention to heat and humidity, to include wearing light, breathable clothing, is critical. "Sideline misting sprays are helpful in keeping kids cool during warm-weather play," he adds.

One size does not fit all

Shoes, mouth and eyewear must be fit to the athlete. Equipment should be soccer-specific and appropriate to the playing surface, taking into consideration such practice and play surfaces as grass and artificial turf, which can be less forgiving to impact. Shoes should provide adequate foot support and shock absorption, and should be replaced frequently during growth spurts.

Rakow says risk factor recognition is an important first step to preventing sports injuries. The second is proper preparation for the sport. For more information about preventing soccer-related injuries and for sample pre-season and in-season soccer-specific exercises, see *First Step: An Injury Prevention and Performance Enhancement Program*, which features a coaches manual and video. First Step was created by sports physicians and physical therapists at the Institute for Athletic Medicine and the Minnesota Sports Medicine. Call Fairview Press at 1-800-544-8207 or visit www.mnsportsmed.org for more information.