**Youth Soccer Injuries**

Soccer is one of the most popular sports in the world and the fastest-growing team sport in the United States. Rich Luker is the scientist behind a few [ESPN](http://www.businessinsider.com/blackboard/espn) studies one of which concluded that soccer is America's second-most popular sport among 12-24 year olds. There is at least one soccer player in 30% of American households. With the promise of scholarships and a lucrative sporting career, players and parents are taking youth soccer far more seriously than ever before. Although soccer provides an enjoyable form of aerobic exercise and helps develop balance, agility, coordination, and a sense of teamwork, soccer players must be aware of the risks.

Injuries in youth soccer are similar to those of adults. Injuries to the lower extremities are the most common in soccer. These injuries may be traumatic, such as a kick to the leg or a twist to the knee, or may result from overuse of a muscle, tendon, or bone.

Here are of the most common youth sports injuries which should be on every soccer coach and parents radar:

**Severs Disease (Irritation of Heel Growth Line)**

Although the name might sound pretty frightening, Sever's disease is really a common heel injury that occurs in kids. It can be painful, but is only temporary and has no long-term effects.

Sever's disease, also called calcaneal apophysitis, is a painful bone disorder that results from inflammation (swelling) of the growth plate in the heel. A growth plate, also called the physis, is an area at the end of a developing bone where cartilage cells grow by dividing. This is how bones grow. When the growth is complete the growth cells turn into bone and the plate fuses into the parent bone.

Pain is felt where the Achilles tendon attaches to the heel bone. The condition flares up after periods of activity and then eases with rest. The calf muscles are usually tight and so ankle range of motion is often reduced.

If this condition develops, apply ice to the back of the ankle for acute pain. Treatment involves increasing flexibility, performing calf stretching exercises, gently, but on a frequent daily basis, to activity modification may be necessary during flare-ups and a heel lift can be placed in the shoes **temporarily** to reduce the stretch on the heel.

Sever's disease is a common cause of heel pain in growing kids, especially those who are physically active. It usually occurs during the growth spurt of adolescence, the approximately 2-year period in early puberty when kids grow most rapidly. This growth spurt can begin any time between the ages of 8 and 13 for girls and 10 and 15 for boys. Sever's disease rarely occurs in older teens because the back of the heel usually finishes growing by the age of 15, when the growth plate hardens and the growing bones fuse together into mature bone. Sever's disease is similar to Osgood-Schlatter disease, a condition that affects the bones in the knees.

**Osgood Schlatters Disease**

Good news is that Osgood-Schlatter disease (OSD) is far less frightening than its name. Though it's one of the most common causes of knee pain in adolescents, it's really not a disease, but an [overuse injury](http://kidshealth.org/parent/nutrition_center/exercise_safety/sports_safety.html). OSD can be quite painful, but usually resolves itself within 12 to 24 months.

Osgood Schlatters disease is another form of apophysitis, which occurs below the knee joint, where the patella tendon attaches to the shin bone (tibia). Growth spurts make kids vulnerable because their bones, muscles, and tendons are growing quickly and not always at the same time. With exercise, differences in size and strength between the muscle groups place unusual stress on the growth plate at the top of the shinbone. After a while, a bony lump may start to appear at the attachment point at the top of the tibia just below the knee cap.

 OSD usually strikes active adolescents around the beginning of their growth spurts, the approximately 2 year period during which they grow most rapidly. Growth spurts can begin any time between the ages of 8 and 13 for girls, or 10 and 15 for boys. OSD has been more common in boys, but as more girls participate in sports, this is changing.

Symptoms may include:

* pain that worsens with exercise
* relief from pain with rest
* swelling or tenderness below the knee cap and over the shinbone
* limping after exercise
* tightness of the muscles surrounding the knee (the hamstring and quadriceps muscles)

Symptoms that *aren't* typical of OSD include pain at rest, thigh pain, or severe pain that awakens kids from sleep or makes them cry. If your child has any of these symptoms, talk to your doctor.

OSD can be managed to help ease symptoms and prevent long term injuries.  Gentle stretching of the quad muscles can help with flexibility and range of motion. Applying ice after exercise will ease pain and inflammation. During a flare-up, it may be necessary to have a period of relative rest by reducing training duration and intensity.

**Ankle Sprains**

Soccer is hard on your feet! Injuries to the foot and ankle can occur from running, cutting, sliding or tackling, striking the ball or colliding with other players. Ankle sprains are one of the most common injuries in youth soccer. Researchers have estimated that ankle injuries account for 16 to 29% of all soccer related injuries in young athletes.

Ankle injuries often occur from a contact injury during the game of soccer. The injury occurs when the ankle is rolled over and one or more ligaments are damaged, most often on the outer ankle. The ankle will usually swell quickly and sometimes extensive bruising may develop within 1-2 days. If the athlete is able to walk after the injury, then a low grade sprain is suspected. If, however, the athlete is unable to walk after the injury, then you should see a physician to rule out a broken bone or high grade ankle sprain.

**Ankle Sprains**

**Grade I injury** – involves stretching of the outside ligament (ATFL) without tearing or instability, able to walk, pain usually only on outside of ankle

**Grade II injury** – involves the complete tear of the ligament (ATFL) and partial tear of another ligament (CFL), slight instability, and difficulty bearing weight, pain located outside of ankle

**Grade III injury** – involves tearing of both ligaments (ATFL, CFL), instability, inability to weight bear

**High Ankle Sprains** – usually involves injury to the ligaments that connect the bones above the ankle joint. Great instability, inability to bear weight with pain located inside and outside of the ankle are symptoms

While ankle injuries are very common in soccer, proper care and rehabilitation can ensure that a player returns to form as quickly as possible. Treatment for ankle sprains and injuries depends on the severity of the injury. Most athletes can return to play when they have no pain and are able to run without a limp. Bracing can help the athlete initially during the recovery period to aid in stability, however, rehabilitation and strength training of the ankle remain the most beneficial.

Ankle sprains usually occur as a result of a sudden force and in that way may not be avoidable. Certain exercises can be performed to improve strength, balance and co-ordination at the foot and ankle to reduce the risk of injury. The lateral ankle muscles and tendons need to be strengthened. Examples include resistance band exercises and balance training. A point-specific ankle rehabilitation program remains the single most successful treatment option for return to competitive sport.

**Hamstring Strains**

Hamstring strains are one of the most common muscle injuries in soccer. The hamstring is a group of three muscles that run along the back of the thigh. They allow the leg to bend at the knee. Hamstring strains usually occur during exercise that involves a lot of running and jumping or sudden stopping and starting. During a hamstring strain, one or more of these muscles gets stretched too quickly or is worked too hard. It starts with a sudden pain in the back of the thigh. It may be difficult to bear weight fully. There may be pain on bending the knee and it may not be possible to fully straighten the knee. Bruising may develop a few days later in more severe cases. The damage to the muscle can range from just a mild “pull” to actual tearing of the muscle and surrounding tissue.

Pulled hamstrings are graded 1, 2 or 3 depending on severity.  Grade 1 consists of minor tears within the muscle. A grade 2 is a partial tear in the muscle and grade 3 is a severe or complete rupture of the muscle.

The symptoms associated with a muscle strain include:

* Sudden and severe pain during exercise, along with a snapping or popping feeling
* Tightness
* Swelling
* Bruising
* Weakness
* Loss of flexibility

Hamstring strain can be a result of:

* Doing too much, too soon or pushing beyond your limits
* History of hamstring injuries
* Poor flexibility and/or strength
* Improper or no warm-up
* Muscle imbalance- the muscles in the front of your thigh (the quadriceps) are a lot stronger than your hamstrings
* Going through a growth spurt

You can’t prevent all hamstring injuries, but you can certainly take steps to reduce the risk. Ensure that all players warmup thoroughly, with a gradual increase in intensity and speed, dynamic stretching and soccer drills like passing and shooting. In training, ensure athletes stretch the hamstring (and all other leg muscles) before and after, as well as strengthening the hamstrings and glutes with exercises like lunges and squats.

While in many ways children’s soccer injuries are similar to those sustained by adult players, there are certain points which must be taken into account. A serious injury at a young age can impact on a child’s future involvement and enjoyment of the sport. All care should be taken to avoid injuries and seek the appropriate treatment and care if one should occur. Children’s bodies are also not as strong or robust as an adult, so overtraining is something to be aware of in children who train hard from an early age. Try to ensure they take part in other forms of sport and exercise. Variety is good for the mind and body, and makes sure that they also have two full rest days a week.

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