

Running safety

A parent's guide for keeping kids in the game.



Sixty-five percent of all youth runners suffer injuries each year. Most of these injuries are caused by over-training or overuse. This reference guide provides information on the most common running injuries that require treatment.

Overuse injuries

Over-training and overuse injuries occur when repetitive stress is placed on the body without sufficient time to repair. Most of these injuries can be prevented with proper rest and using proper technique. To prevent further injury, athletes, coaches, and parents should recognize the early signs of overuse injuries. Damage caused by repetitive stress leads to tissue inflammation, which causes pain. Symptoms of overuse injuries, also called chronic sports injuries include pain when performing the activity or sport, intermittent swelling, decreasing performance, and dull pain even at rest. If symptoms persist, make an appointment with your pediatrician or pediatric sports medicine physician. It is also important to recognize potential environmental factors that may contribute to the risk for overuse injuries. They include type of shoe and running surface, distance, and intensity.

Knee injuries

- **Patellofemoral pain syndrome** (runner's knee) — pain in the front of the knee related to muscle and tissue stress around the knee cap; can be addressed with proper training in physical therapy.
- **Osteochondritis dissecans** — a defect in the knee's cartilage that can become evident over time during repetitive activity such as jumping.
- **Osgood-Schlatter disease** — stress-related inflammation in a growth center at the front of the knee.

- **Iliotibial band syndrome** (ITBS) — the most common cause of pain on the outside (lateral) of the knee. This overuse injury results from repetitive friction of the connective band of tissues extending from the hip to the knee, which then rub on the outer portion of the leg. Hill running often aggravates this condition.

Leg injuries

- **Medial tibial stress syndrome**, also called shin splints, causes pain along the lower inside portion of the tibia (shin). Shin splints also sometimes cause inflammation along the lower leg. It is important to note that not all shin pain is related to shin splints.
- **Stress fracture** — stress or fatigue fractures are the mounting result of abnormal stresses on normal bone. Stress fractures occur after repetitive loading on the bone, and are most common in the lower extremity. They are seen in both highly trained athletes as well as in individuals unaccustomed to vigorous activity.
- **Sever's disease** — a common injury among children ages nine to 12. Sever's disease is a disturbance to the growth plate at the back of the heel bone (calcaneus) where the strong Achilles tendon attaches to it.

Dehydration

Runners are at risk of dehydration if they don't get enough fluid to replace what is lost through the skin as sweat and through the lungs while breathing. It is important to drink plenty of fluids before, during, and after a workout or race. An athlete's performance can be impacted by even mild dehydration. Athletes should take a water bottle to school and drink between classes and during breaks so that they are well-hydrated before their workout. In addition:

- Water should be readily available when working out.
- Athletes should drink often, ideally every 15 to 30 minutes.
- Sports drinks are recommended for activities lasting longer than one hour to replace sugar and salt as well as water.

Early signs of dehydration can be non-specific and include fatigue, nausea, decreased athletic performance, headache, apathy, irritability, and thirst. Signs of advanced dehydration include dark urine, decrease in reaction time, dry lips and mouth, and disorientation.



Running safety (cont.)



Asthma

Asthma is a condition that causes wheezing, coughing, shortness of breath, or chest tightness. Some athletes have a form of asthma that causes symptoms during or after physical activity called exercise-induced asthma. In runners, symptoms usually occur five to ten minutes after the athlete starts continuously running. Actions that may prevent or lessen exercise-induced asthma are:

- Warming up before a workout or game
- Breathing through the nose, and not the mouth, to warm and humidify the air before it enters the airways

Wheezing or coughing that begins between five to 20 minutes after beginning to run or play is a sign that asthma is not under control and more needs to be done to control symptoms.

Your child's primary care physician or a sports medicine physician can diagnose and treat asthma. An athlete is often prescribed an inhaler medication, such as albuterol, to be used 20 to 30 minutes before activity to prevent symptoms of asthma. Make sure your child follows instructions carefully to manage symptoms. With proper management, an athlete with asthma can maintain full participation in most sports. In fact, aerobic exercise actually improves airway function in asthmatic patients.

Bumps, bruises, twists, and muscle strains

These can affect all areas of the body. Recommended treatment is the **PRICE** formula:

- P**rotect the area with a sling or crutches, if necessary.
- R**est the injured area.
- I**ce the injury for 20 minutes at a time. Do not apply the ice directly to the skin.
- C**ompress the injured area with a wrap. Do not pull tightly, as this can cut off circulation.
- E**levate the injured area above the heart.

SSM Health Cardinal Glennon SportsCare

SSM Health Cardinal Glennon SportsCare is the premier pediatric sports medicine provider in St. Louis and St. Charles. We provide exclusive, direct access to comprehensive medical care for young athletes.

Specialists your child has access to include adolescent medicine physicians, cardiologists, emergency medicine physicians, neurologists, nutritionists, orthopedists, pediatric psychologists, physical therapists, pulmonologists, radiologists, and rehabilitation specialists. We also keep kids in the game through educational programs and supports for parents, coaches and athletes that focus on injury prevention, proper technique and overall athletic health.

For more information about SSM Health Cardinal Glennon SportsCare or to find a specialist for your athlete, call or text us **24/7 at 314-577-5640**.

Expert care for young athletes by SSM Health Cardinal Glennon Children's Hospital providers, **24 hours a day in the ER at:** SSM Health Cardinal Glennon Children's Hospital, DePaul Hospital, St. Clare Hospital, St. Joseph Hospital-St. Charles, St. Joseph Hospital-Lake St. Louis, Anderson Hospital, and HSHS St. Elizabeth Hospital.

During the COVID-19 pandemic, SSM Health ministries implemented enhanced safety measures, which are evaluated periodically based on COVID-19 transmission numbers. To ensure your protection and that of others, we continue to require face masks upon entry along with ministry-specific screening processes.