

Young Athlete Program: Running Injuries

UPMC Sports Medicine's Young Athlete Program brings together a team of sports medicine experts that provide individualized attention for injury prevention and management for young athletes.

The goal of the Young Athlete Program is not only to treat athletes when injuries occur, but to focus on prevention and performance training to help them reach their full potential.

Our team of experts use cutting-edge, science-based techniques to help speed recovery, and quickly and safely prepare the athlete to return to competition. Physical therapists, physicians, athletic trainers, sports performance coaches, and other experts focus on prevention, nutrition, conditioning, and sport-specific training, tailored to an athlete's age and level of competition.

Common Running Injuries

Running is a great way for a young athlete to benefit from team or solo activity and develop a foundation to live a healthy lifestyle. Runners generally are not at high risk for injury; however, lack of focus on flexibility and strength, wearing improper clothing or shoes, and running in bad weather conditions can lead to injury and poor performance.

Runners may experience muscle inflammation and strains in the hip and thigh. They also may encounter knee and lower leg injuries such as knee cap pain, tendonitis, hamstring strains, shin splints, and stress fractures. Foot and ankle injuries can include plantar fasciitis (pain in the heel or bottom of the foot), ankle sprains, and stress fractures.

In addition, runners are subject to weather-related problems including heat exhaustion, heat stroke, and sunburn. They also must guard against dehydration.

Proper Running Clothing

Runners should match their clothing and footwear to the weather. In hot weather, light, breathable clothing prevents perspiration buildup and enables the body to better regulate heat.



Colder weather calls for light layers that can be removed as the runner warms up or the temperature changes. This allows for temperature adjustments throughout the run.

Running hats, head covers, and/or ear covers protect the skin from the sun or frostbite while permitting body temperature control. Thick, proper-fitting socks lessen the chance of blisters.

Running Footwear

Proper footwear is key to safe running. The right shoes reduce the shock and stress on a runner's feet, knees, hips, and back. When shoes wear out, the rest of the body absorbs the shock as the feet repeatedly hit the ground. This extra stress overloads the muscles and joints, leading to injury.

Different styles of running shoes are designed for different types of feet. Runners with a history of foot or arch pain should visit a store specializing in running shoes or consult a trained professional who can evaluate foot movement and determine the best shoe choice.

Shoes should have a finger width of space in front of the big toe. New shoes should be broken in with several short runs before they are worn for a long run or race. Be sure to frequently inspect shoes for excessive wear and replace them after 300 to 400 miles or every four months to avoid unnecessary injury.

Preventing Running Injuries

Lack of muscle strength or flexibility in any joint can change a runner's form and potentially result in overuse injuries. Many of these injuries can be prevented with proper warm up prior to running and a thorough conditioning program that includes strengthening and flexibility exercises for the muscle groups involved.

Stretching before and after running is an important step to take to prevent injury. Hold each stretch for 15 to 30 seconds at a level where a gentle pull is felt in the muscles.

Running everyday can lead to overuse injuries as well. Take days off to rest and engage in cross-training exercises. Give your body an opportunity to ease into the demands of running, especially if new to the sport or returning from a hiatus. Don't run too much before your body is ready.

Tips to Improve Running Safety and Performance

Warm up and cool down

- Always do a light warm up of about 5 minutes followed by 5 to 10 minutes of stretching. Stretch major muscle groups before and after running to improve flexibility and prevent soreness.
- When not racing, start slowly and speed up gradually.
- All-purpose track surfaces (e.g., a high school track) are ideal, especially for beginners. Runners should switch directions each time they run on a track.

Stay hydrated

- Drink 16 ounces of fluids two hours before running.
- Drink 4 to 8 ounces of water every 15 minutes while running.
- For runs longer than 60 minutes, a sports drink containing carbohydrates (sugar) is useful.
- After running, drink, and then drink again, even if no longer thirsty. To measure how much hydration is needed a runner should step on a scale before and after running, then drink 16 ounces of fluid for every pound lost.

Safe Weather Conditions

Children and teenagers can't tolerate hot and cold weather as well as adults. They are more prone to heat illness (e.g., heat cramps, heat exhaustion, and heat stroke), sunburn, and dehydration.

The best time to run is morning or late evening when the humidity is the lowest. Avoid running between 1 and 3 p.m. or when the temperature is over 90 degrees. Use sunscreen to prevent sunburn.

Screening Young Athletes

Our team of sports rehabilitation experts provide injury prevention screenings to young athletes. These screenings can help uncover existing injuries and areas of weakness, and can help prolong participation in sports.

These 45-minute screenings include:

- Flexibility
- Strength
- Functional movement assessment

The results of the screening will help determine if a young athlete needs to consult with a physician, participate in physical therapy, or consider sport-specific performance training. UPMC Sports Medicine has the expertise and comprehensive services to support young athletes.

Contact the Young Athlete Program

Regardless of age or sport, the Young Athlete Program has the expertise, technology, and services to make a difference for your athlete. For more information or to make an appointment, call **1-855-93-SPORT (77678)** or visit **UPMCSportsMedicine.com**.

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