

Running

Running, as a sport, can involve a number of different forms, including the following:

- **Cross-country.** A sport in which teams of runners compete on long-distance road running courses.
- **Track and field.** A sport that includes track events, like sprints, distance running, hurdles, and relays, and field events that involve throwing and jumping.
- **Marathon.** A long-distance (about 26 miles) road running event.
- **Triathlon.** A 3-part event that includes swimming, cycling, and running. Distances vary depending on the age of the athletes.

Running injuries are common and there can be a variety of causes. Running injuries can be caused by improper training (for example, doing too much too fast), mechanical problems (for example, high arch or flat foot), or previous injuries. Other causes may be the environment (for example, uneven or hilly terrain; hot or cold weather conditions) or previous injuries. While not all injuries can be prevented, the risk of injuries can be reduced.

The following is information from the American Academy of Pediatrics about how to prevent running injuries. Also included is a list of common running injuries.

General injury prevention and safety tips

- **Sports physical exam.** Athletes should have a preparticipation physical evaluation (PPE) to make sure they are ready to safely begin the sport. The best time for a PPE is about 4 to 6 weeks before the beginning of the season. Athletes also should see their doctors for routine well-child checkups.
- **Fitness.** Athletes should maintain a good fitness level during the season and off-season. Preseason training should allow time for general conditioning and sport-specific conditioning. Also important are proper warm-up and cool-down exercises.
- **Technique.** Athletes should learn and practice safe techniques for performing the skills that are integral to their sport. Athletes should work with coaches and athletic trainers on achieving proper technique.
- **Nutrition.** Eating healthy and the right amount of calories is important. A good rule to follow is to eat an extra 100 calories for every mile run.

Cross-country/track injuries and prevention and safety tips

Injury	Tips
Blisters	<ul style="list-style-type: none"> • Running shoes should fit properly. (See “Foot type.”) • Running shoes should be changed every 6 months or 300 to 500 miles.
Overuse Injuries <ul style="list-style-type: none"> • Shin splints (lower leg pain) • Stress fractures of the lower leg or foot • Tendonitis of the knee and ankle • Sever’s disease (an inflammation of the growth plate that causes pain in the heel) • Plantar fasciitis (a common cause of heel pain under the arch of the foot) 	<ul style="list-style-type: none"> • Athletes should begin a strengthening program that works on the hips, buttocks, abdominal, knee, and ankle muscles. • Cross-train with other activities such as water jogging and elliptical trainers. • Athletes should begin a stretching program that works on the hips, thighs, calves, and back of the legs. • Balancing exercises should be incorporated. • Athletes should run on soft, even surfaces whenever possible (flat dirt or grass surfaces are best). • Athletes should increase their weekly mileage by no more than 10% (for example, if you currently run 20 miles, only increase to 22 miles the next week). • Limit speed work to 1 to 2 days per week.
Exercise-associated diarrhea	<ul style="list-style-type: none"> • Limit how much fiber is eaten 24 hours before an event.

Marathon and triathlon injuries and prevention and safety tips

Injury	Tips
Burnout	<ul style="list-style-type: none"> • Triathlon participation by children and teens should be limited to shorter, age-appropriate distances. • Children and teens should not be encouraged to participate in marathons, and youth records should not be kept to avoid encouragement.
Heat or cold injuries	<ul style="list-style-type: none"> • Proper hydration with cool water and sports drinks is important. Athletes should determine their individual sweat rate, then replace every pound lost with 16 to 20 ounces of fluid. <p>Sweat rate=Pre-workout weight - Post 1-hour workout weight.</p> <ul style="list-style-type: none"> • Athletes should not run, bike, or swim in extreme hot or cold environments. • Proper calorie intake is important. In addition, runners should get 1,300 mg of calcium per day (1,500 mg for females with no menstrual period).
Menstrual irregularities in female athletes	<ul style="list-style-type: none"> • Female athletes should keep track of their menstrual periods. They should see a doctor if they start to miss menstrual periods.

Foot type

To determine your foot type, wet the bottom of your foot and step on a piece of cardboard. Match the imprint with the choices in the table below.

Foot	Problem	Shoe
 Flat foot	Overpronation	Motion control
 Normal arch		Stability
 High arch	No shock absorption	Cushioned

NOTES

The information contained in this publication should not be used as a substitute for the medical care and advice of your health care professional. There may be variations in treatment that your health care professional may recommend based on individual facts and circumstances.

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