

Keeping gymnastics safe and fun for kids

August 12 2024, by Elizabeth B. Portin, DO, FAAP, American Academy of Pediatrics



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The recent Olympics are inspiring another generation of young athletes.

Gymnastics, always popular, can be a great sport for children, helping them build strength, flexibility, balance and coordination. It's also

important to ensure a safe, positive experience by preventing gymnastics injuries.

To reduce the risk of injury, young gymnasts should have trained coaches who are experienced and familiar with gymnastics techniques, rules and how to safely perform moves. Coaches should understand the physical and emotional development of different ages. They should also be certified in CPR and first aid.

Spotters offer proper supervision and should be available at all times to assist, making sure moves are performed safely.

Gym rules help ensure safety. "Clowning around" should not be tolerated in the gym, especially around the foam safety pit or trampolines, and safety gear should fit properly and be well-maintained. Make sure your gymnast is equipped with:

Teams should develop and practice an emergency plan so that team members know their roles in emergency situations. The plan would include first aid and emergency contact information. All team members should get a written copy each season. Parents also should be familiar with the plan and review it with their children.

Watch out for common gymnastics injuries, such as those that involve the wrists, elbows, knees, ankles and feet.

Because gymnasts walk and jump on their hands, significant force (sometimes two to four times their body weight) is put on the wrists. As a result, most gymnasts complain of wrist pain at some point.

Gymnasts are particularly at risk for injuries to the growth plate of the wrist as well as stress fractures of the forearm, tears in the wrist cartilage and scaphoid fractures.

Treatment begins with rest, ice, compression and elevation (RICE). Athletes should see a doctor if their wrists are swollen or painful the next day. X-rays may be needed.

The risk of these injuries can be reduced by a gradual increase in activity intensity, proper skill progression, proper warm-up and conditioning, and the use of wrist braces. Athletes should never take medication prior to activity to mask the pain.

Elbow sprains, fractures or dislocations can occur when a gymnast lands on an overextended elbow. Loss of blood supply to an area of bone and cartilage, a condition called osteochondritis dissecans, can cause an inability to straighten the elbow and locking, catching or swelling of the elbow.

Gymnasts are at risk of these injuries from the repetitive forces placed on the elbow joints.

Treatment begins with RICE. Athletes should see a doctor if their elbows are swollen or painful the next day. X-rays may be needed.

With ankle sprains common in gymnastics, a strength training program that includes balance and resistance band exercises is recommended for both treatment and prevention.

Sever's disease ([heel pain](#) from inflammation of the growth plate of the heel bone) can happen when an [athlete's](#) bare foot impacts the ground. Use of an ankle brace or a heel cup in an ankle brace cushions the ankle while performing gymnastics events. Athletes may need to condition in sneakers to limit the amount of barefoot activities.

Both acute and chronic knee injuries are seen in gymnastics. Anterior cruciate ligament (ACL) tears commonly occur with dismounts and floor

exercises. ACL prevention programs, which teach proper landing and stopping techniques and include hamstring strengthening exercises, should be part of the training and conditioning of all gymnasts.

The athletes' young ages and hours of practice make pain in the front of the knee common (Osgood-Schlatter disease, patellar tendinosis ("jumper's knee") and patellofemoral pain syndrome). They might experience more pain during periods of rapid growth.

When a young gymnast hurts their knee, treatment begins with RICE. Athletes should see a doctor as soon as possible if they cannot walk on the injured knee; the knee is swollen; a pop is felt at the time of injury; or the knee feels loose or like it will give way.

Athletes who return to play with a torn ACL risk further joint damage.

Spondylolysis, stress fractures in bones of the lower spine, is a common injury in athletes who do a lot of jumping, tumbling and back-bending activities. Symptoms of spondylolysis include low back pain that feels worse with back extension activities like back walkovers or back handsprings.

Gymnasts with [low back pain](#) for longer than two weeks should see a doctor. X-rays are usually normal so other tests are often needed to diagnose spondylolysis.

Training on the bars, horse or rings often causes calluses or blisters (also called rips by many gymnasts). These can be prevented by using chalk (to decrease friction), leather grips and regular shaving of calluses that do develop.

Other medical issues that can affect kids in gymnastics include relative energy deficiency syndrome (RED-S), an unhealthy condition where

athletes use more calories than they are consuming. Reproductive health, bone health and psychological health may be impacted.

Many gymnasts try to stay thin for appearances, or to be a lighter weight for mastery of difficult moves. Parents and trainers should be on the lookout for rapid weight loss or abnormal eating behaviors that could suggest an eating disorder.

Burnout can affect gymnasts with long hours of training, year-round participation and pressures to advance. This is common among athletes who began training or specializing (practicing a single sport year-round) at very young ages.

Depression can develop in athletes forced to "retire" or miss a season after an injury, or if pushed too hard physically or emotionally. Athletes should be watched carefully and counseled if burnout or depression is suspected. Athletes should enjoy competing or practicing gymnastics, and they should be allowed to quit as they choose.

Remember that gymnastics injuries can be prevented with proper supervision and following rules and safety guidelines in place. For answers to more questions about injuries, [injury](#) prevention and safe training practices, talk with your doctor, a sports medicine specialist or a physical therapist.

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