Common Gymnastics Treatment, Injuries, and Prevention

P.R.I.C.E. Treatment Method

P. Protect - Protect the injury from further harm by using a brace, splint, immobilizer or ACE bandage.
R. Rest- Rest the injured area by not participating in activities that are painful to perform.
I. Ice- Ice the area for 20 minutes every 2 hours. Never use heat because it causes the area to swell even more.
C. Compression- Compress the swelling using an ACE bandage or compression wrap to limit any further swelling. When wrapping the injured area, start at the furthest point away from the body and move toward the body. Be sure that you are not cutting off circulation.
E. Elevate- Elevate the injured area above the heart to pull blood flow away from the injured area.

COMMON INJURIES

Ankle Injuries
The most common injury in sports is a lateral ankle sprain. This injury occurs in gymnastics by rolling the ankle over the outside of the foot. This often occurs when landing from a jump or planting for a sudden change of direction.

Knee Injuries
A common injury in gymnastics is an anterior cruciate ligament (ACL) sprain or tear, which occurs when the knee is twisted forcefully or hyper-extended. This may occur when landing with the knee hyper-extended. Athletes often describe a pop at the time of injury, followed by a lot of swelling within a few hours.

Elbow Tendonitis
Tendonitis is the inflammation, irritation and swelling of a tendon. It can occur as a result of injury, overuse or aging as the tendon loses elasticity. Any action that places prolonged repetitive strain on the joints and muscles can cause tendonitis. The most common symptoms are pain, tenderness and increased pain with movement.

Head Injuries
A concussion is a brain injury usually caused by a sudden jolt or a blow to the head or neck. An athlete does not need to be knocked out, or have memory loss, to have suffered a concussion. In fact, most athletes who suffer a sports-related concussion do not lose consciousness. Athletes may have suffered a concussion if they:
• Appear dazed or stunned
• Are confused
• Forget plays
• Move clumsily
• Exhibit unsteadiness
• Are unsure of game, score or opponent
• Answer questions slowly
• Have behavior or personality changes
• Can't recall events either before or after hit
• Lose consciousness
An athlete with signs of a concussion should not return until evaluated by a doctor.

For more information, or to contact one of our Sports Medicine Outreach Liaisons, email us at SportsMedicine@amitahealth.org or call us at 847.385.7120 or 708.245.6051

AMITAhealth.org/SportsMedicine
**Wrist Injuries**
In gymnastics, the wrist is subject to forces that exceed the body weight of the athlete. The wrist ligaments, the tough bands of fibrous tissue that connect one bone to another, may be stretched beyond their normal limits and are at risk of being torn. Mild sprains can be treated with P.R.I.C.E at home while severe sprains may need surgery to repair torn ligaments.

**Lower Back Pain**
The lower back is a common source of chronic pain among gymnasts. The cause of most lower back pain is related to muscle and ligament strain. The pain is usually resolved with rest, physical therapy or orthopedic treatment.

**Sprains and Strains**
A sprain is an injury to a ligament, the tough, fibrous tissue that connects bones to other bone. Ligament injuries involve a stretching or a tearing of this tissue. A sprain typically occurs when an athlete falls on an outstretched arm, lands on the side of their foot or twists a knee with the foot planted firmly on the ground. This results in an over-stretch or tear of the ligament(s) supporting that joint. The usual signs and symptoms of a muscle sprain include pain, swelling, bruising and the loss of functional ability (the ability to move and use the joint). Sometimes people feel a pop or tear when the injury happens. However, these signs and symptoms can vary in intensity, depending on the severity of the sprain.

A strain is an injury to either a muscle or a tendon, the tissue that connects muscles to bones. Depending on the severity of the injury, a strain may be a simple overstretch of the muscle or tendon or it can result in a partial or complete tear. A strain is caused by twisting or pulling a muscle or tendon. Strains can be acute or chronic. An acute strain is caused by trauma or an injury such as a blow to the body; it can also be caused by improperly lifting heavy objects or overstretching the muscles. Chronic strains are usually the result of prolonged, repetitive movement of the muscles and tendons.

**PREVENTION**

**Equipment**
Use proper fitting braces, clothes and shoes. Inspect all equipment and the apparatus prior to practice or competition.

**Training /Conditioning**
Proper resistance training increases strength in the lower back, core, shoulders and ankle stability. Use proper strength training techniques by working with a professional performance trainer or a sports medicine professional. Proper conditioning, flexibility and functional movement training may reduce the risk of non-contact injuries. Resist the temptation to perform through pain.

**Warming Up**
Warm-up muscles with dynamic stretching prior to practice, workout or performance. An effective warm-up increases both your heart rate and your respiratory rate. Start at a slower, more relaxed pace and gradually work up to full speed. When perspiration begins, the muscles are warmed up and ready for a workout.

**Stretching**
Stretch only after having warmed up; a cold muscle is more likely to tear when stretched. Stretching after a workout increases flexibility and reduces stress on joints. Perform stretches slowly, holding each position for at least five seconds.

**Nutrition**
Proper nutrition before and during your workout will help you maintain blood sugar levels and keep you adequately hydrated for peak performance. Drink plenty of fluids. A doctor or physical therapist can assist you in developing a proper strength, flexibility and nutrition plan.

The AMITA Health Orthopedics Institute is a national leader in musculoskeletal care, offering comprehensive and advanced care for a wide range of conditions. We are proactive about keeping you active. That is why our multi-disciplinary orthopedic teams enlist a comprehensive leading edge approach to the prevention, assessment, treatment and rehabilitation of musculoskeletal injuries.

Our team of highly-experienced board-certified physicians, surgeons, therapists and nurses are dedicated to providing patients of all ages with a personalized treatment program that is customized for your condition, lifestyle and personal preferences.

We work hard to prevent sports-related injuries, which have become increasingly more common among athletes, especially children. AMITA Health Sports Medicine Outreach Liaisons keep kids active and participating in the extracurricular activities they enjoy by delivering educational programs and support for parents, coaches and athletes that focus on injury prevention, proper technique and overall athletic care.