

# VOLLEYBALL SAFETY

A GUIDE TO INJURY PREVENTION



SCOTTISH RITE  
FOR CHILDREN  
SPORTS MEDICINE

Like many sports, volleyball comes with some inherent risks. This popular, fast-paced, explosive-natured sport requires players to react quickly, swiftly generate power from the legs and arms and perform movements repeatedly. Year-round, intense competition adds to the challenges for preventing overuse injuries and burnout. However, strategic rest periods and following appropriate safety recommendations can help decrease injury risk and help keep these athletes on the court.

## COMMON PROBLEMS FOR VOLLEYBALL PLAYERS

### KNEE PAIN AND INJURIES

Pain in the front of the knee is a common complaint from growing, active females. A proper strength and conditioning program can help prevent this discomfort and improve the alignment of both hips and knees for more power in squatting and jumping. Activity-related pain should not be ignored. Landing awkwardly from a jump can cause sprains and tears to ligaments and other soft tissue in the knee. A swollen knee after an injury warrants removal from play and an evaluation.

### FINGER INJURIES

Blocking high-speed hits and setting the ball can put the fingers at risk of being jammed, fractured or dislocated. While jammed fingers typically heal with rest and ice, they can sometimes cause injury to ligaments and cartilage, which may require closer evaluation. If you are unsure or if pain and swelling do not subside with rest, it is best to have a medical evaluation.

### ANKLE INJURIES

Ankle injuries are common in many sports, including volleyball, and typically occur while changing direction or landing on another player's foot after a jump. Mild ankle sprains are often treated with RICE (Rest, Ice, Compression and Elevation). Repeated sprains, more severe sprains or an inability to bear weight may require an X-ray, evaluation and rehabilitation.

### SHOULDER PAIN

The repetitive overhead motion of serving and hitting the ball can lead to pain in and around an athlete's shoulder. Without ample recovery time, the tissue cannot adapt to the stress, and the muscle, tendon, bone or cartilage can be damaged. If pain persists after resting the injury for a couple of days, it is best to have a medical evaluation.



### CONCUSSIONS

Liberos seem to be at the greatest risk of concussions in volleyball, but a hit or fall can happen to any player. An athlete with any symptoms or change in behavior, thinking, or physical functioning after a blow to the head or body should be suspected of having a concussion. This athlete should be removed from play immediately, even if there was not a loss of consciousness. The athlete should not return to play the same day as the injury and should have a medical evaluation.

### GROIN INJURIES

Defensive moves require rapid changes in direction and speed, which can cause the adductor muscle group (inner thigh) to become overstretched. Pain from a muscle strain to this group may occur suddenly or over time. A medical evaluation is appropriate if the condition persists or occurs repeatedly.

### LOW BACK PAIN

Back pain that persists or does not get better with rest should not be ignored. Promptly addressing it can keep it from worsening. Overuse injuries such as a stress fracture (spondylolysis) in the lower back can develop from repeated hyperextension common in volleyball. Studies have found that volleyball players with a history of ankle sprains may be at a higher risk of low back pain. Strength and conditioning programs that include core training will help to prevent back pain.

# SCOTTISH RITE



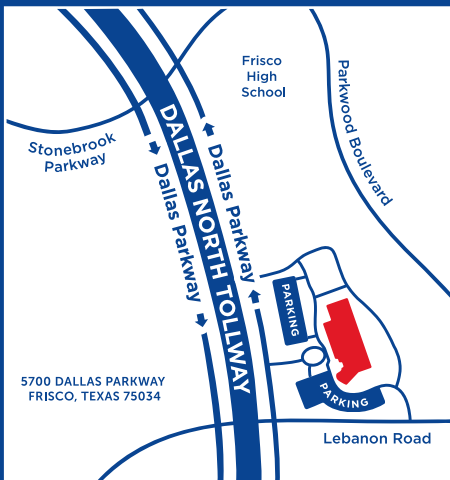
## SPORTS MEDICINE

The Center for Excellence in Sports Medicine at Scottish Rite for Children is a comprehensive practice specializing in the treatment of sport-related injuries and conditions in young and growing athletes. Sports Medicine physicians, pediatric orthopedic surgeons, physical therapists, athletic trainers, psychologists and others work side-by-side with athletes, parents and coaches to develop the best game plan for recovery.



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## PREVENTING VOLLEYBALL INJURIES

### PLAY SMART AND BE AWARE OF THE ENVIRONMENT

All coaches want their players to hustle, but it is equally important to make smart plays. An athlete should be aware of objects around the court (score table, bleachers, benches, etc.) when running or diving for the ball. Make sure the floor is swept clean of debris, dust and trash. Also, keep a towel near the bench to clean up water spills and wipe up sweat when players dive on the floor.

### COMMUNICATE

Volleyball is truly a team sport where one athlete cannot shine without the others. Calling for the ball can help teammates reduce the speed and frequency of collisions. Team unity and effective communication can also improve recognition and response to injuries such as concussions.

### PRE-PARTICIPATION EVALUATION (PPE)

PPE is an essential first step in injury prevention. These evaluations can help to identify existing injuries or conditions, heart or lung problems and other issues that could make an athlete more prone to injury during play. This annual visit with the primary care doctor includes important conversations that go beyond sports safety.

### WARM-UP

A dynamic warm-up involves continuous movement in preparation for competition or practice. Warming up the body increases the elasticity of the muscles, tendons and ligaments around the joints, decreasing the likelihood of injury. There is growing evidence to support the effectiveness of knee and ankle injury prevention programs. These programs consist of exercises and routines that teach athletes how to land from jumps properly, improve balance, and increase core strength. Talk to your coach about adding a program to the team's warm-up routine.

### STAY HYDRATED

Indoors and outdoors, an athlete's performance can be impacted by even mild dehydration. Players should drink often—ideally every 15-20 minutes. Each athlete should have a water bottle for every event. Sports drinks are recommended for practice or matches lasting longer than one hour or in hot conditions. This helps replace electrolytes lost through sweat and provides carbohydrates needed for energy.

### REST

Repetitive serving and hitting put the shoulder at risk for pain and injury. Take a day or two off from volleyball each week to let the shoulder rest even if there are no symptoms. Playing another sport and taking a break from volleyball training at least three months of the year have been shown to reduce the risk of overuse injuries.

### WEAR APPROPRIATE GEAR

Athletes should wear properly sized shoes that are tied correctly and are appropriate for the playing surface. Properly worn knee pads provide protection while diving on the floor. Athletes may also consider wearing ankle braces to reduce the risk of ankle sprains if they have a prior injury history.