

FOOTBALL SAFETY

A GUIDE TO INJURY PREVENTION

TEXAS
SCOTTISH RITE HOSPITAL
FOR CHILDREN

SPORTS
MEDICINE

WHAT ARE THE RISKS?

As one of the most popular sports in America, football is the source of many injuries each year. New rules and better equipment have improved game safety, but **28 percent** of football players ages 5-14 still suffer injuries each year.¹ Furthermore, high school football has **three times** as many catastrophic injuries as college football.¹

With the full contact nature of football, traumatic injuries are common despite the use of protective equipment. Impact sustained during hits and desperate efforts to resist tackles cause athletes' bodies to contort resulting in various injuries.



COMMON FOOTBALL PROBLEMS

CONCUSSIONS

Most athletes that suffer a concussion do not lose consciousness. An athlete with any symptoms after a blow to the head or body such as a change in behavior, thinking, or physical functioning should be suspected of having a concussion and removed from play immediately.

BURNERS OR STINGERS

A burner or stinger is an injury to the nerves that travel from the neck down the arm when the head is stretched away from or toward the arm. This results in intense pain, burning or stinging, numbness and weakness from the neck down the arm. An athlete that sustains a burner or stinger should be seen by a sports medicine specialist.

KNEE INJURIES

Sudden cutting, jumping and physical contact can put a lot of stress on the knees and force them into awkward positions. This can cause sprains and tears to ligaments and cartilage, especially to the anterior and posterior cruciate ligaments (ACL and PCL), medial collateral ligament (MCL), and the meniscus. A swollen knee after an injury should be evaluated by a sports medicine specialist. A young athlete should not continue to play if the knee remains swollen.

SHOULDER INJURIES

The force from a collision and the chaos of a tackle can cause a shoulder dislocation, separation or clavicle (collar bone) fracture.

DEHYDRATION AND HEAT EXHAUSTION

High intensity workouts during hot and humid weather can make it difficult to replace the fluid and salt lost as sweat. This can result in cramps and eventually lead to heat exhaustion and even heat stroke. See *Stay Hydrated* and *Acclimate to the Heat* (on reverse).

ANKLE INJURIES

Lateral ankle sprains are common in many sports. In football, they often occur while cutting, stepping on another player's foot, or during a hit. Mild ankle sprains are treated with RICE (Rest, Ice, Compression and Elevation). More severe sprains or inability to bear weight may require an X-ray and evaluation by a sports medicine specialist.

¹Preserving the Future of Sport: From Prevention to Treatment of Youth Overuse Sports Injuries. AOSSM 2009 Annual Meeting Pre-Conference Program. Keystone, Colorado

The Texas Scottish Rite Hospital for Children (TSRHC) Sports Medicine Center is a comprehensive practice specializing in the treatment of sports-related conditions and injuries in young and growing athletes. The center offers a complete team of operative and non-operative physicians, nurse practitioners, psychologists, nurses, physical therapists, medical assistants and athletic trainers – all working closely together to provide the best care for each patient.

The TSRHC Sports Medicine Center is a division of Texas Scottish Rite Hospital for Children.

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PREVENTING FOOTBALL INJURIES

WEAR APPROPRIATE PROTECTIVE EQUIPMENT

Protective gear is required for a reason – it helps! Make sure the athlete is fitted for the correct size of protective gear to receive the most benefit. Loose or improperly fitting equipment may not offer the same level of support.

PRE-SEASON PHYSICAL EXAM & BASELINE NEUROCOGNITIVE TESTING

Many leagues require a physical exam before allowing participation. These exams help identify existing injuries or conditions, heart or lung problems, and other issues that could make an athlete more prone to injury during play. In the event of a concussion, a baseline neurocognitive test (i.e. ImPACT test) gives doctors access to information that can help develop the best plan of care for the athlete.

WARM UP

A dynamic warm-up involves continuous movement to raise the body's core temperature in preparation for competition. Warming up the body increases the elasticity of the muscles, tendons and ligaments around the joints, decreasing the likelihood of injury. Be sure a coach leads the team through a dynamic warm-up routine before each practice and game.

KNOW THE PLAYS

If everyone is on the same page, unnecessary collisions, trips and twists are less likely to occur. Studying the playbook and understanding the flow of each play can help reduce confusion over positions and assignments, leading to less risk and more first downs.

STAY IN SHAPE

Going into two-a-days after sitting on the couch for a couple months makes an athlete more prone to heat exhaustion, dehydration, and cramps. Furthermore, athletes that are fatigued are not as crisp with movements making them more likely to sustain injuries. So while it may not be your favorite way to spend the off-season, participating in moderate physical activity can save you pain later.

ACCLIMATE TO THE HEAT

The goal of acclimatization is to gradually increase athletes' ability to tolerate the heat. The National Athletic Trainers' Association (NATA) recommends a 14-day acclimatization period with progressive equipment and practice guidelines. Consult the NATA's *Preseason Heat-Acclimatization Guidelines for Secondary School Athletics* for more information.

STAY HYDRATED

An athlete's performance can be impacted by even mild dehydration. Players should drink often—ideally every 15-20 minutes, especially during the heat of summer. Water should be readily available, but sports drinks are recommended for vigorous activities lasting longer than one hour to replace electrolytes lost through sweat and carbohydrates needed for energy.

FOLLOW THE RULES

New player contact rules may seem restricting, but they are designed to reduce the risk of severe injuries. Specifically, be sure to tackle with the head up and do not lead with it. Coaches and parents should emphasize the importance of obeying these rules and discourage dirty and ill-intentioned play. By following the rules, you can be competitive and physical without putting others at risk.

STRENGTHEN NECK AND SHOULDER MUSCLES TO BETTER ABSORB A HIT

If the muscles surrounding the neck and shoulder are strong, they are better able to absorb shock and slow the movement of the head upon impact, which may reduce the risk of a concussion. Athletes should consult a strength coach or athletic trainer for exercises to improve neck and shoulder strength.