

Report on Turf Toe in Athletes

If you pay attention to any sports news, then you know how sports radio and TV hosts talk endlessly about athletes' injuries. With more and more focus on sports, even the tiniest scratch or dent is headline news. One of the more unusual injuries reported in football players is called Turf Toe.

Turf toe describes damage to the base of the big toe. The medical term for this problem is hyperextension injury to the hallux metatarsophalangeal (MTP) joint. Hyperextension means the toe is bent way back on itself. You've probably seen this occur on TV and not even been aware of it.

Picture this: a football player has the ball. He gets tackled and as he goes down, his foot is in a position with the toes in contact with the ground but the foot with the heel up toward the sky.

The player doing the tackling goes down with his knee on the ball holder's upended heel. The force of the tackler's knee pushing down on the ball holder's heel is enough to injure the soft tissues and even the joint of the big toe still in contact with the ground.

It's called turf toe because most of these injuries occur on artificial turf. The injury can be mild (grade I) to severe (grade III). Treatment and length of time on the bench depend on the severity of the injury.

With a grade I injury, the ligaments around the base of the big toe are stretched and strained but nothing is torn or broken. The player may experience some pain, perhaps a little bruising, and some swelling. He may not even miss a game or practice because of it.

Grade II injuries are a little more problematic. Some of the soft tissue structures are torn. Swelling and pain limit motion. A walking boot and crutches may be needed. The player will be off the field for up to two weeks. When he does return, the athletic trainer will likely tape the toe to protect it for another two weeks.

In the most severe injuries (grade III), there is significant swelling, bruising, and pain. That's because the ligaments, joint capsule, and cartilage under the toe have been completely torn or ruptured. As a result, the hallux metatarsophalangeal (big toe) joint is weak and unstable.

At all levels of severity, treatment begins with managing the symptoms using the tried and true formula of R.I.C.E. -- rest, ice, compression, and elevation. Anti-inflammatory medications help keep the swelling down.

Accurate diagnosis with physical exam and imaging studies (X-rays, MRIs) help determine whether the athlete will continue with conservative (nonoperative) care or go on to have surgery. With low-grade injuries, a splint, cast, or boot is used to immobilize the foot and protect the soft tissues while healing takes place.

Some cases can be treated with long-term (six to eight weeks or longer) immobilization in a boot or cast. But surgery is often required for grade III turf toe injuries. The surgeon makes every effort to restore the toe to its normal anatomy. Most of the time, the soft tissues can be repaired and stitched back in place.

The player with this level of injury will be off the field for three to four months. The timing of his return-to-play may depend on the position he plays on the team. At a minimum, before being released to full participation (especially running or explosive movements), athletes with turf toe must have 50 to 60-degrees of passive toe flexion without pain. Passive motion means the examiner moves the patient's toe rather than

the player actively bending the toe himself.

Whenever the injured player returns to his preinjury level of participation, toe protection is provided. This could be as simple as taping the toe. A stiff-soled shoe to prevent over extending the toe is a must. Special shoe inserts called orthotics are also available. There is even a special design for post-turf toe injuries called the turf toe plate.

In summary, sports athletes playing on artificial turf are at increased risk for turf toe injury. With more attention and focus on sports than ever before, it's only a matter of time before this becomes a well-known problem.

But sports fans can relax because orthopedic surgeons have the problem well in hand. Early diagnosis and treatment will ensure that affected athletes will be back in action as quickly as possible.

Reference: Jeremy J. McCormick, MD, and Robert B. Anderson. Turf Toe: Anatomy, Diagnosis, and Treatment. In Sports Health. November/December 2010. Vol. 2. No. 6. Pp. 487-494.