

Turf Toe



A turf toe injury is a sprain of the joint capsule at the 1st metatarsophalangeal joint (MPJ). It is named for the surface on which it is more commonly caused, artificial turf. However it can occur on almost any surface. Most often it occurs when an athlete's cleated shoe gets caught on the turf with the great toe in an extended position. Next, the athlete's weight is shifted forward over the toe and the shoe does not release from the turf, causing a hyperextension of the 1st MPJ. This hyperextension injures the joint capsule at the MPJ. Another mechanism of injury occurs when one athlete falls on the calf of another athlete whose toe is already extended and planted on the ground causing a traumatic hyperextension of the MPJ. This injury is commonly associated with sports requiring frequent stops and starts and quick direction changes such as football, soccer and rugby but can occur in any sport on almost any surface. The type of footwear also plays a role in the increased risk of injury. Sports that require a cleated shoe for traction and grip tend to see more of this type of injury.

Symptoms of turf toe include significant pain at the base of the great toe. Usually the athlete will develop symptoms immediately rather

than experiencing a gradual onset of symptoms without clear injury. At the time of injury the athlete will have difficulty bearing weight on the injured foot. Their gait pattern will be modified to avoid pressure on the great toe. On examination, there will significant tenderness to palpation to the base of the great toe. Swelling and pain with great toe extension are common.

Treatment of this injury is fairly routine. For the more severe or traumatic types of turf toe, x-rays should be obtained to rule out the possibility of a fracture of the first metatarsal or small bones in the great toe. When fractures are ruled out, the treatment should include RICE (Rest, ice, compression and elevation). During the initial phase of treatment, immobilization should be utilized to help promote healing. Depending on the severity of injury this could be as simple as a stiff soled shoe or more restrictive such as a cast or walking boot.

After a period of immobilization and rest the athlete may begin rehabilitation exercises for the injured toe. The first step in returning to activity is to regain motion. Passive range of motion (ROM) is accomplished by sitting with the

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injured foot across the thigh of the uninvolved leg. Grasp the great toe near the MPJ and flex and extend the joint but not to the point of creating significant pain. Always ice after rehabilitation exercises to decrease pain and swelling. Once ROM is regained, the athlete may begin strengthening exercises. Walking without supportive devices will begin this process. Other useful strengthening exercises include toe raises, calf raises, squats and lunges. Balance exercises are a necessity as well. When the athlete can perform the strength and balance exercises without any pain, he/she may begin conditioning and agility as well as sport specific exercises.

Adding extra support to the injured toe will help the transition back to sports.

One way to add support is to have the toe taped by an Athletic Trainer. Another way of adding support is to place a rigid splint in the shoe under the great toe, again decreasing the amount of motion. When returning to sports, athletes should progress slowly and only play if pain free. If pain returns, they should stop for that day and ice. Athletes should continue to gradually increase the amount of time they play as the toe allows until they are able to play an entire game without pain.

References

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*Jay Hanson,
Licensed Athletic Trainer*