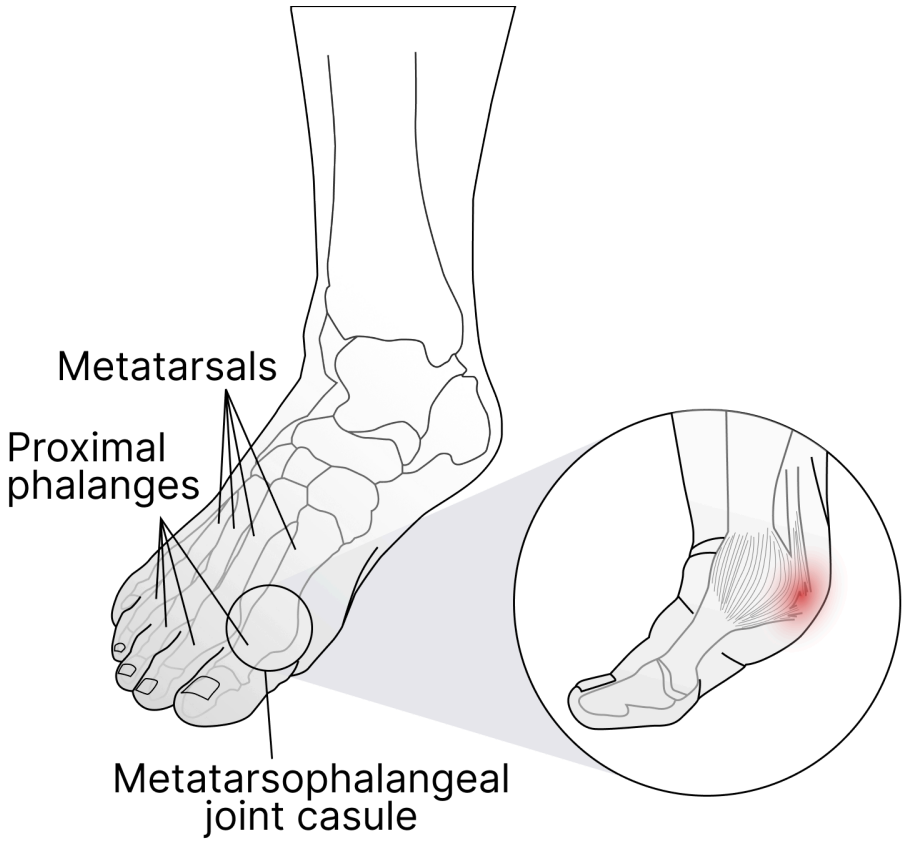
Turf Toe Treatment Guidelines Handout

Turf toe is a sprain of the metatarsophalangeal (MTP) joint in the big toe, typically occurring in contact sports such as football and rugby. This injury involves the sprain or disruption of the plantar capsuloligamentous structures of the first MTP joint, leading to pain, swelling, and weakness during push-off.

Turf toe



Classification and management according to grade

Grade 1

Description

- Sprain of the plantar ligamentous complex.
- **Clinical features:** Localized swelling and mild ecchymosis.
- **Radiographic findings:** Normal.
- **MRI findings:** Intact plantar capsuloligamentous complex with surrounding edema.

Management

- **Initial management**: Rest, ice, compression, elevation, anti-inflammatories.
- **Supportive treatment**: Taping the great toe in a slightly plantarflexed position for compression and to limit painful motion.
- **Return to activity**: Early return to sport within 1–2 weeks.

Grade 2

Description

- Partial tear of the plantar ligamentous complex.
- **Clinical features:** Significant swelling and ecchymosis with some restriction of range of motion.
- **Radiographic findings:** Normal.
- **MRI findings:** Partial thickness high signal in the plantar plate with surrounding edema.

Management

- **Initial management**: Rest, ice, compression, elevation, anti-inflammatories.
- **Immobilization**: Protected weightbearing with a walking boot or cast in plantarflexion for a short period.
- **Gradual return to play**: After 4–6 weeks, with careful monitoring. Passive flexion movements should begin a few days following injury, progressing to low-impact exercise with toe strapping as comfort allows.
- **Platelet-rich plasma (PRP) injections**: Evidence supports the use for Grade 2 injuries, although steroid and local anesthetic injections are not advised.

Grade 3

Description

- Complete tear of the plantar ligamentous complex.
- **Clinical features:** Severe swelling, weakness of great toe flexion, and dorsal translation of the great toe on vertical Lachman test.
- **Radiographic findings:** Possible avulsion fracture of the proximal phalanx, sesamoid fracture, sesamoid retraction, or first MTPJ dislocation.
- **MRI findings:** Full thickness high signal in the plantar plate, possible sesamoid or chondral injury.

Management

- **Initial management**: Rest, ice, compression, elevation, anti-inflammatories.
- **Immobilization**: Cast or boot with the great toe strapped in flexion for up to 8 weeks or longer.
- **Gradual range of motion exercises**: Begin after immobilization with gradual progression. Use stiff-soled shoes or stiff inserts during weightbearing.
- **Return to activity**: Gradual return to sport may take up to 6 months. Ensure at least 50° of comfortable passive dorsiflexion before resuming high-impact activities.
- **Surgical management**: Indicated for patients who fail to improve with conservative treatment. Less than 2% of cases require surgery. Surgical repair aims to restore stability at the first MTPJ.

Surgical indications

- Large capsular avulsion with joint instability
- Retraction of sesamoids
- Sesamoid fracture or diastasis of bipartite sesamoid
- Traumatic hallux valgus deformity
- Chondral injury
- Cock-up toe deformity
- Intra-articular loose body
- Failure of conservative management

Surgical techniques

- **Repair of the plantar plate**: Directly using non-absorbable sutures or to the proximal phalanx using drilled tunnels or suture anchors.
- **Sesamoidectomy**: If necessary, with abductor hallucis transfer to confer stability as a plantar restraint to dorsiflexion and aid MTPJ flexion.
- **Postoperative care**: Non-weightbearing for 4–6 weeks. Early passive range of motion exercises or prevention of dorsiflexion based on surgeon preference. Return to sports training after 10–12 weeks, with competitive sports resuming after at least 4 months.

Additional notes

American Academy of Orthopaedic Surgeons. (2012). *Turf toe*. OrthoInfo. https://orthoinfo.aaos.org/en/diseases--conditions/turf-toe

Cleveland Clinic. (2021, February 1). *Turf toe: Causes, symptoms & treatment*. https://my.clevelandclinic.org/health/diseases/17590-turf-toe

Clutton, J., Winson, D. M., & Tong, A. (2023). Turf toe: A review of mechanism, pathoanatomy and management. *Orthopaedics and Trauma*, *38*(1). https://doi.org/10.1016/j.mporth.2023.11.006

Mass General Brigham Sports Medicine. (n.d.). *Turf toe: Symptoms & treatment*. Retrieved July 8, 2024, from https://www.massgeneralbrigham.org/en/patient-care/services-and-specialties/sports-medicine/conditions/foot-ankle/turf-toe