

Section 6.16

ANKLE AND FOOT PROTOCOLS AND TREATMENT IDEAS

6.16.1 ANKLE INSTABILITY

Inversion injuries, primarily sprains of the ankle are one of the most commonly treated injuries. Lateral ankle sprains are classified into three categories: Grade I, II, and III. A Grade I mild sprain is stretching or minor tearing of a few fibers of the ligament with no loss of function and only slight swelling and tenderness and usually involves the ATFL. A Grade II moderate sprain involves extensive tearing of the ligament fibers, resulting in profuse swelling, pain with movement, and significant tenderness with discoloration and usually involves the ATFL and calcaneofibular ligament. A Grade III severe sprain is painful with significant loss of motion, swelling, bruising, and tenderness

and involves all three lateral ligaments: ATFL, calcaneofibular ligament, and posterior talofibular ligament. The three main treatments for acute lateral ankle ligament injuries are immobilization, functional treatment consisting of early mobilization and an external support (brace, rigid taping), and surgical reconstruction (Kerkhoffs, Handoll, de Bie, Rowe, & Strujis, 2002). Chronic lateral ankle instability occurs in 10% to 20% of people after an acute ankle sprain. Initial treatment is generally conservative; however, if conservative treatment fails and ligament laxity is present, surgery is indicated.

Where's the Evidence?

Conservative treatment consisting of neuromuscular training alone has been shown to be effective in the short term. If surgical correction is performed, studies also show early rehabilitation is superior to 6 weeks post-operation immobilization (de Vries, Krips, Sierevelt, Blankenvoort, & van Dijk, 2011).

Handoll, Rowe, Quinn, and de Brie (2001) found evidence to suggest that wearing a semi-rigid ankle support such as an air cast may even prevent ankle sprains in high-risk sporting activities such as basketball and soccer.

Seah and Mani-Bubu's review of the evidence in 2011 found that for mild-to-moderate ankle sprains, functional treatment options consisting of elastic bandaging, soft casting, taping, or orthoses with associated coordination training was better than immobilization for multiple outcomes measures. They also found that for severe ankle sprains, a short period of immobilization resulted in a quicker recovery. Other findings included that lace-up supports are a more effective functional treatment than elastic bandaging and result in less swelling in the short-term when compared with semi-rigid ankle supports, elastic bandaging, and tape.

Petersen et al.'s review of available evidence through 2013 also supported these ideas stating that the majority of grades I, II, and III lateral ankle ligament ruptures could be managed without surgery. Their systematic review also supported protocol of a short-term immobilization for grade III injuries followed by a semi-rigid brace.

In a study by Janssen, van Mechelen, and Verhagen (2014) of 384 athletes who had previously sustained a lateral ankle sprain, bracing was found to be somewhat superior to neuromuscular training in reducing the incidence but not the severity of self-reported recurrent ankle sprains after usual care.