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## ANTERIOR ANKLE IMPINGEMENT PROTOCOL

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Anterior ankle impingement occurs following trauma or repetitive dorsiflexion, particularly in athletes such as football and soccer players, gymnasts, ballet dancers and runners. It has often been termed "athlete's ankle" or "footballer's ankle". Impingement occurs at the distal tibia and talar neck and can be caused by osteophyte formation or soft tissue impingement. Soft tissue impingement can be the result of recurrent supination injuries or inversion ankle sprains. Physical therapy is among the most prescribed conservative treatment. Surgical measures include arthroscopic debridement. See "Ankle Arthroscopy Protocol" for surgical intervention.

Anterior ankle impingement can be confirmed when 5 of the following are present:

- Pain with activities
- Anterolateral ankle joint tenderness
- Recurrent joint swelling
- Anterolateral pain with forced dorsiflexion and eversion
- Pain during single leg squat
- Lack of lateral ankle stability

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### CONSERVATIVE REHABILITATION

#### **GOALS:**

- Focus on improving mobility
- Manual techniques: Distraction, A/P lateral talocrural glides, A/P distal fibula glides, Cuboid whip, soft tissue mobilization
- Ther Ex: Gastroc/Soleus stretching as tolerated, Single leg balance, Ankle PREs with theraband

### POST OPERATIVE REHABILITATION

#### **WEEK 1:** Postop dressing/boot

- Initiate partial weightbearing with crutches or walker unless there was an osteochondral defect
- Elevate leg above heart 23 hours/day
- Ice behind knee to control pain and swelling
- Acetaminophen (e.g. Tylenol) 500mg every 6 hours alternating with ibuprofen 600mg every 6 hours or meloxicam 15mg once daily. Narcotic pain medication (hydrocodone or oxycodone) should be reserved for breakthrough pain as second line medication. Do not take over 4,000mg of acetaminophen per day.

#### **1<sup>ST</sup> POST OP (5-7 DAYS):** Dressing Change

- Begin ROM exercises

#### **2<sup>ND</sup> POST OP (10-14 DAYS):** Suture Removal

- Full WB in boot, transition to regular shoe as tolerated
- Begin physical therapy if needed/indicated
- Transition to shoe gear WBAT as gait normalizes
- Begin ankle ROM exercises (AROM, BAPS board in seated)
- Gastroc/soleus stretching: begin in long sit NWB and progress to standing stretches

#### **WEEKS 4-6:** Office Visit

- Progress to sports' specific strengthening and return to activity as tolerated
- Begin ankle PREs (theraband 4 way)
- Progress to WB exercises as tolerated (Heel Raises, BAPS board in standing)
- Begin static balance, single leg balance, stable surface proprioceptive training
- Gait should be normalized in shoe gear

#### **WEEKS 6-8**

- Progress proprioceptive training to dynamic/unstable surfaces
- Begin agility training as tolerated

**PHYSICAL THERAPY:** Physical therapy typically begins 2-4 weeks post op to focus on restoration of ROM, edema control, scar reduction, and restoration of proper gait mechanics with emphasis on weight bearing through the first ray in stance phase.

*Developed in conjunction with the physicians at South Bend Orthopaedics*

**DRIVING:** Prior to driving, you must be able weightbear on your right foot without crutches. In addition, you may begin driving at 9 weeks if surgery on right ankle; if left ankle, may drive automatic transmission car when off narcotic pain medication

**FULL ACTIVITY:** This may take 6 to 18 months. There is no guarantee on outcome. All conservative management options have risk of worsening pain, progressive irreversible deformity, and failing to provide substantial pain relief. All surgical management options have risk of infection, skin or bone healing issues, and/or worsening pain. Our promise is that we will not stop working with you until we maximize your return to function, gainful work, and minimize pain.

**SHOWERING:** You may shower with soap and water 1 day after surgery. Avoid lotions, creams, or antibiotic ointments on surgical site until directed by your orthopaedic surgeon. No baths or submerging operative site under water until incision has completely healed.

**SKIN CARE:** Steristrips are typically placed on your incision at your follow up appointment. Steristrips will typically fall off on their own. Remove steristrips in shower after 3 weeks if they remain on incision. Incisions may become sensitive. Some surgical incisions based on their location and patient factors are more likely to require postoperative scar desensitization with physical therapy. You may use Mederma or other skin protectant lotion once incisions have completely healed and approved by your orthopaedic surgeon. Do not place cortisone or other steroid on your incision unless directed by your orthopaedic surgeon. Incisions and surgical site scars are more prone to burn by ultraviolet radiation when out in the sun. Always apply sun screen onto the healed incision once fully healed.

**STOOL SOFTENERS:** While on narcotic pain medication (e.g. Norco/hydrocodone or Percocet/oxycodone) especially within first 72 hours of surgery, you should take stool softener (e.g. Miralax, docusate, senna). Discontinue if you develop loose stool or diarrhea.

#### **REFERENCES**

1. Anterior impingement syndrome in dancers. O'Kane JW and Kadel N. Curr Rev Musculoskelet Med. 2008; 1:12-16.
2. Diagnosis of anterolateral ankle impingement. Comparison between magnetic resonance imaging and clinical examination. Liu SH, Nuccion SL, Finerman G. Am J Sports Med. 1997 May-Jun; 25(3): 389-93.
3. Update on anterior ankle impingement. Vaseenon T and Amendola A. Curr Rev Musculoskelet Med. June 2012; 5 (2): 145-150.