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## **ANKLE SPRAIN Treatment Guidelines**

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### **Functional Clinical Classification of Ankle Sprains**

- **Mild Sprain (Grade I):** Minor ligamentous injury with the maintenance of functional integrity. There is minimal functional loss, localized tenderness and little swelling.
- **Moderate Sprain (Grade II):** There is a tear of some ligamentous fibers. There is moderate functional loss with difficulty ambulating, diffuse swelling, and tenderness localized to the injured region. Mild instability/laxity may be present; however, a firm end-feel is present
- **Severe Sprain (Grade III):** Indicative of a complete rupture of the ligaments. Marked functional loss/disability is present. Most often, there is marked pain and swelling, however, due to capsular disruption these may not be as great as expected. Individuals with this injury are usually unable to bear their weight.

### **Phase I - Initial Treatment (Inflammatory Stage - 0 to 48 hours)**

- **OBJECTIVE:** Limit extent of injury
- **GOALS:**
  - Control pain and edema
  - Maintain soft-tissue/joint mobility and integrity
  - Maintain integrity and function of other areas
  - Patient education regarding the extent of injury and precautions for optimal healing
- **TREATMENT: (PRICE)**
  - **Protection** - support, splinting/bracing, taping
  - **Rest** – weight bearing to tolerance with mild sprains, non to partial weightbearing with crutches for moderate and severe sprains
  - **Ice** - applied until region is numb for 3-5 minutes (15-20 minutes total) every 2-4 hours, through the 4th day, or until swelling has resolved
  - **Compression** - compression stocking/sock, tape, JOBST pump, ACE, etc.
  - **Elevation** - above the heart as frequently as possible until the swelling resolves. In conjunction with ice

### **II. Phase II - Rehabilitation (Late Inflammatory Stage - 24 hours to 4 days)**

NOTE: Grade III immobilized as physician's discretion

- **OBJECTIVE:** Restoration of Motion

- **GOALS:**
  - Control pain and swelling
  - Progressively increase soft-tissue, muscle, and joint mobility
  - Strengthen supporting and related muscles
  - Maintain the integrity and function of associated areas
  
- **TREATMENT:**
  - Continue PRICE as needed
  - Crutch ambulation should be discontinued when there is an adequate reciprocal gait pattern with minimal limp - Gait training should be started at this point
  - As swelling and pain decrease, active and passive ROM and isometric exercise may be started
  - Writing the alphabet with the big toe (frequently)
  - AROM with the foot elevated
  - Gentle Mobilization (grades I/II - Progress to III/IV) as needed
  - Intrinsic foot exercises
  - Gastroc/Soleus stretch with a towel 3 x 30 sec
  - Isometric exercises for all movements utilizing a wall, uninvolved extremity, or pillows (10 reps, 6 sec hold)
  - Low resistance exercise in the sagittal plane (plantar flexion and dorsiflexion) utilizing theraband or surgical tubing
  - NOTE: Pain/discomfort are used as a barometer for exercise intensity (Exercise should be in the painless arc of motion)

### III. Phase III - Advanced Rehabilitation and Return to Activity Subacute - 4 to 21 days

- **OBJECTIVE:** Restoration of endurance and agility
  
- **GOALS:**
  - Resolve remaining swelling and pain
  - Progressively increase endurance and agility
  - Progressive strengthening
  - Progress to functional independence
  - Use patient education and proprioceptive training to prevent re-injury
  
- **TREATMENT:**
  - Begin resistive exercise in all motions using theraband or surgical tubing 30 reps
  - Functional activity utilizing treadmill, Stairmaster, or bike (5-20 minutes)
  - Leg Strength: step-ups, toe raises, leg extension, hamstring curl, leg press
  - Proprioceptive training: steamboats, min-trampoline, fitter
  - Agility drills: carioca, side-to-side step/jumping, rope skipping (1 to 5 minutes), etc.
  - Advance to running, cutting sports, as tolerated
  - Patient education on preventing re-injury



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