Finger Sprain

ICD-9: 842.13 interphalangeal joint sprain

Description: Violent overstretching of one or more ligaments that hold the finger joints together. These sprains may occur at the CMC, MCP, PIP and DIP joints.

Etiology: A twisting and jamming force on the end of the finger, or, a hyperextension or overstretching by radial or ulnar forces.

Physical Examination Findings (Key Impairments):

**Acute Stage / Severe Condition**

- Effusion around the involved joint
- If complete rupture of the capsule/ligament, instability may be present with varus-valgus forces, surgery is usually recommended - followed by physical therapy
- Crepitus in an acutely injured joint may indicate a fracture
- Pain at end range of varus/valgus stress test – stressing collateral ligaments and capsule
- Pain with mid-range active and passive movements
- Tenderness/pain reproduced with palpation/provocation of involved collateral ligament

**Sub Acute Stage / Moderate Condition**

As above with the following differences:

- Moderate swelling and stiffness around the involved joint
- Pain with active and passive movements at end ranges

**Settled Stage / Mild Condition**

As above with the following differences:

- Mild swelling and stiffness around the involved joint
- Pain with active and passive overpressure movements at end ranges
- Potential limitations and pain with joint accessory motion examination
Intervention Approaches / Strategies

**Acute Stage / Severe Condition**

Goals: Prevent further tissue damage  
Decrease swelling and stiffness  
Alleviate pain of the involved joint

- **Physical Agents**  
  Ice pack or ice massage  
  Electrical stimulation  
  Ultrasound (underwater)  
  Ultrasound pulsed low intensity (.10-.15 w/sec)  
  Keep hand elevated

- **External Devices (Taping/Splinting/Orthotics)**  
  A “buddy” taping (taping one finger to its neighbor) to provide stabilization  
  Thermoplastic splinting for 6 weeks continually (remove for therapeutic exercises) and then just at night for 4 more weeks  
  Compressive bandage (or kinesiotape) for swelling control, cohesive crepe bandage (light weight and easy to apply), or neoprene sleeve

- **Therapeutic Exercises**  
  Gentle active range of motion in painfree ranges  
  Note: Joint motion should be encouraged as soon as possible to prevent contractures  
  Improving movement at the distal (uninvolved) joint to assist with motion at the involved joint while avoiding further injury and pain.

**Sub Acute Stage / Moderate Condition**

Goals: Achieve normal ROM  
Return to normal, non-strenuous daily functions

- **Approaches/ Strategies listed above**

- **Therapeutic Exercises**  
  Progress joint active range of motion  
  Strengthening exercises and exercises that stimulate functional activities  
  Slow firm, isolated passive and active range of motion to stretch joints with limited mobility

- **Manual Therapy**  
  Joint mobilization where required to restore normal accessory joint mobility  
  (more commonly indicated following a period of joint immobilization)
Settled Stage / Mild Condition

Goals: Restore normal strength and extensibility of the involved finger
Maintain or return to functional activities of involved joints

- Approaches / Strategies listed above
- Therapeutic Exercises
  Progress strengthening exercises and exercises that stimulate functional activities
- Re-injury Prevention Instruction
  Tape and/or splint vulnerable joints before potentially injurious activities, such as athletic participation

Intervention for High Performance / High Demand Functioning in Workers or Athletes

Goal: Return to optimum level of patient function

- Approaches / Strategies listed above
- Therapeutic Exercises
  Ensure that strengthening exercises will enhance performance and stimulate high performance/high demand functioning

Selected References


