

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

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