
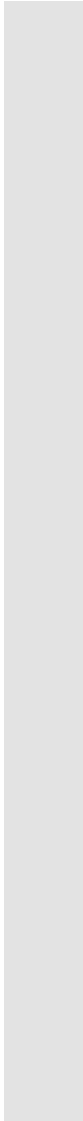


Management of Common Hand Conditions

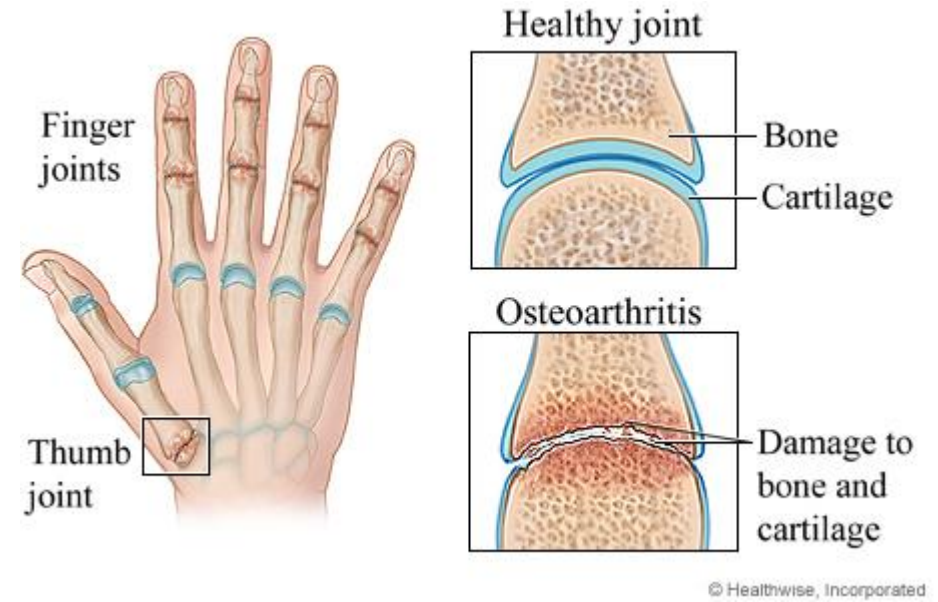


Speaker

- Kim Tait, BSc OT, OT Reg.(Ont.), ACPAC
- Occupational Therapist and Advanced Clinical Practitioner in Arthritis Care
- Over 20 years of advanced knowledge, skills and experience in the assessment and treatment of hand, arthritis and musculoskeletal conditions

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- Overview of various hand conditions
 - Treatment options
 - Management and joint protection strategies

Hand Osteoarthritis



- Most common cause of hand pain
- Degeneration of cartilage "wear and tear"
- Involves the thumbs, PIPs and DIPs
- Deformities, swelling
- Pain, decrease ROM, strength and dexterity

Causes of Osteoarthritis

- Genetics
- Gender: Female > Male hand OA
- Occupation
- Previous injury
- Repetitive use



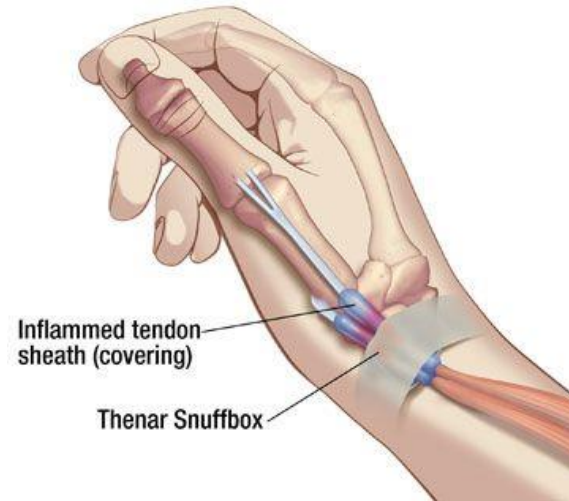
OA Treatment

- Splinting
- Rest and range of motion exercises
- Heat, paraffin wax/ice
- Topical voltaren gel
- Tylenol Arthritis, NSAID (short term), fish oil (Omega 3)
- Cortisone injection
- Surgery (joint replacement, fusion)



Dequervain's Tenosynovitis

De Quervain's Tenosynovitis



- Inflammation of the tendons of the thumb and wrist
- Overuse injury (golf, piano, typing, texting, gardening)
- Pregnancy and childcare

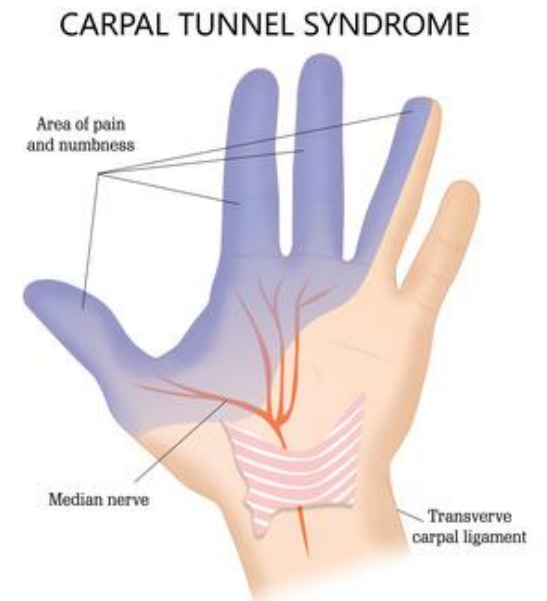
DeQuervain's Treatment

- Splint-immobilize wrist and thumb for 2 weeks
- Rest
- Ice and friction massage
- Gradual ROM exercises, hand use
- Activity modification
- Strengthening
- Cortisone injection
- Surgery



Carpal Tunnel Syndrome

- Compression of the median nerve at the wrist
- Pain, numbness, tingling, "electric shock" feeling
- Thumb, index, middle and ring fingers palm side
- Worse at night and static holding (phone, driving)
- Weak grip, clumsiness, dropping objects

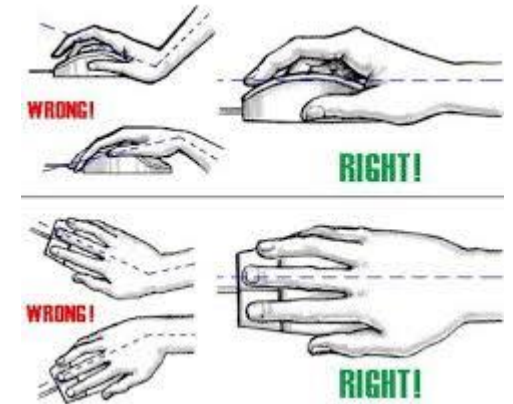
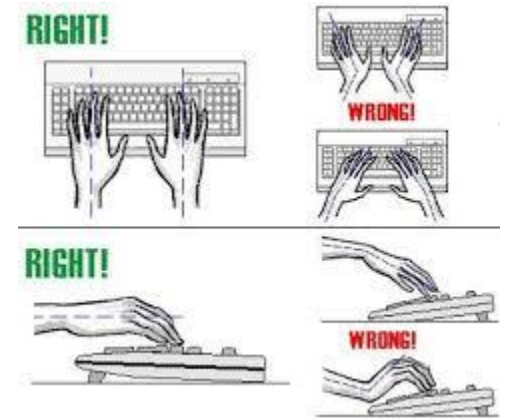
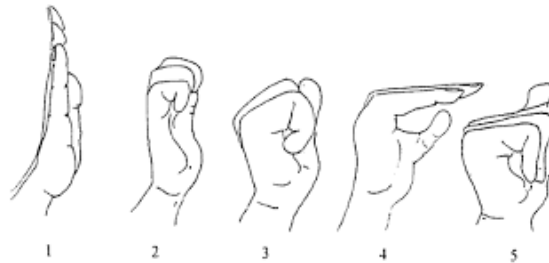


Carpal Tunnel Syndrome Causes

- Repetitive activities (keyboarding/mouse)
- Genetics
- Hand and wrist positions (sleep, occupations)
- Vibration
- Pregnancy
- Health conditions: Rheumatoid Arthritis, Thyroid, Diabetes

Carpal Tunnel Syndrome Treatment

- Splinting at night for several months
- NSAIDS
- Activity modification (work station, posture)
- Exercises: nerve gliding, stretches
- Surgery for moderate to severe compression
- Requires nerve and muscle testing prior



Flexor Tenosynovitis (Trigger Finger)


- One of the most common causes of hand pain
- Inflammation of the flexor tendon sheath
- Nodule can develop
- Flexor tendon catches when attempts to glide through system
- Worse in the morning
- Popping, clicking of finger
- Severe case the finger locks into the palm of the hand



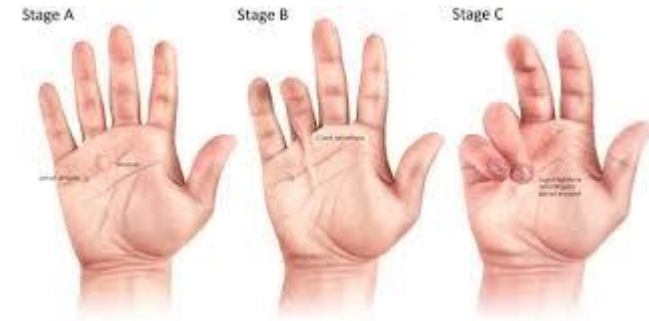
Trigger Finger Causes

- Repetitive gripping
- Medical conditions: Diabetes, carpal tunnel syndrome, arthritis

Trigger Finger Treatment

- **Mild symptoms:** massage over nodule, icing, extensor stretches
 - Splint finger in extension at night
 - Avoid aggravating activities
 - Rest
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- **Severe symptoms:** locking, manually open/unlock finger
 - Cortisone injections (2-3 may be necessary 6 weeks apart)
 - Majority of people improve after 1 injection
 - Surgery

Dupuytren's Disease



- Condition of the palmar fascia
- Overtime the nodules develop, fascia thickens, tightens and causes fingers to be pulled inward
- Can cause thick cords and joint contractures

Dupuytren's Disease

- Progresses slowly
- Mild cases often do not require treatment
- Moderate to severe: surgical and nonsurgical treatments

Dupuytren's Causes

- Gender: Men>women
- Ancestry: more prevalent in people of northern European and Scandinavian ancestry
- Genetic: runs in families
- Alcohol
- Age
- Medical conditions: Diabetes, seizure disorders

Dupuytren's Treatment

- **Non surgical:**
 - Night splinting in extension
 - ROM exercises
 - Cortisone injections
 - Collagenase (enzyme) injections



Dupuytren's Treatment

- Collagenase injections (XIAFLEX)
- New treatment alternative to surgery
- Specifically trained Plastic Surgeon freezes the hand with local anesthetic and injects collagenase medication into the cords
- 1 week later the hand is frozen again and the Surgeon releases the cords and straightens the fingers
- Night splinting 4 weeks



Dupuytren's Treatment

- Surgery
- Severe and recurrent cases
- Palmar fasciotomy (removal of abnormal tissue and cords) under general anesthetic
- Zig zag incision
- Involves surgical risks
- Months of hand therapy and splinting
- 20% chance of recurrence




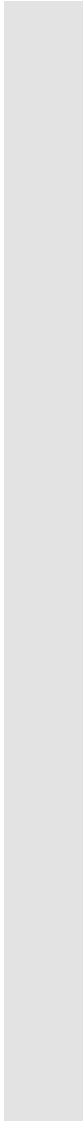
Joint protection strategies

Joint Protection and Energy Conservation



Joint protection strategies

- Balance of activity and rest
- Use assistive devices
- Avoid repetitive movements and static holding
- Avoid tight gripping, twisting
- Use good body mechanics
- Use larger joints to distribute the load
- Maintain range motion

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- Questions?
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