# Orthopaedic/Rheumatological Hand and Wrist Examination



### Introduction

- <u>W</u>ash hands, <u>I</u>ntroduce self, ask <u>P</u>atients name & DOB & what they like to be called, <u>E</u>xplain examination and get consent
- Expose arms above elbows, and place pillow on their lap to rest their hands on.
- General inspection: patient e.g. age, mobility, trauma, risk factors; around bed e.g. mobility aids.

#### Look

- Tops
  - o General: posture, obvious deformity, scars
  - o Bones: swelling and deformities
    - OA changes: Heberden's nodes (DIPJ), Bouchard's nodes (PIPJ)
    - RA changes: loss of knuckle guttering, swan neck deformity (PIP hyperextension + DIP flexion), boutonniere
      deformity (PIP flexion + DIP hyperextension), Z-shaped thumb (IP hyperextension + MCP flexion), ulnar
      deviation, palmar subluxation of MCPs
  - O Skin: scars, thinning, bruising (steroid use), rashes
  - Muscles: wasting, guttering
  - Nails: psoriatic changes (e.g. pitting, onycolysis), nailfold vasculitis, clubbing
- Palms
  - Muscle wasting; palmar erythema (RA); carpal tunnel release scar; swellings e.g. ganglions
- Extensor surface of arm
  - Feel up border: psoriasis, rheumatoid nodules, gouty tophi (whitish nodules of crystallised uric acid under skin around fingers/ elbows)

#### Feel

Ask if any pain first.

- Palms
  - Bulk of thenar/ hypothenar eminences
  - Tendon thickening: palpate flexor tendon sheaths (hypertrophy/contraction = Dupytrens) and fully flex fingers individually and feel tendon base as you release it back down (triggering/tendon lump = trigger digit)
- Tops
  - o Temperature (forearm, wrist and MCP joints)
  - o Squeeze joints for tenderness & feel for bony swellings, effusions, synovitis, defoormities
    - Distil radio-ulnar joint
    - Radial and ulnar styloid
    - Anatomical snuffbox (tenderness = scaphoid fracture)
    - Carpals (bimanual palpation)
    - MCPs (squeeze along row then bimanual palpation if any pain elicited) & base of thumb (squaring = OA)
    - IP joints (bimanual palpation of each joint) (Heberden's/Bouchard's nodes = OA)
  - Tendon tenderness
    - Around radial styloid i.e. 1<sup>st</sup> extensor compartment (tenderness = de Quervain's tenosynovitis)
    - Around ulnar styloid (tenderness = extensor carpi ulnaris tendinitis)

#### Move

- Wrist movements: actively and passively (feel for crepitus): flexion 70° and extension 80° (prayer sign, reverse prayer sign); pronation 70° and supination 80°; radial deviation 20° and ulnar deviation 40°
- Finger movements: straighten fingers fully (against gravity) (difficulty = joint disease, extensor tendon rupture, neurological damage); make fist (cant tuck fingers in = tendon/ small joint involvement); move each MCP and IP joints passively (assess for limited movement and crepitus)
- **Thumb movements:** extension (stretch thumb to opposite side); resisted abduction (point thumb in air); opposition (touch thumb and little finger tip); adduction (thumb to palm)
- SPECIAL TESTS
  - o Phalen's test: reverse prayer sign for 1min (pain/paresthesia = carpal tunnel syndrome)
  - Tinel's test: tap median nerve at its course in wrist (paresthesia = carpal tunnel syndrome)
  - Finkelstein's test: patient adducts thumb to palm and closes fist around it, then examiner tilts wrist into ulnar deviation (pain = de Quervain's tenosynovitis)

## **Function**

- Function: test pincer grip; carry out everyday tasks e.g. undo buttons, write sentence, hold cup
- Brief neurological hand exam: quickly do the motor and sensory parts of the neurological hand exam

# To complete exam

- "To complete my examination I would examine the joint above, and also do a full neurovascular exam would you like me to do this now?"
- Summarise and suggest further investigations you would do after a full history



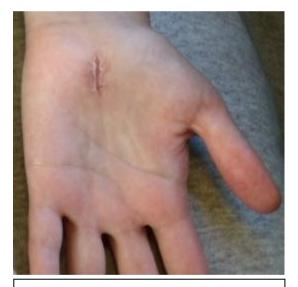
**Heberden's nodes**: Bony swellings of distal interphalangeal joints



**Boutonnière deformity**: flexed proximal interphalangeal joint and hyperextended distal interphalangeal joint



Rheumatoid arthritis: ulnar deviation, Z-thumb, palmar subluxation, bouchard's nodes
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Carpal tunnel release scar



Ganglion



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