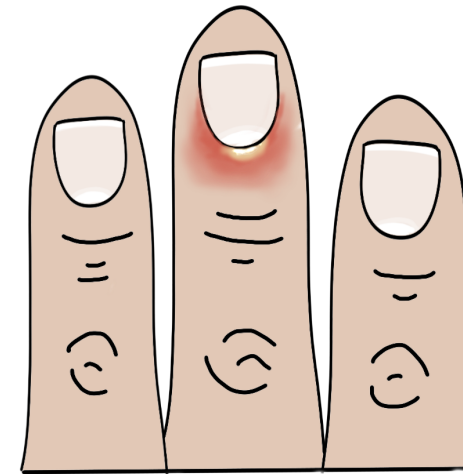


The image features five hands of a light skin tone, positioned around the central text. One hand is at the top left, another at the top right, one at the bottom left, one at the bottom right, and one on the right side. Each hand is in a different pose, with fingers slightly spread or curled, and palms facing towards the center. The background is plain white.

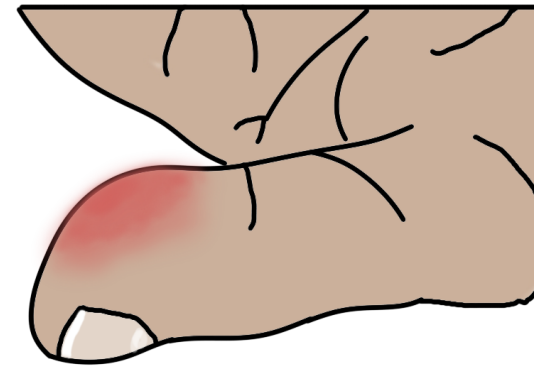
# Hand Infections and Conditions

# Hand infections usually occur in well-defined compartments:

- Under the nail fold (paronychia).
- Pulp space (felon).
- Subcutaneous tissues.
- Deep fascial space.
- Tendon sheaths.
- Joints.



**Paronychia**



**Felon**

- Hand infections Usually occur due to a trauma.
- Occurs more in diabetic and immunocompromised patients.
- The most common organism to cause these infections are staphylococcus bacteria.
- The infected area is red, swollen, hot, and painful.
- If left untreated, infection can spread to other compartments with a risk of hematological and lymphatic spread.



**Lymphangitis**

# Paronychia

- It's an infection under the nail-fold.
- The most common hand infection.
- Risk factors:
  - 1) Hangnails.
  - 2) Nail biting and sucking.
  - 3) Manicures.
  - 4) Penetrating trauma.





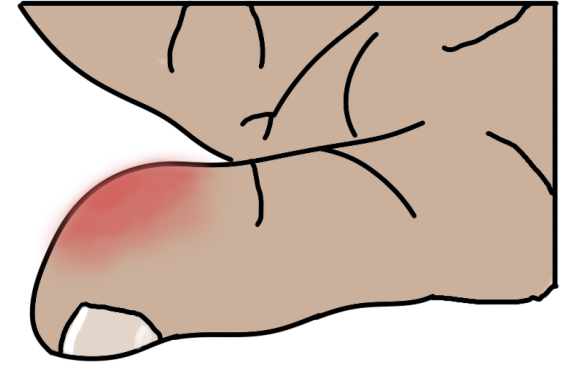
## Treatment:

- Antibiotics.
- Drainage ( if abcess is present).  
inadequate drainage of an acute infection can lead to a **chronic paronychia.**



# Felon

- It's a closed-space infections of the fingertip pulp.
- Usually causes by a prick injury.
- Treatment: antibiotics and drainage.
- If left untreated could cause:
  - 1) osteomyelitis
  - 2) necrosis of the finger pad.



**Finger pad necrosis**

# Herpetic whitlow

- Painful Lesions on a finger or thumb caused by the **herpes** simplex virus.
- Risk factors:
  - 1) genital or oral herpes.
  - 2) health care worker.
- Lesion are small vesicles on fingertips that starts to ulcerate.
- It's self limiting, subsides within 10 days .
- Acyclovir can be effective in early stages.



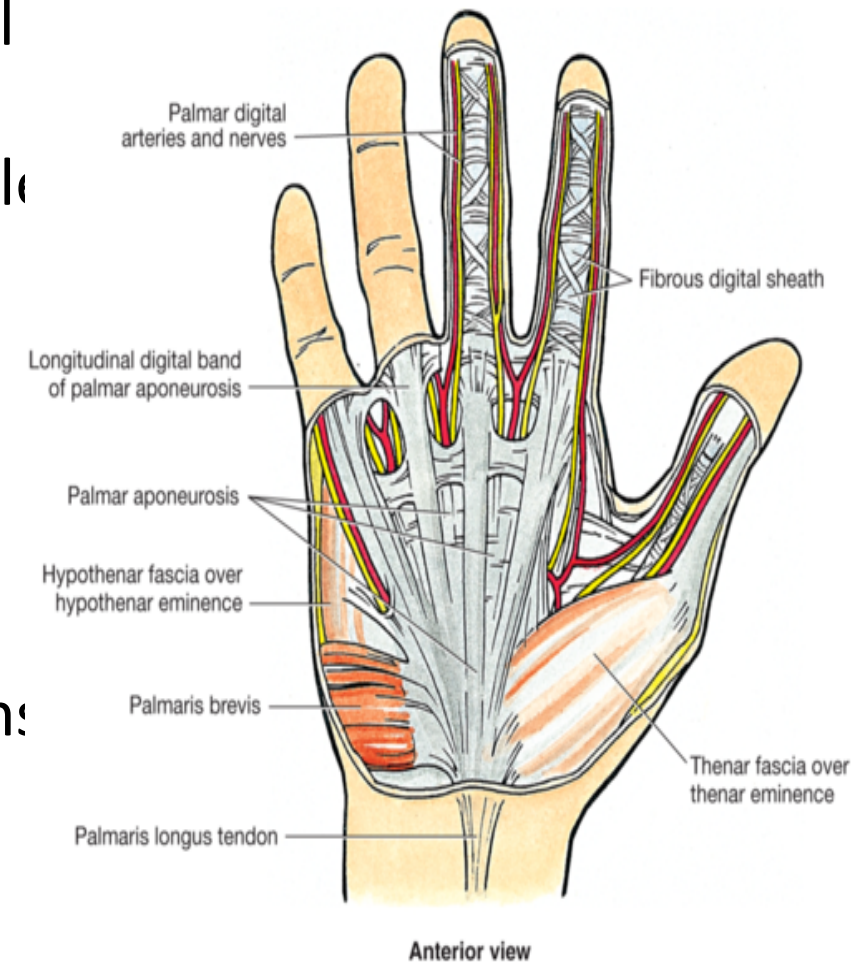
# Suppurative Tenosynovitis

- Inflammation of a tendon and its sheath.
- Common organisms: staphylococcus aureus and streptococcus.
- The affected digit will be painful and swollen, held at a flexion position.
- Treatment:
  - 1) elevation and splinting of hand.
  - 2) IV antibiotics.
  - 3) surgical drainage ( if no improvement).
- If left untreated it can cause vascular occlusion and tendon necrosis.



# Deep fascial space infection

- Infection of the large thenar and mid palmar fascial spaces.
- The palm area will be painful , but usually not swollen while the Dorsum part of the hand will be.
- Treatment:
  - 1) antibiotics.
  - 2) splitage.
  - 3) drainage.
- Infection could extend proximally causing symptoms: median nerve compression.



# Septic arthritis

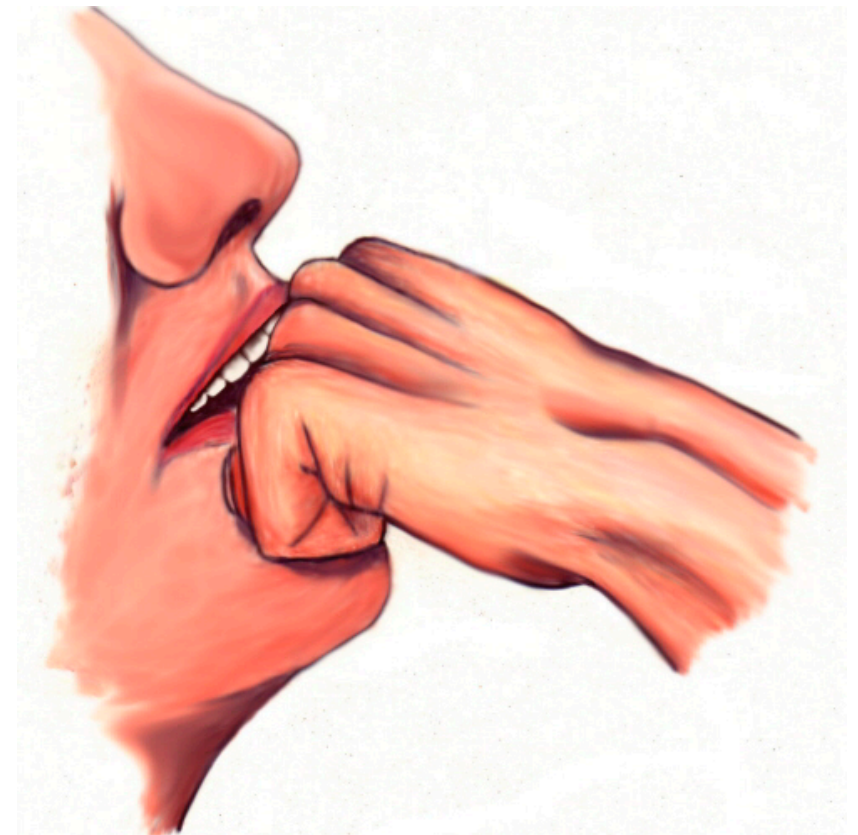
- Infection of any MCP or finger joint.
- Contamination occurs via the bloodstream, iatrogenically, or penetrating trauma.
- patients with damaged or prosthetic joints have an increased risk.
- **Acute** in onset, Classical **triad** of **fever**, **joint pain**, and **restricted range of motion**
- Joint may be **swollen**, **red**, and **warm**.
- **Treatment:**
  - 1) antibiotics.
  - 2) splintage.
  - 3) drainage.
- If left **untreated**: Joint destruction, osteomyelitis and Sepsis can occur.



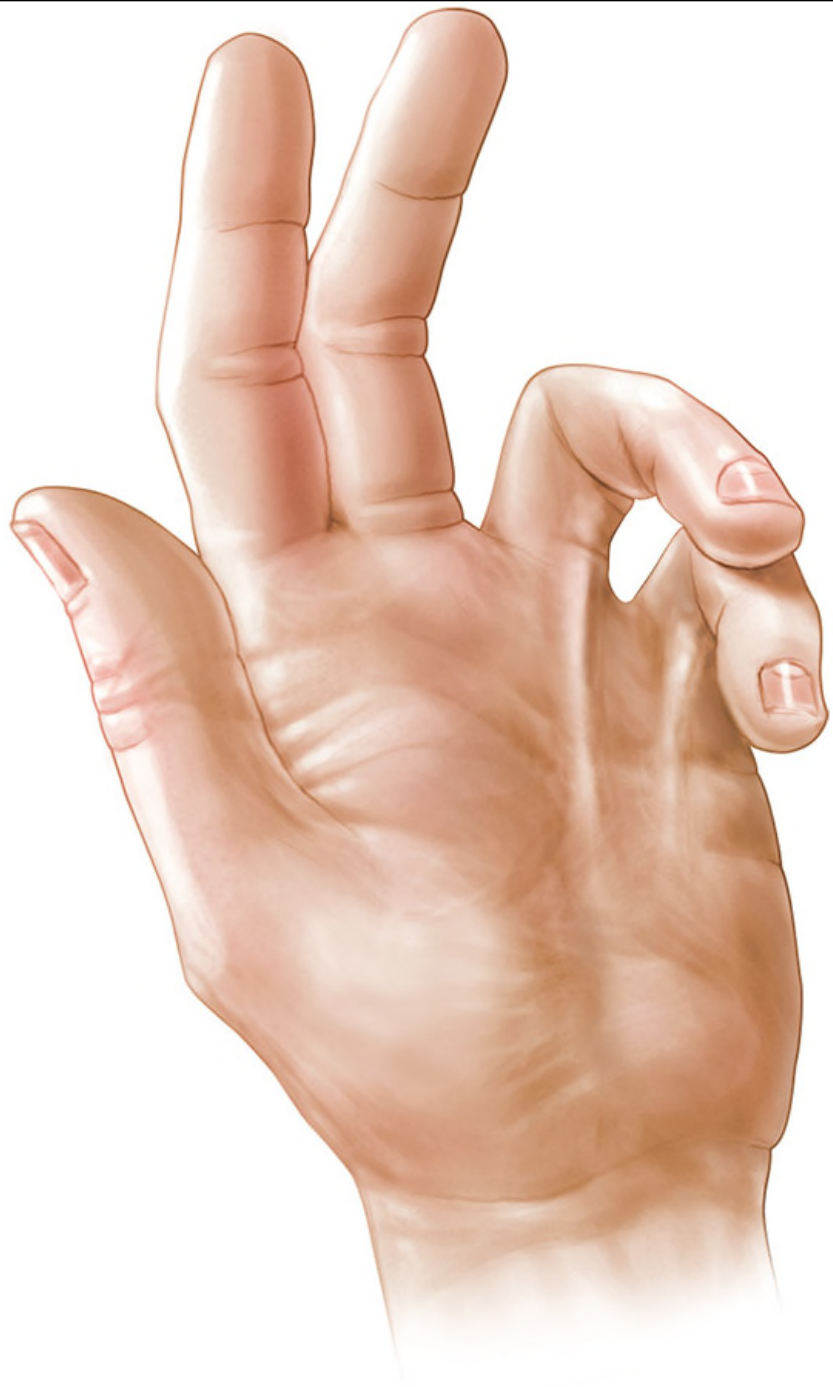


# Bites

- Laceration from either an Animal or a human bite.
- Usually occurs during fist fighting.
- **Human** bites are considered **more** infectious.
- **X-ray** should be obtained to exclude fracture or the presence of tooth fragments, along with swabs for culture.
- **Treatment:**
  - 1) debridement.
  - 2) antibiotics.
  - 3) elevation and splintage.
- In animal bites a person should rule out **rabies**.







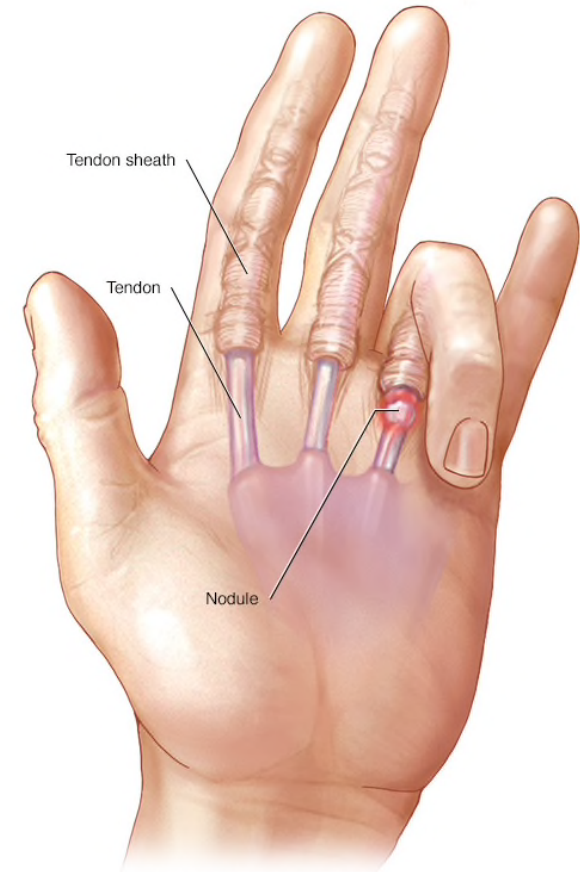
## Common hand conditions

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- Trigger finger .
- Osteoarthritis .
- Dupuytren's contracture.
- Carpal tunnel syndrome.

# Trigger finger

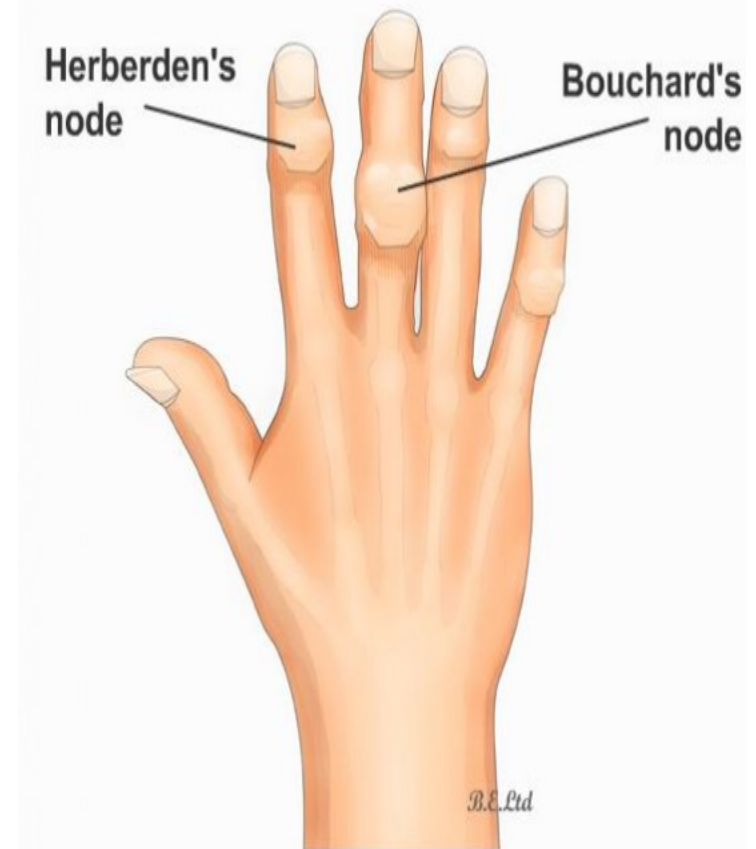
- painful **locking** of a finger in flexed position it's released suddenly with a snap/**pop** on extension.
- Local swelling from inflammation or scarring of the tendon sheath (tenosynovium) around the flexor tendons
- Mostly affects **thumbs** and **ring** fingers.
- **Treatment:**
  - 1) injection of corticosteroid at the mouth of the tendon sheath.  
(recurrence after 6 months is >30%).
  - 2) surgery ( refractory cases).



# Osteoarthritis

- noninflammatory degeneration of the joint complex (articular cartilage, subchondral bone, and synovium) that occurs with old age or from overuse.
- One of the most common joint joint disorders.
- Treatment is usually Symptomatic treatment ( cortisone injections in severe pain)

Distal interphalangeal joints	Proximal interphalangeal joints.
Most common in postmenopausal women	Less common
Swollen painful distal joints , spreads to all fingers of both hands	Swollen painful joints , associated with osteoarthritis elsewhere in the body
Bony thickening ( Heberden's nodes)	Bony thickening ( Bouchard's nodes)



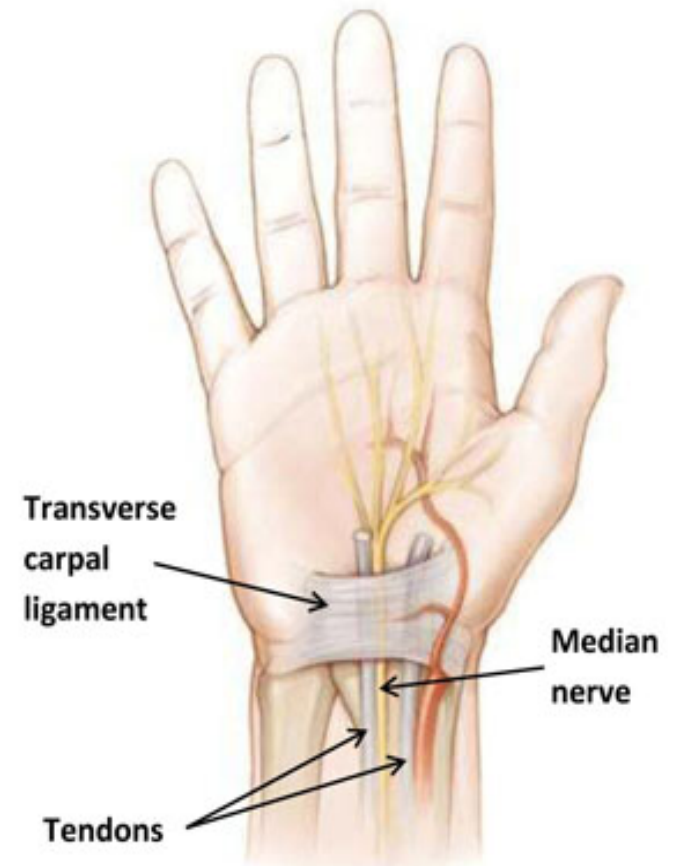
# Dupuytren's contracture

- Dupuytren's contracture is a common fibroproliferative disorder affecting the palmar fascia mainly of the 4th, and 5th fingers
- The cause is still unknown , but it's is genetic.
- Males>females.
- **Features:**
- Skin puckering near the proximal flexor crease is the earliest sign.
- Flexion contracture of affected finger/s.
- **Treatment:**
  - 1)Conservative therapy.
  - 2)Corticosteroids injections.
  - 3)Surgery:  
Indicated in patients with functional disability due contractures.  
(Fasciotomy, Fasciectomy).



# Carpal tunnel syndrome

- Carpal tunnel syndrome is a peripheral neuropathy caused by compression of the **median nerve** by the **transverse carpal ligament**.
- carpal tunnel is a narrow fibrous structure at the level of the palmar aspect of the wrist. It contains flexor tendons and the median nerve.
- It occurs more commonly in
  - 1)previous distal radius fracture.
  - 2)Manual workers (vibrating tools).
  - 3)Pregnancy.
  - 4)Diabetes.

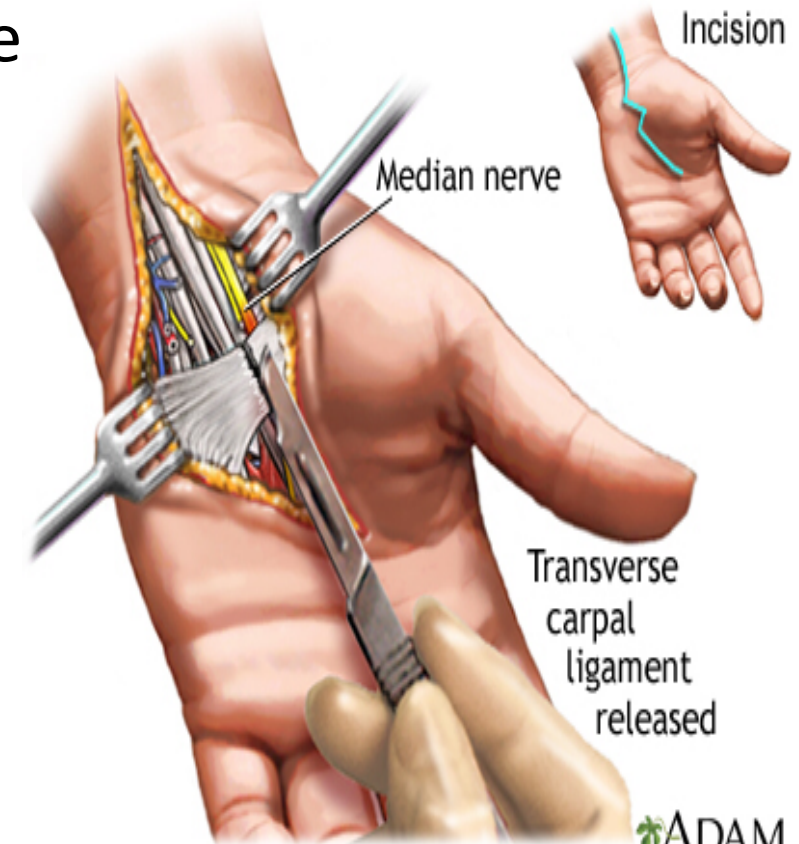


- **Clinical features:**

- 1) Sensory symptoms on the palmar surface of the thumb, index, and middle finger; and radial half of the ring finger (paresthesia, numbness)
- 2) Weakened grip.
- 3) Thenar atrophy.

- **Treatment :**

- 1) conservative treatment: immobilization with splints, steroid injections, NSAID.
- 2) surgical release of the transverse carpal ligament.





Thank  
you

