

Common MSK Disorders

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Trigger Finger (Stenosing Tenosynovitis)

Definition

- Painful condition where a finger **catches, locks, or snaps** during flexion and extension.
- Caused by **thickening of the flexor tendon or A1 pulley**, preventing smooth tendon gliding.



Trigger Finger (Stenosing Tenosynovitis)

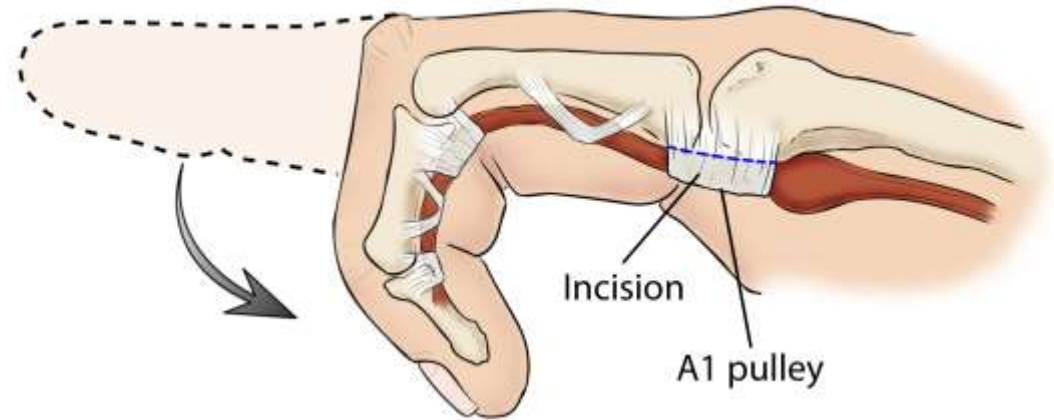
Typical Patients:

- Age 40–60 years
- Women > men
- Associated with:
 - Diabetes
 - Rheumatoid arthritis
 - Repetitive hand use

Trigger Finger (Stenosing Tenosynovitis)

Pathology

- Flexor tendon swelling or nodule
- A1 pulley thickening
- Tendon cannot pass smoothly through pulley → snapping / locking



Trigger Finger (Stenosing Tenosynovitis)

Symptoms

- Pain at the **base of the finger (MCP region)**
- **Clicking or snapping** with movement
- **Finger locking in flexion**
- Morning stiffness
- Patient may need to **use the other hand to extend the finger**

Trigger Finger (Stenosing Tenosynovitis)

Clinical Signs

- **Tenderness over A1 pulley** (palmar MCP area)
- **Palpable tendon nodule**
- **Triggering during flexion–extension**
- Sometimes **locked finger**

Diagnosis

- **Clinical diagnosis**
- Imaging rarely needed

Trigger Finger (Stenosing Tenosynovitis)

Treatment

Conservative

- Rest / activity modification
- NSAIDs
- Splinting



Steroid injection

- Injection into flexor tendon sheath at A1 pulley
- Success rate 60–90%



Trigger Finger (Stenosing Tenosynovitis)

Surgery

- A1 pulley release
- For persistent or severe cases



Carpal Tunnel Syndrome

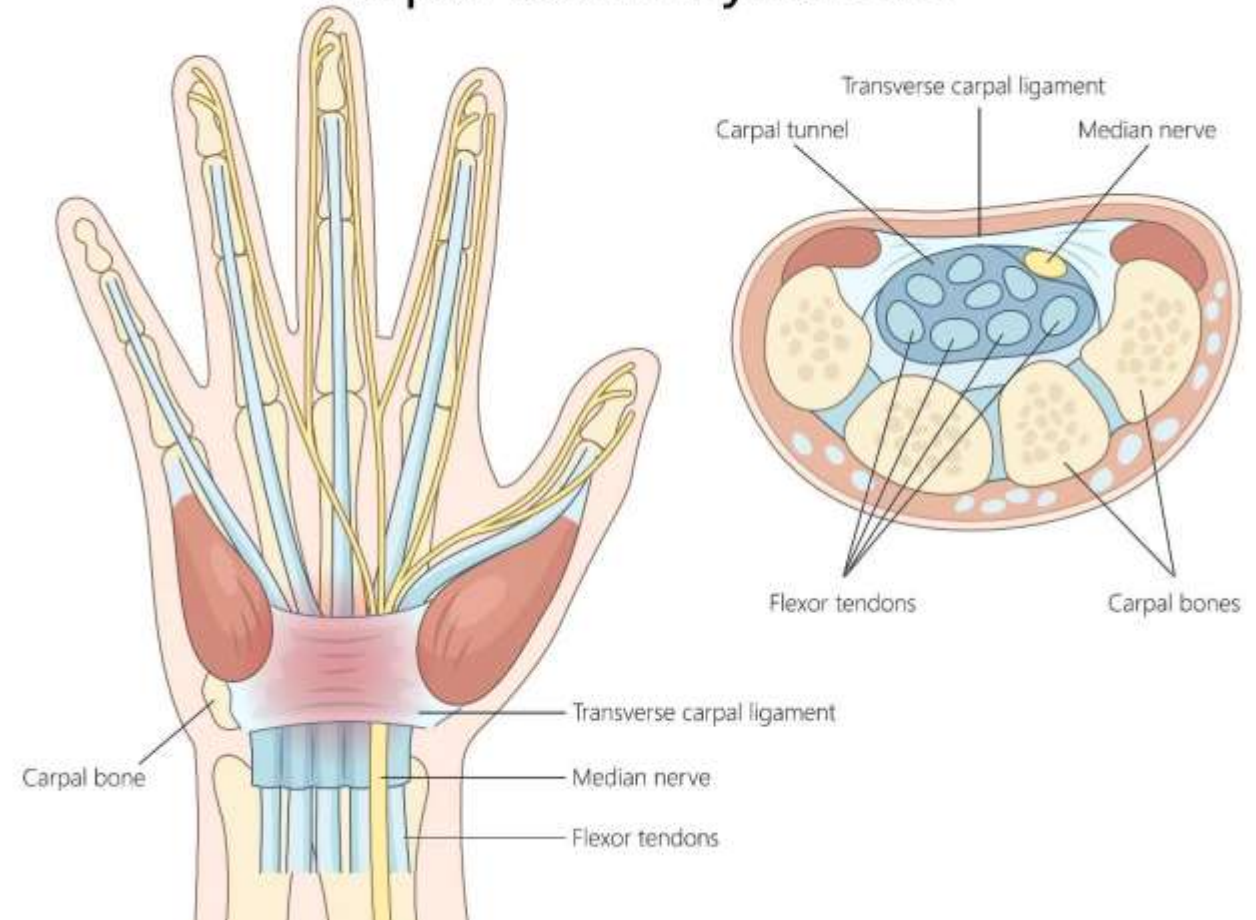
Definition

- Compression of the **median nerve** in the carpal tunnel at the wrist.

Anatomy

- **Carpal tunnel contents**
 - Median nerve
 - 9 flexor tendons
 - 4 FDS
 - 4 FDP
 - 1 FPL
- **Roof: Transverse carpal ligament (flexor retinaculum)**

Carpal Tunnel Syndrome



Carpal Tunnel Syndrome

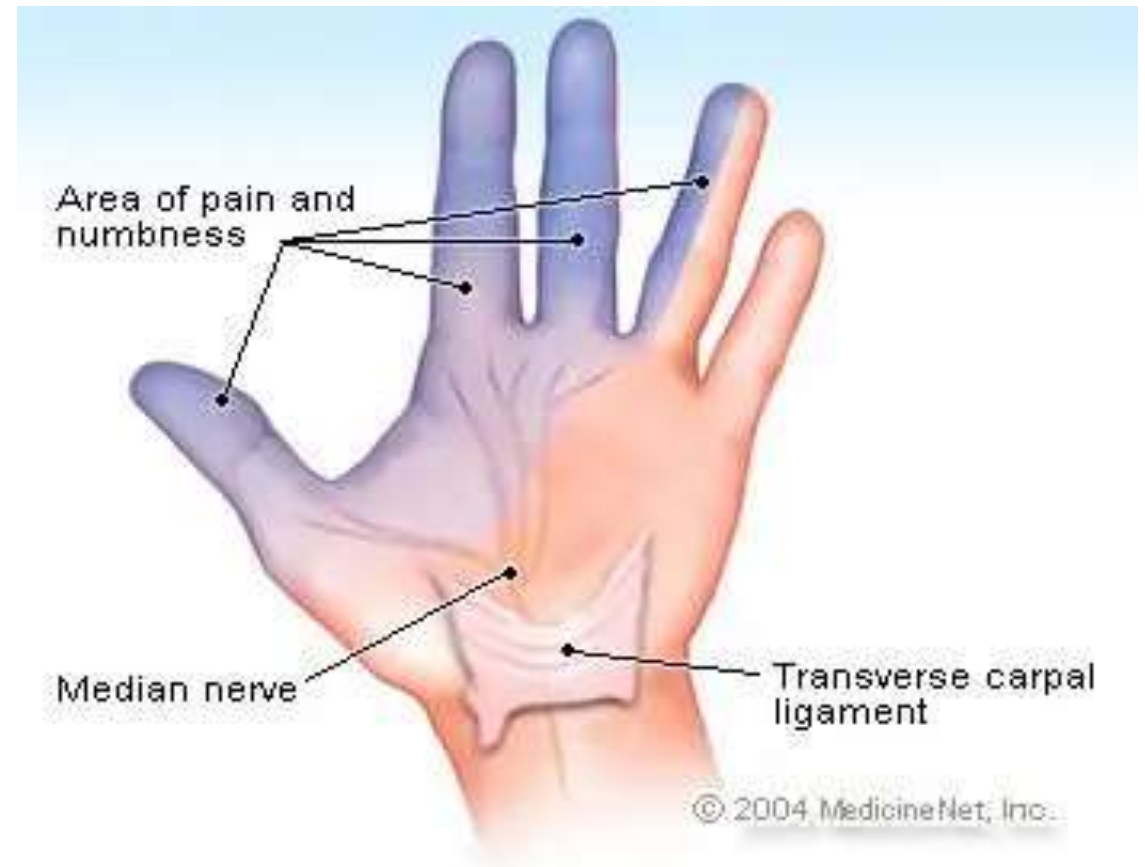
Risk Factors

- Female > male
- Age 30–60
- Diabetes
- Hypothyroidism
- Pregnancy
- Rheumatoid arthritis
- Repetitive wrist activity

Carpal Tunnel Syndrome

Symptoms

- **Numbness and tingling**
- Distribution: **thumb, index, middle, radial half of ring finger**
- **Night symptoms common**
- Hand shaking may relieve symptoms (**flick sign**)
- Weak grip in advanced cases



Carpal Tunnel Syndrome

Carpal Tunnel Syndrome

Signs

- **Thenar muscle wasting** (late)
- Sensory loss in median nerve distribution
- **Weak thumb opposition**

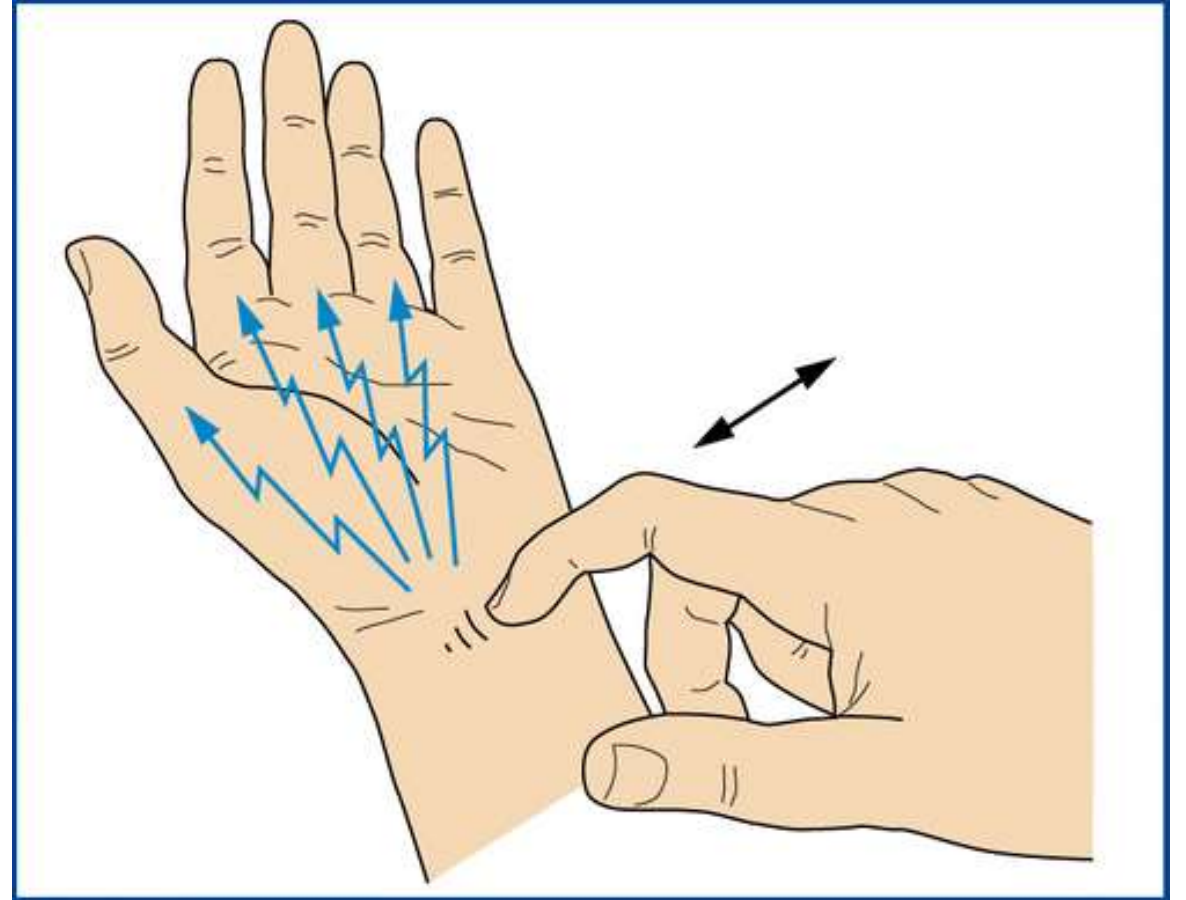


Carpal Tunnel Syndrome

Clinical Tests

Tinel sign

- Tapping over carpal tunnel → paresthesia



Carpal Tunnel Syndrome

Phalen test

- Wrist flexion 60 sec → symptoms



Carpal Tunnel Syndrome

Durkan compression test

- Direct pressure over carpal tunnel

Diagnosis

- Usually **clinical**
- **Nerve conduction study** confirms severity



Carpal Tunnel Syndrome

Treatment

- **Conservative**

- Wrist splint (neutral position) at night
- Activity modification
- NSAIDs

- **Steroid injection**



Carpal Tunnel Syndrome

- **Surgical**
 - **Carpal tunnel release**
 - **Division of transverse carpal ligament**



Ganglion Cyst

Definition

- **Benign cystic swelling** arising from a **joint capsule or tendon sheath**.
- Filled with **thick gelatinous (mucinous) fluid**.

Common Locations

- **Dorsal wrist** (most common – ~70%)
- **Volar wrist**
- Base of fingers
- Foot / ankle

Ganglion Cyst

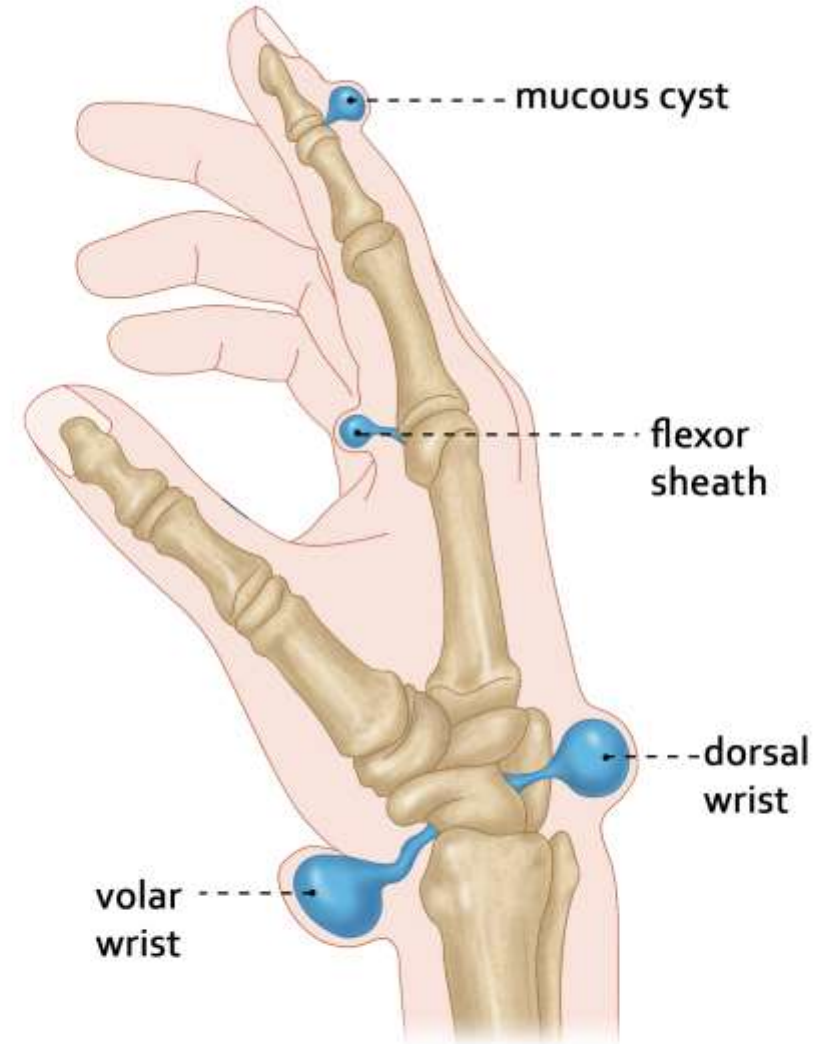
Typical Patients

- Young adults (20–40 years)

- Female > male

Pathology

- Outpouching of **synovial tissue**
- Degeneration of connective tissue → **mucin-filled cyst**
- Often connected to nearby **joint capsule**



Ganglion Cysts

Ganglion Cyst

Symptoms

- Visible **round swelling**
- May **change in size**
- Often **painless**
- Sometimes:
 - aching pain
 - weakness with wrist use
 - cosmetic concern



Ganglion Cyst

Clinical Features

- **Smooth, round lump**
- **Firm but slightly fluctuant**
- Usually **transilluminates**
- May be **attached to deeper structures**
- Moves slightly with wrist motion



Ganglion Cyst

Diagnosis

- **Clinical**
- Ultrasound or MRI only if uncertain

Treatment

- **Observation**
 - Many resolve **spontaneously**
- **Aspiration**
 - Needle aspiration \pm steroid
 - Higher **recurrence rate**



Ganglion Cyst

- **Surgical excision**
 - Remove **cyst + stalk**
 - Lower recurrence



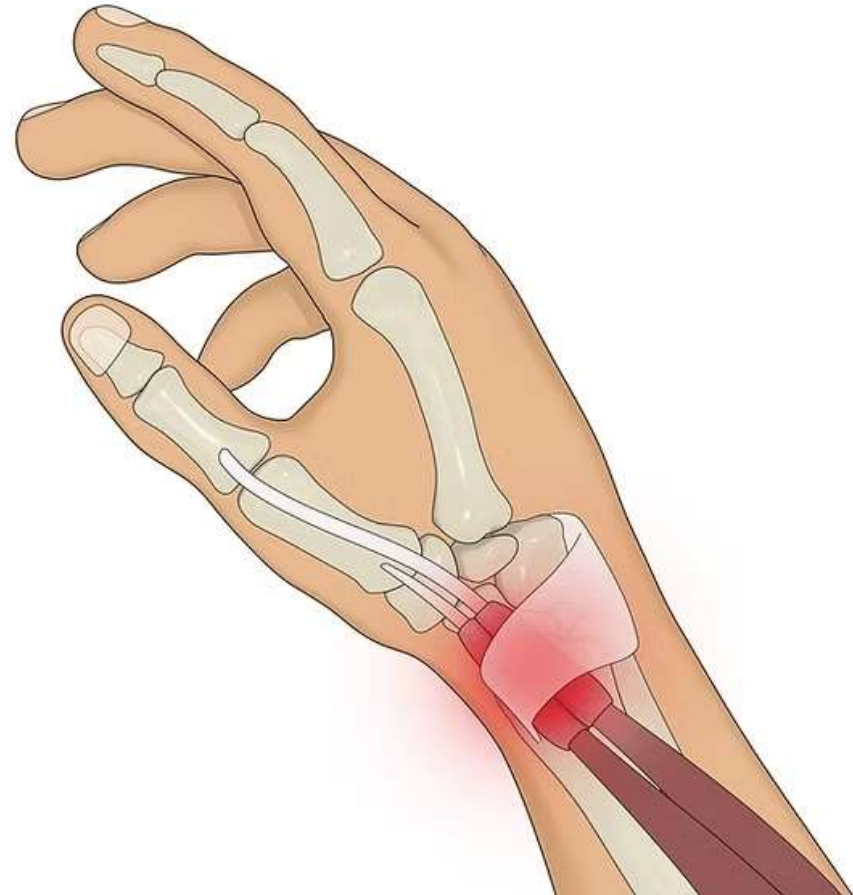
De Quervain's Tenosynovitis

Definition

- **Stenosing tenosynovitis of the first dorsal wrist compartment.**

Tendons Involved

- **Abductor Pollicis Longus (APL)**
- **Extensor Pollicis Brevis (EPB)**



De Quervain's Tenosynovitis

Typical Patients

- Women > men
- Age 30–50
- Common in new mothers (“mother’s wrist”)
- Repetitive thumb or wrist use

Cause

- Repetitive **thumb abduction and extension**
- Thickening of tendon sheath → **restricted tendon gliding**

De Quervain's Tenosynovitis

Symptoms

- **Pain at radial side of the wrist**
- Pain worsens with:
 - Gripping
 - lifting objects
 - thumb movement
- Swelling near **radial styloid**

Clinical Signs

- **Tenderness over radial styloid**
- Pain with **thumb motion**
- Sometimes mild swelling



De Quervain's Tenosynovitis

Special Test

- **Finkelstein test**
 - Patient makes a **fist with thumb inside**
 - Wrist is **ulnar deviated**
 - Causes **sharp pain at radial styloid**

Diagnosis

- Clinical



De Quervain's Tenosynovitis

Treatment

Conservative

- Thumb spica splint
- Activity modification
- NSAIDs



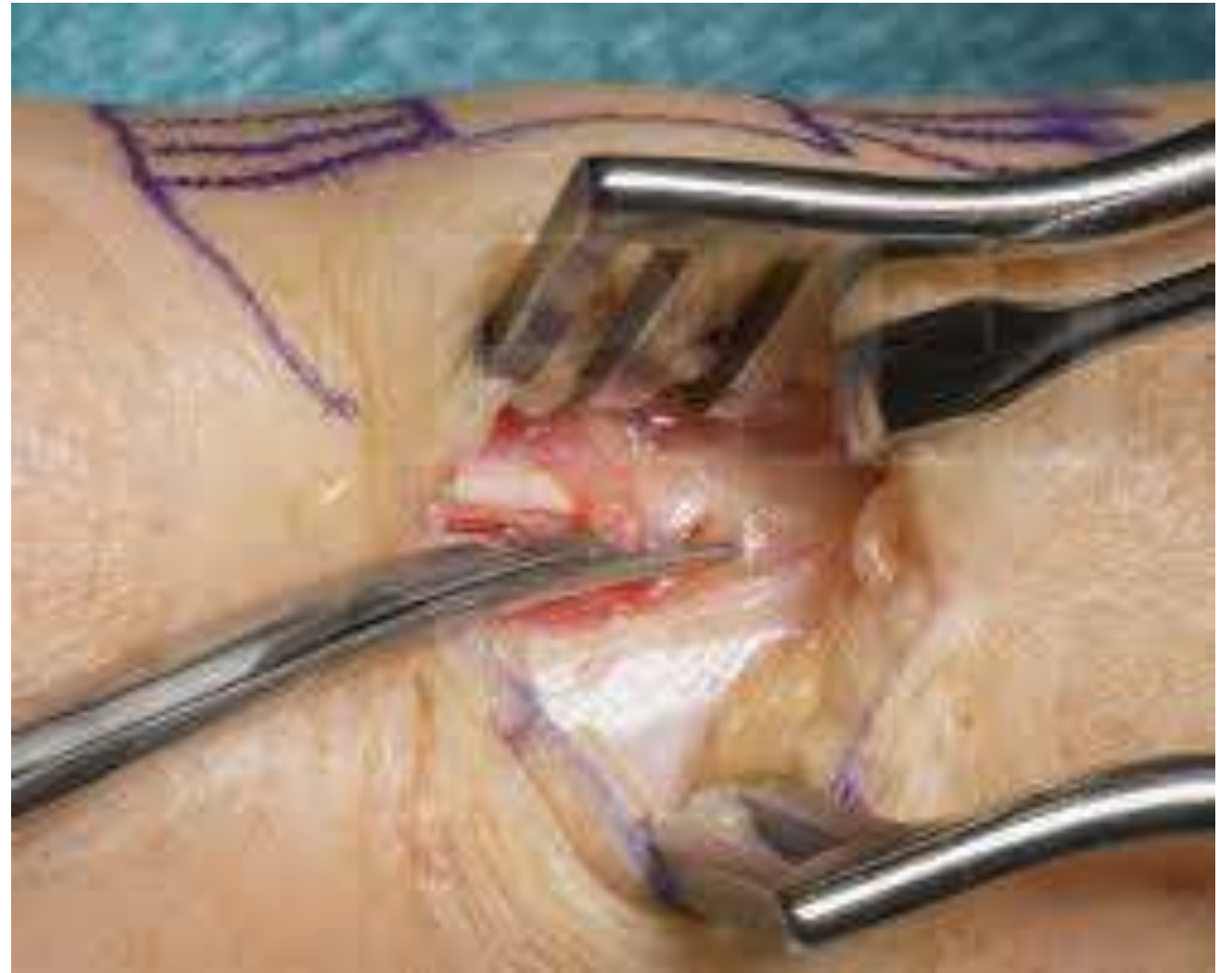
- Injection
- Steroid injection into first dorsal compartment
- High success rate



De Quervain's Tenosynovitis

Surgical

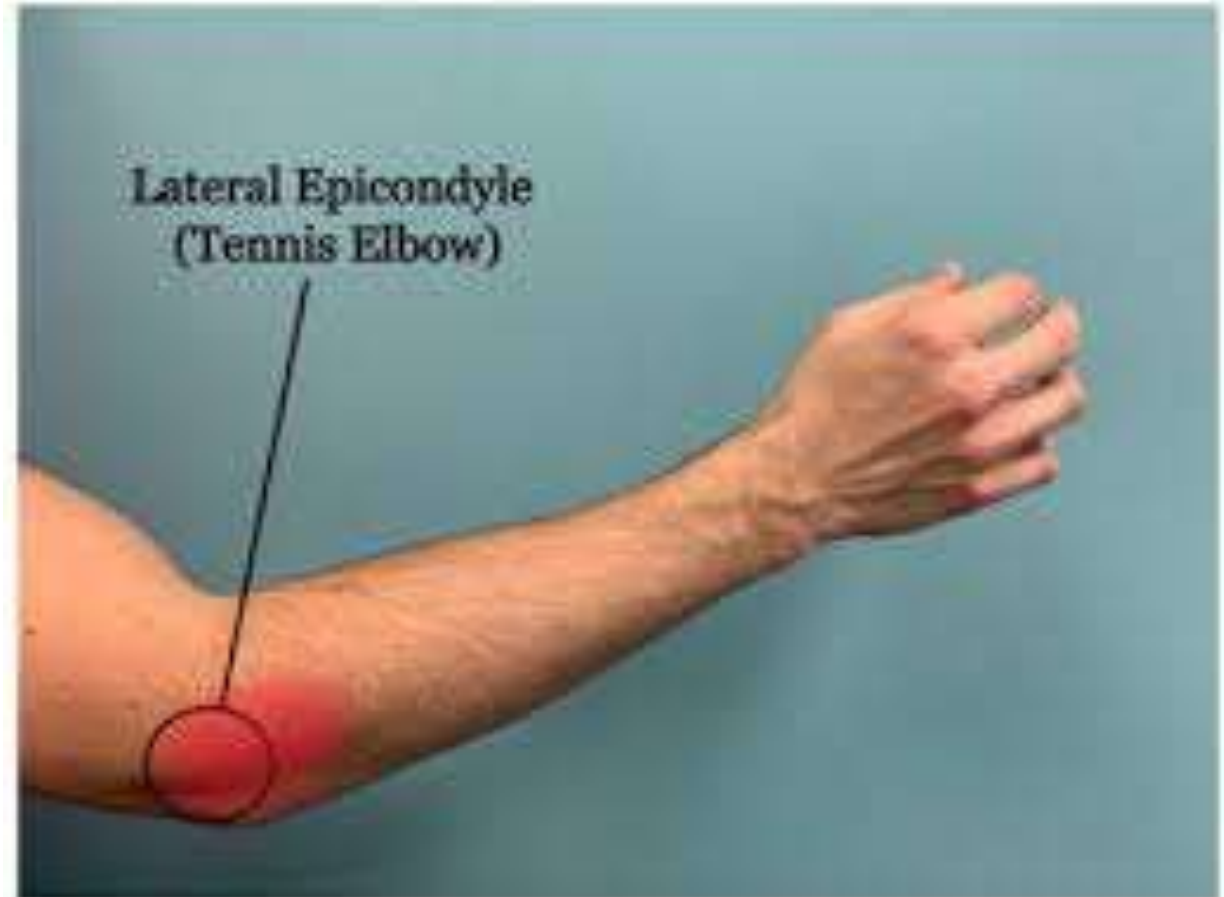
- Release of first dorsal compartment
- For persistent cases



Lateral Epicondylitis (Tennis Elbow)

Definition

- **Overuse tendinopathy** of the **common extensor tendon** origin at the **lateral epicondyle**.
- Most commonly involves **Extensor Carpi Radialis Brevis (ECRB)**.



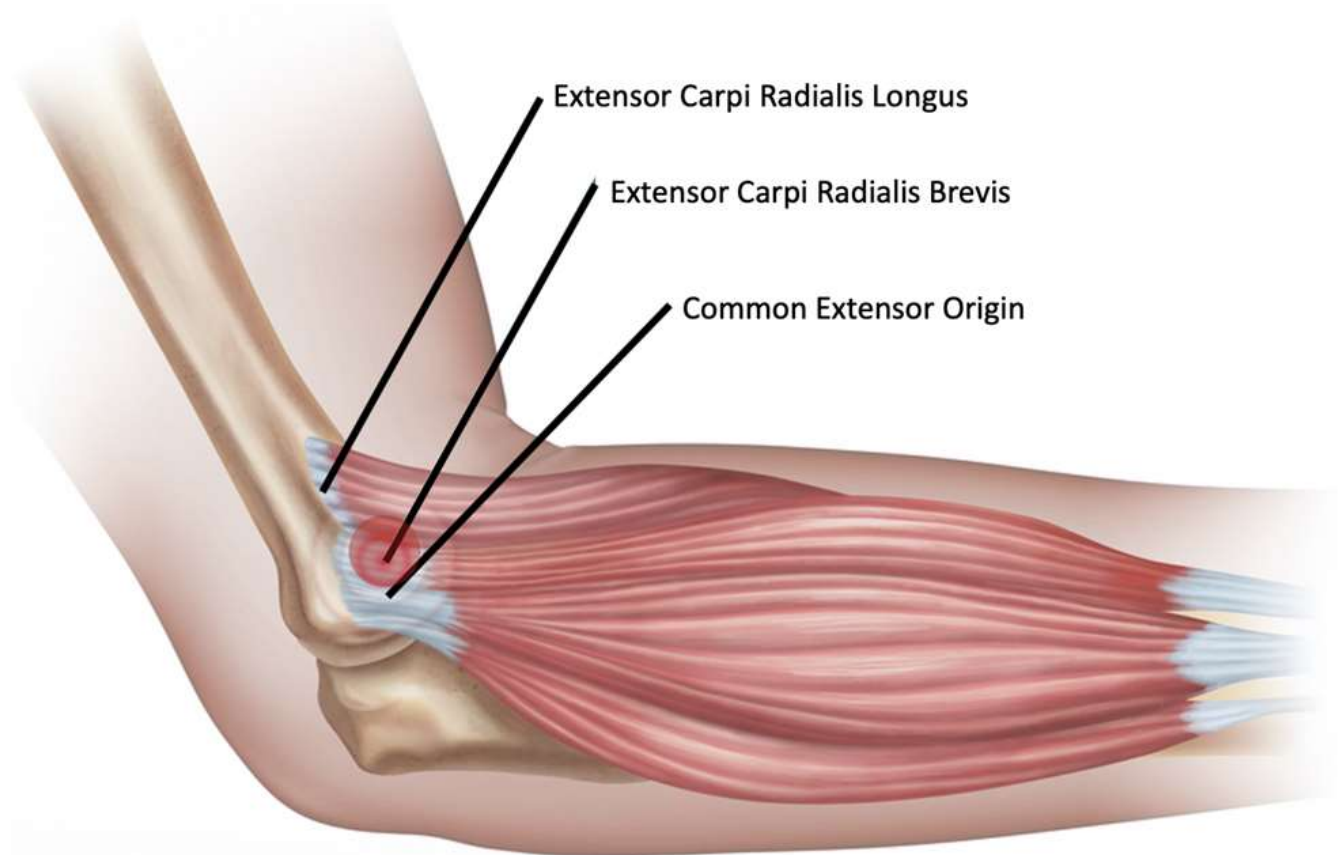
Lateral Epicondylitis (Tennis Elbow)

Typical Patients

- Age 35–55 years
- **Repetitive gripping or wrist extension**
- Not only athletes → many **manual workers**

Pathology

- **Degenerative tendinosis (not true inflammation)**
- Micro tears at the **ECRB origin**



Lateral Epicondylitis (Tennis Elbow)

Symptoms

- **Lateral elbow pain**
- Pain worsens with:
 - Gripping
 - lifting objects
 - wrist extension
- Pain may radiate **down the forearm**

Lateral Epicondylitis (Tennis Elbow)

Clinical Signs

- Tenderness over lateral epicondyle
- Pain with resisted wrist extension
- Pain with gripping



Lateral Epicondylitis (Tennis Elbow)

Special Tests

Cozen test

- Resisted wrist extension → pain

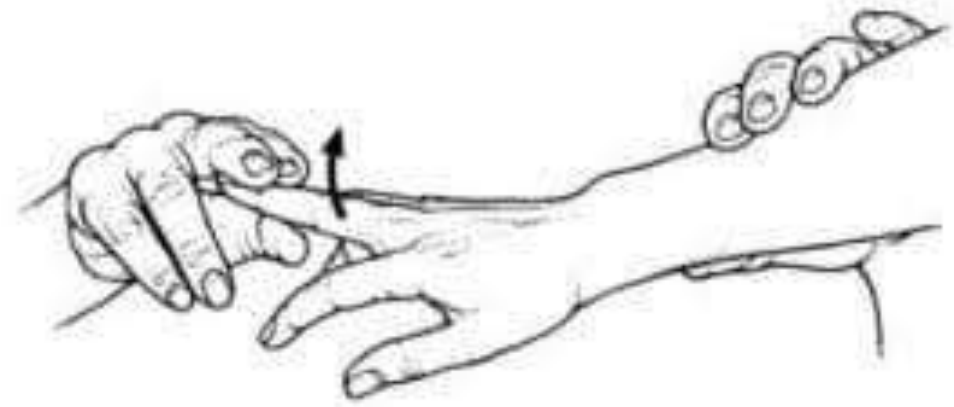


Lateral Epicondylitis (Tennis Elbow)

Maudsley test

- Resisted extension of **middle finger**

Diagnosis - Clinical



Lateral Epicondylitis (Tennis Elbow)

Mill test

- Passive wrist flexion with elbow extension illicit pain.

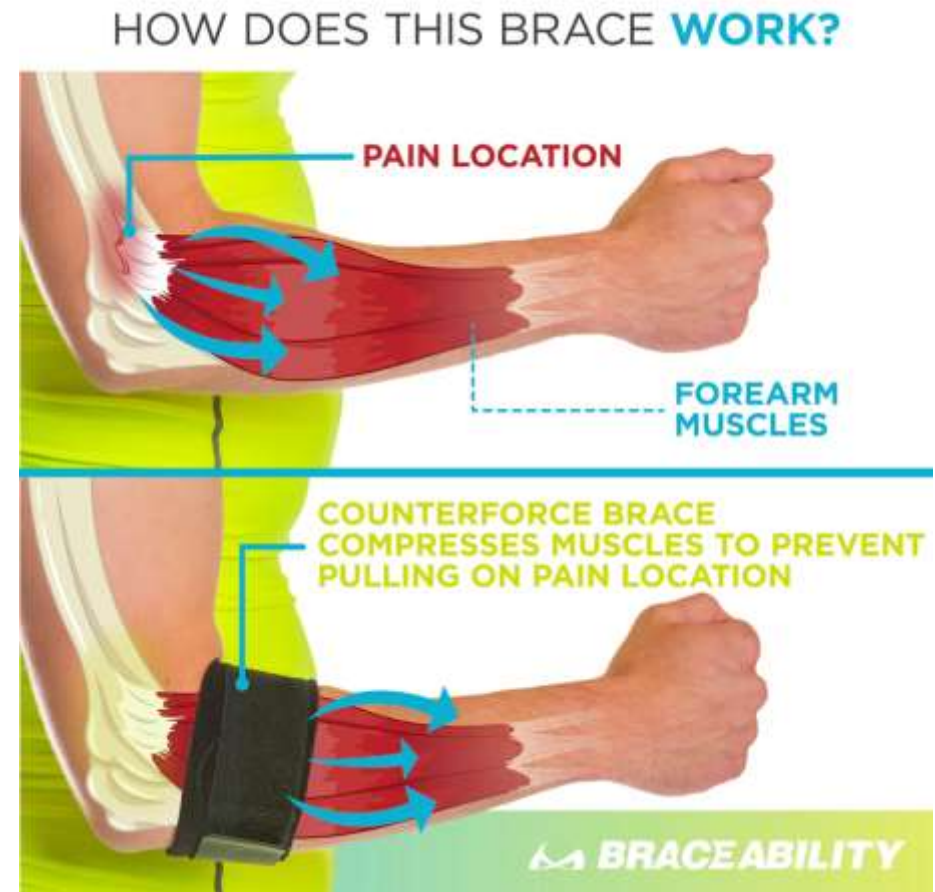


Lateral Epicondylitis (Tennis Elbow)

Treatment

Conservative (most cases improve)

- Activity modification
- NSAIDs
- Physiotherapy
- **Counterforce brace**
- Stretching / strengthening exercises



Lateral Epicondylitis (Tennis Elbow)

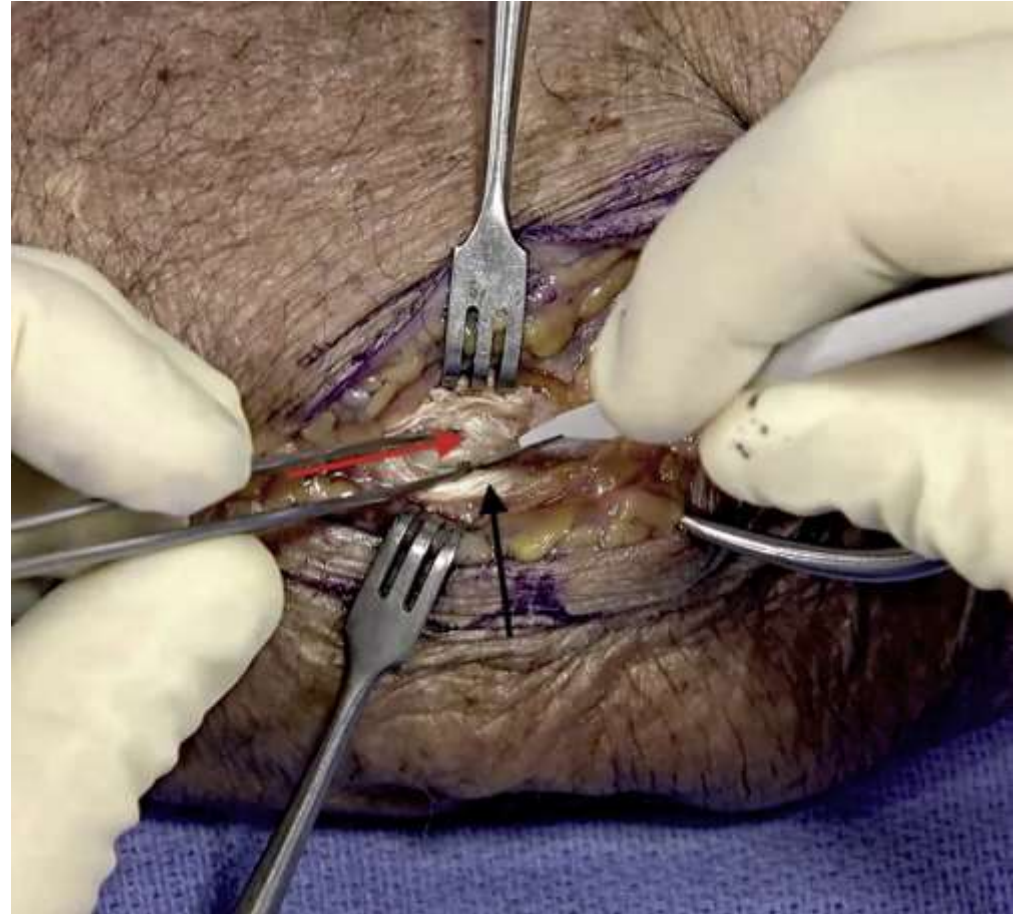
Injection

- **Steroid injection** (short-term relief)
- PRP sometimes used



Lateral Epicondylitis (Tennis Elbow)

- Surgery
- For persistent symptoms (>6–12 months)
- Debridement of ECRB origin



Shoulder Tendinitis (Rotator Cuff Tendinitis)

Definition

- **Inflammation or degeneration of rotator cuff tendons**, most commonly the **supraspinatus tendon**.
- Common Age >40 years
- Often related to **overuse** or **impingement**



Shoulder Tendinitis (Rotator Cuff Tendinitis)

Causes

- Repetitive **overhead activity**
- **Subacromial impingement**
- Degenerative changes
- Trauma or overuse

Shoulder Tendinitis (Rotator Cuff Tendinitis)

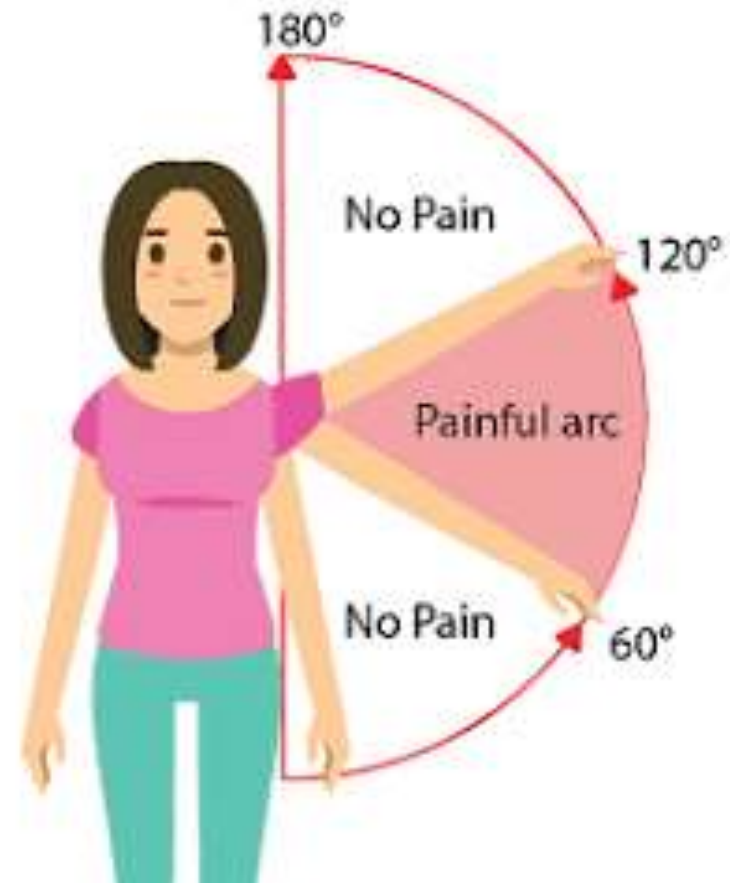
Symptoms

- **Shoulder pain**, especially with movement
- Pain worse with **overhead activity**
- **Night pain** (lying on affected side)
- Difficulty lifting the arm

Shoulder Tendinitis (Rotator Cuff Tendinitis)

Clinical Signs

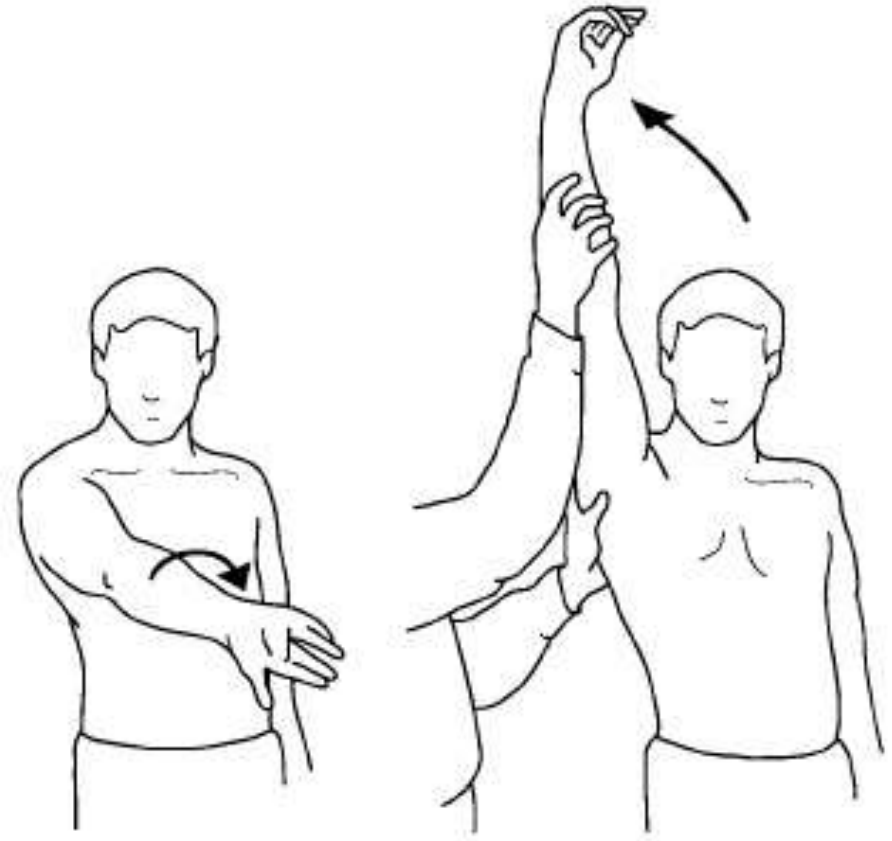
- Painful arc of motion **60–120° abduction**
- Tenderness over **greater tuberosity**
- Weakness with abduction



Shoulder Tendinitis (Rotator Cuff Tendinitis)

Special Tests

- **Neer impingement test**



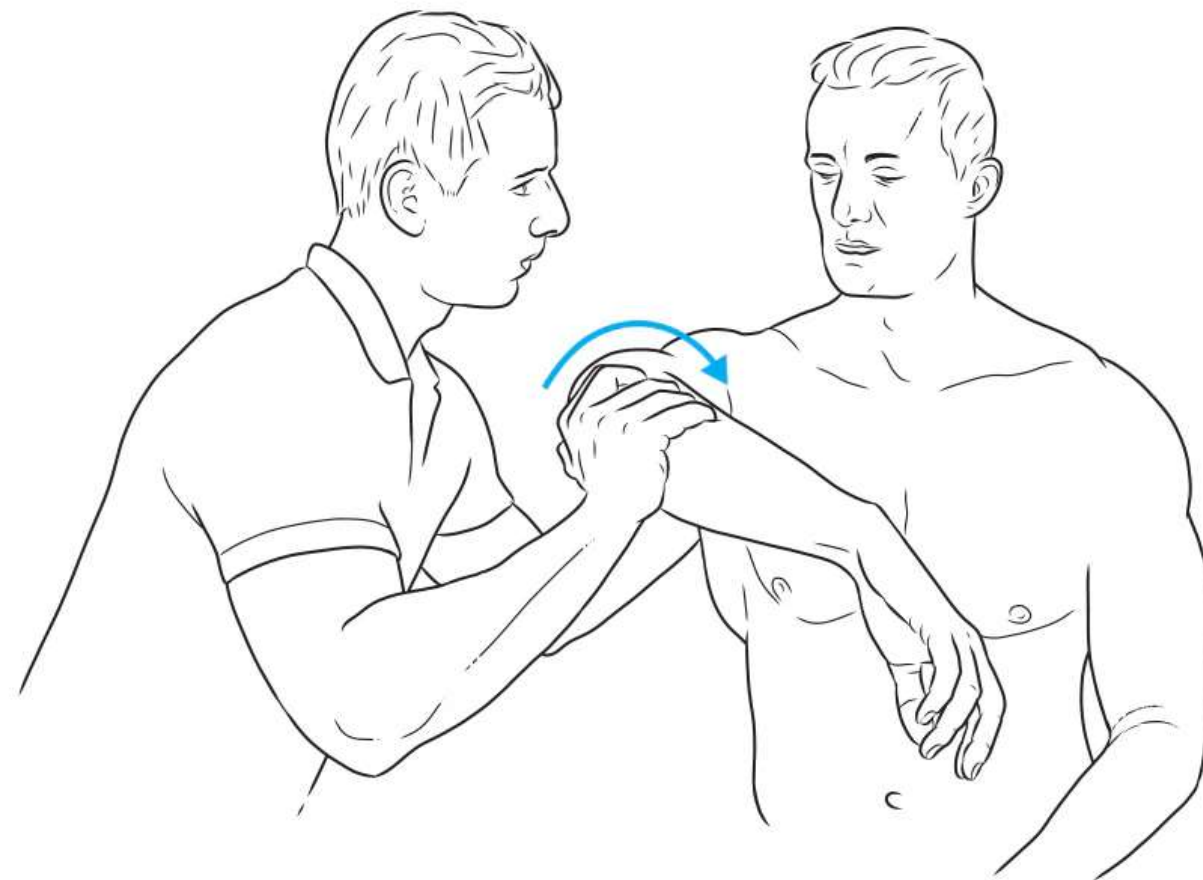
Shoulder Tendinitis (Rotator Cuff Tendinitis)

- Empty can test (Jobe test)



Shoulder Tendinitis (Rotator Cuff Tendinitis)

- **Hawkins–Kennedy test**



Shoulder Tendinitis (Rotator Cuff Tendinitis)

Diagnosis

- Mainly **clinical**
- Ultrasound or MRI if:
 - suspected tear
 - symptoms persist

Shoulder Tendinitis (Rotator Cuff Tendinitis)

Treatment

Conservative

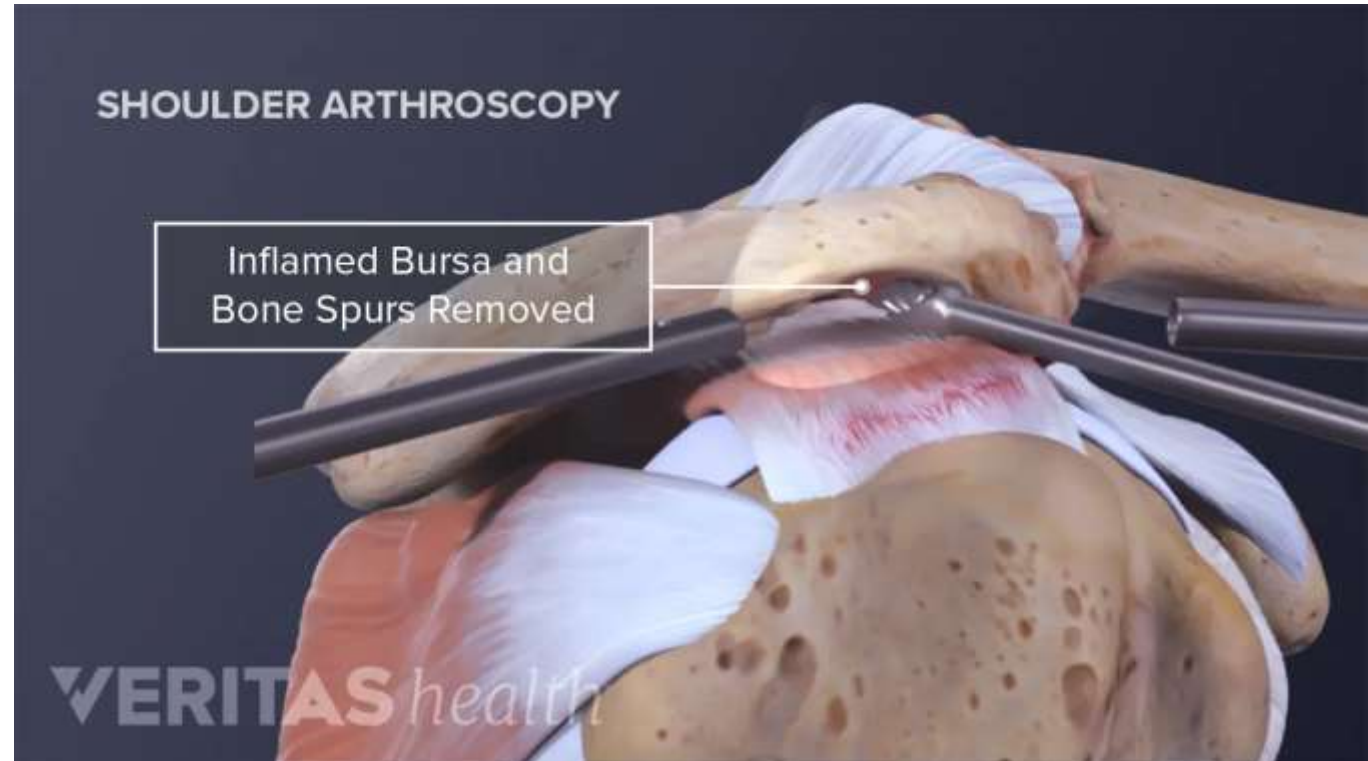
- Rest / activity modification
- NSAIDs
- **Physiotherapy**
- **Subacromial steroid injection**



Shoulder Tendinitis (Rotator Cuff Tendinitis)

Surgical

- If persistent symptoms
- Arthroscopic **subacromial decompression** or cuff repair if tear present



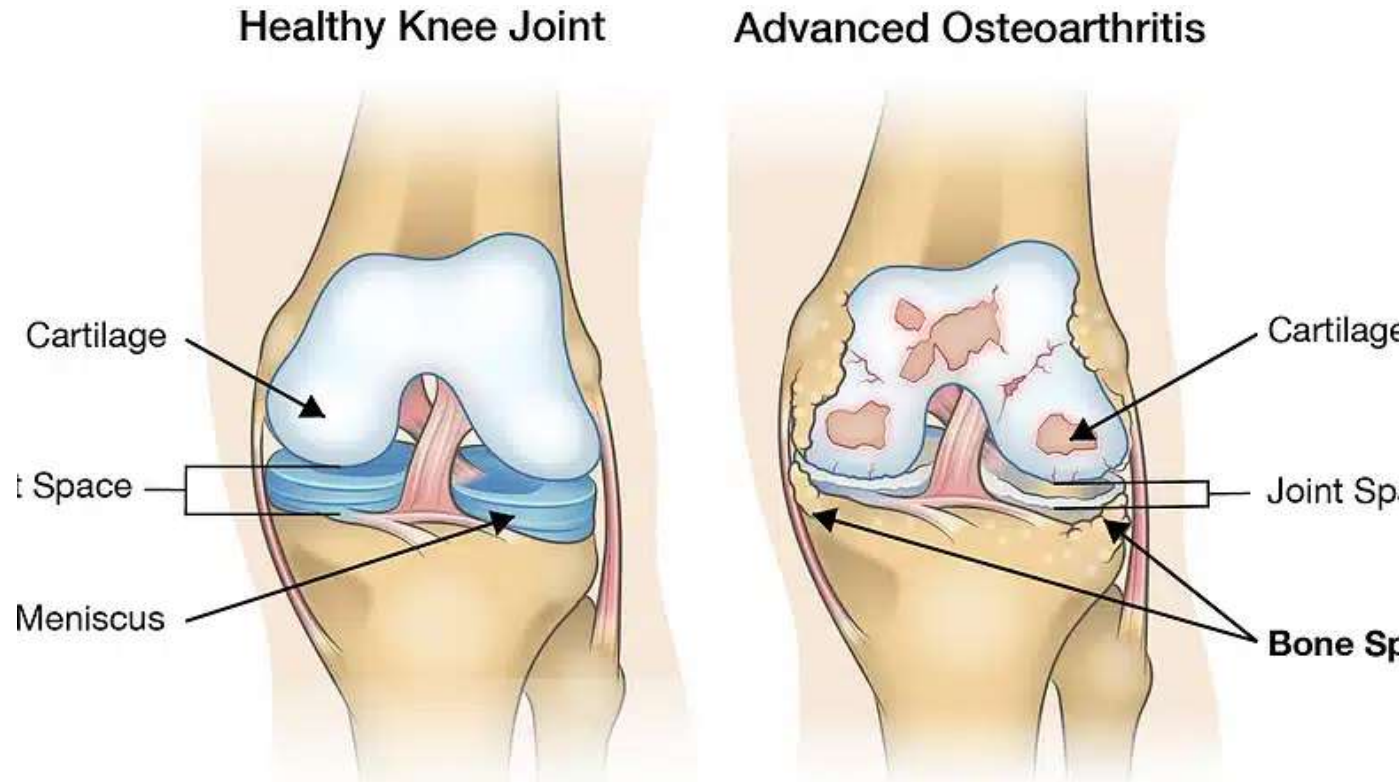
Knee Osteoarthritis

Definition

- **Degenerative joint disease** characterized by **progressive cartilage loss**, osteophyte formation, and joint space narrowing.

Common Age Usually >50 years

More common in women



Knee Osteoarthritis

Risk Factors

- Age
- Obesity
- Previous knee injury
- Meniscal injury
- Malalignment (varus / valgus)
- Genetic predisposition

Knee Osteoarthritis

Symptoms

- Knee pain with activity
- Morning stiffness (<30 minutes)
- Crepitus
- Decreased walking tolerance
- Pain improves with rest

Knee Osteoarthritis

Clinical Signs

- Joint line tenderness
- Crepitus with movement
- Reduced range of motion
- Varus deformity common
- Mild joint swelling
- Diagnosis



Knee Osteoarthritis

X-ray findings

- Joint space narrowing
- Osteophytes
- Subchondral sclerosis
- Subchondral cysts

Typical view:

- **Weight-bearing knee X-ray**

ARTHRITIC KNEE



HEALTHY KNEE



Knee Osteoarthritis

Treatment

Non-operative

- **Weight reduction**
- Physiotherapy
- NSAIDs
- Knee brace
- **Intra-articular steroid injection**
- Hyaluronic acid injection



Knee Osteoarthritis

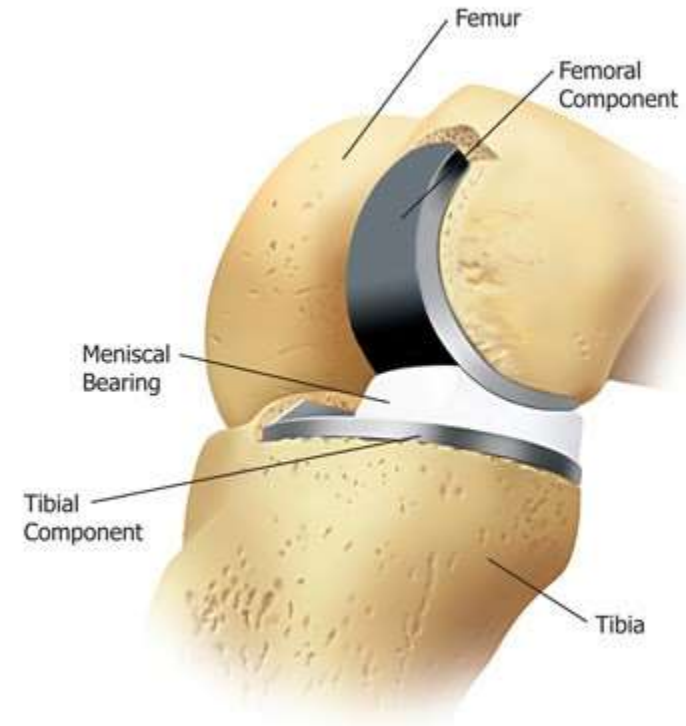
Surgical

- High tibial osteotomy (young patients with varus)



Knee Osteoarthritis

- Unicompartmental knee replacement



Knee Osteoarthritis

- Total knee arthroplasty



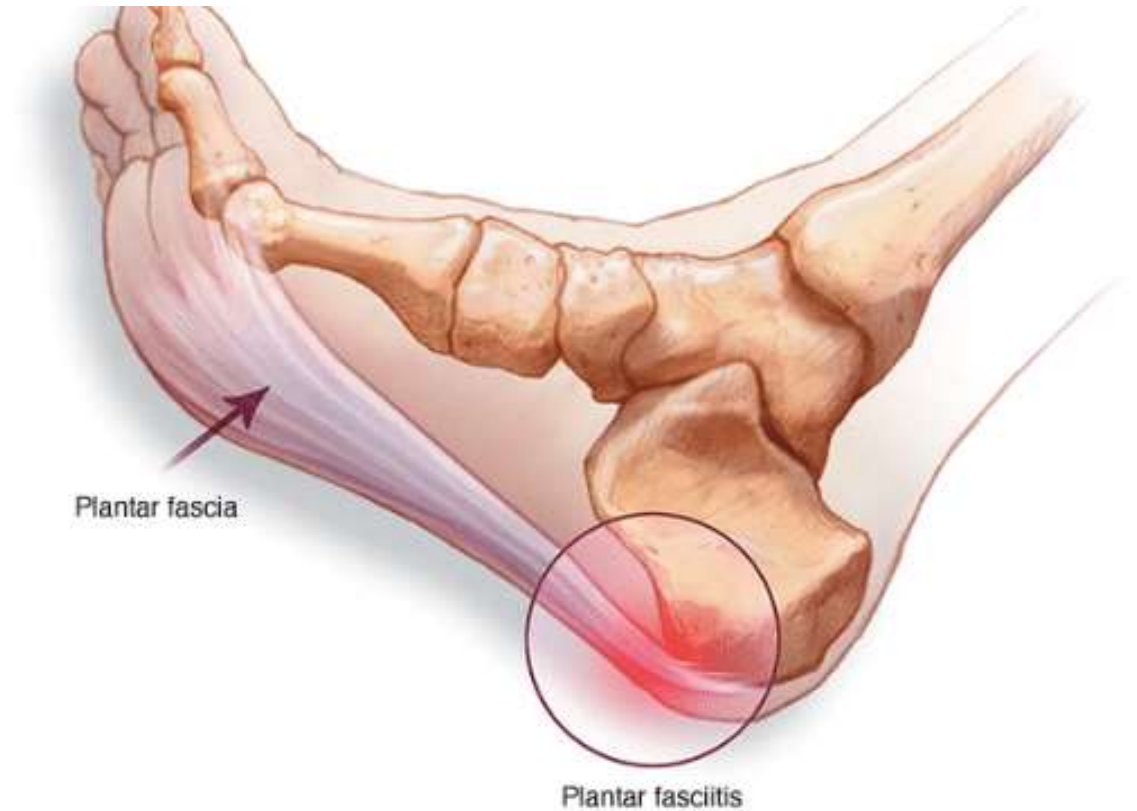
Plantar Fasciitis

Definition

- **Inflammation / degeneration of the plantar fascia** at its calcaneal origin.

Anatomy

- Plantar fascia runs from **medial calcaneal tubercle → toes**
- Supports the **longitudinal arch of the foot**



Plantar Fasciitis

Typical Patients

- Age 40–60
- **Runners**
- People who **stand for long periods**
- **Obesity**

Plantar Fasciitis

Symptoms

- **Heel pain at the plantar surface**
- **Worst with first steps in the morning**
- Pain improves with walking but may return later in the day



Plantar Fasciitis

Clinical Signs

- **Point tenderness at medial calcaneal tubercle**
- Pain with **dorsiflexion of toes** (stretching plantar fascia)
- **Tight Achilles tendon** may be present



Plantar Fasciitis

Diagnosis

- Usually clinical

X-ray

- May show **calcaneal spur**
- Spur is **not the cause of pain**



Plantar Fasciitis

Treatment

Conservative (most patients improve)

- Rest / activity modification
- **Stretching exercises**
 - plantar fascia
 - Achilles tendon
- NSAIDs



Standing calf stretch



Seated plantar fascia stretch



Plantar fascia massage



Achilles stretch



Frozen can roll



Towel stretch

Plantar Fasciitis

- Heel pads or orthotics



Plantar Fasciitis

- Night splints



Plantar Fasciitis

Injection

- Steroid injection for persistent cases



Plantar Fasciitis

Surgery

- Rarely needed
- Partial plantar fascia release



Thank you