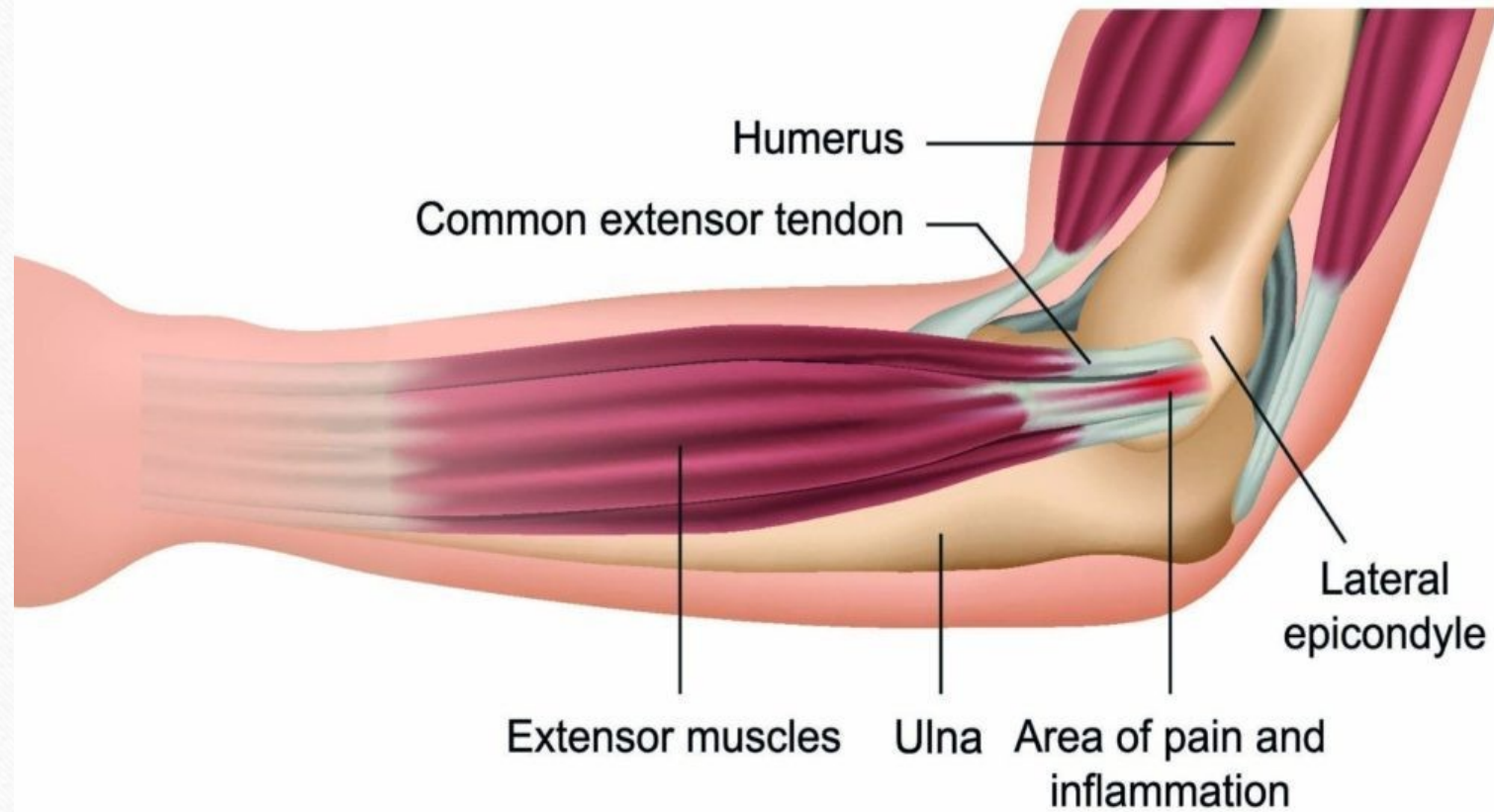


Tennis elbow



Tennis Elbow

- Also known as lateral epicondylitis.
- Tennis elbow (**lateral epicondylitis**) is a painful condition that occurs when tendons in your elbow are overloaded, usually by repetitive motions of the wrist and arm. Despite its name, athletes aren't the only people who develop tennis elbow.
- Tennis elbow is the tendinopathy of the common extensor-supinator tendon.

Pathology

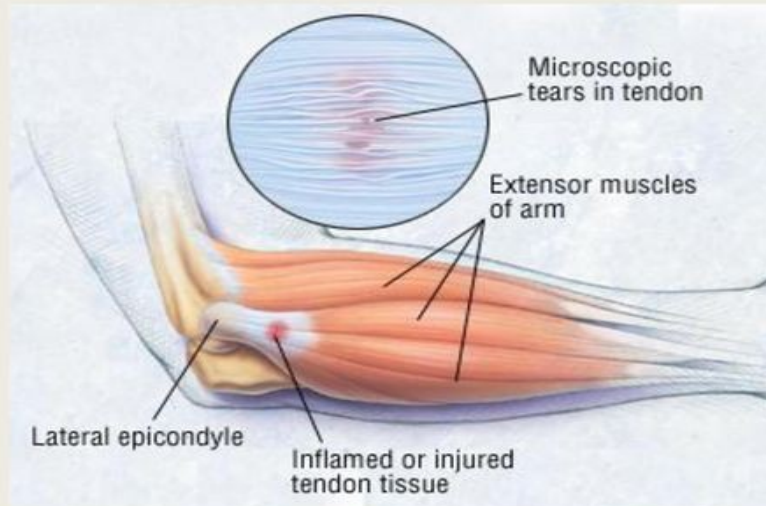
- Degenerative microtears in common extensor supinator tendon due to repetitive mechanical overload.
- The tendinous origin of extensor carpi radialis brevis most commonly affected.
- Microscopic feature of surgical specimen –

Hyaline degeneration

Fibroblastic and vascular proliferation – angio fibroblastic hyperplasia

Microscopic calcification.

I. TENNIS ELBOW & RELATED STRUCTURES



I.2 PATHOLOGY:

- **angiofibroblastic hyperplasia**
- **microscopic tearing & degeneration in tendon structure at musculotendinous/tenoperiosteal junction**
- **granulation tissue formation within nerve ends → pain**
- **immature granulation tissue → tendinous nonunion**

Etiology

- Tennis players : due to faulty playing techniques mostly a late mechanically poor backhand.
- Housewives
- Carpenters
- Miners
- Drill workers
- Use of computer



Clinical features

- 30 – 40 yrs.
- Pain and tenderness over lateral epicondyle of elbow
- Acute or insidious onset of pain
- History of over use, involving forceful gripping, repetitive flexion-extension at wrist or pronation supination activity.
- Pain aggravated by movements like pouring out tea, turning stiff door handle, shaking hands, lifting weights, etc.

-
- Elbow looks normal and flexion and extension are full and normal.

Physical Examination –

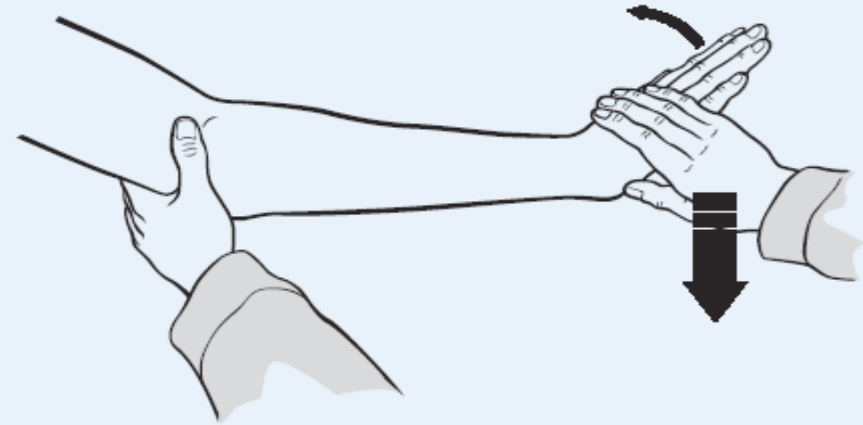
- Localised tenderness at or just below the lateral epicondyle
- Cozen's test – painful resisted extension of the wrist with elbow in full extension elicits pain at the lateral aspect of elbow.
- Mill's test – elbow held in extension, passive wrist flexion and pronation produces pain.

Cozen's test

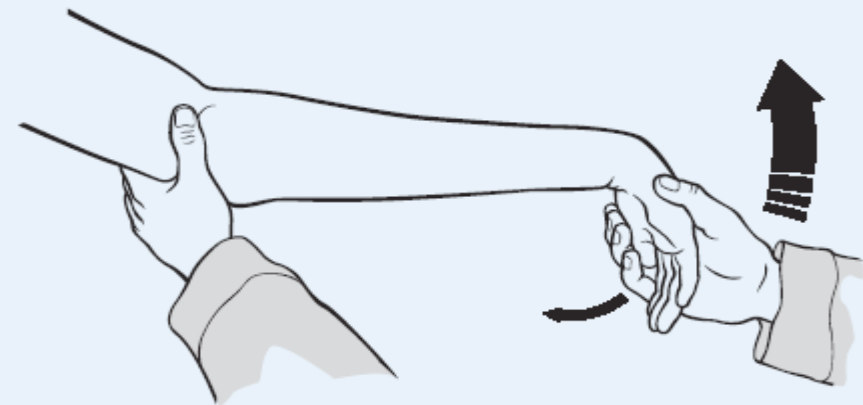


The image above demonstrates the most common location of tennis elbow and the exam technique that makes the pain worse with resisted wrist extension.

Figure E-7. Resisted wrist extension test

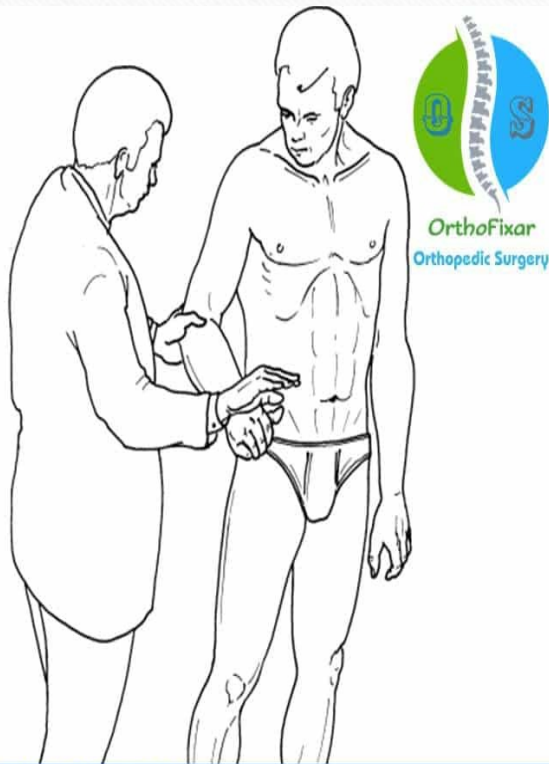
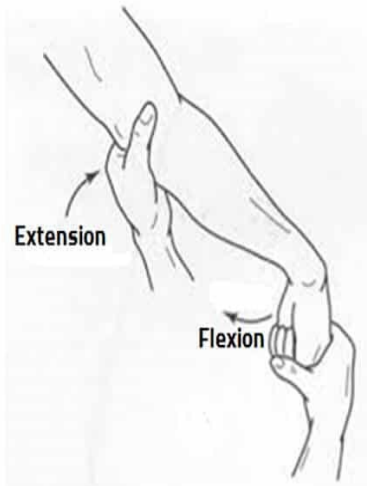


Resisted wrist flexion test



Mill's test

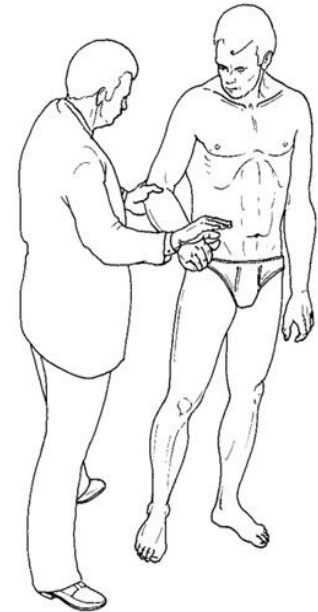
Mill's Test



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Mill's Test.

- The clinician palpates the patient's lateral epicondyle with one hand, while pronating the patient's forearm, fully flexing the wrist, and extending the elbow.
- A reproduction of pain in the area of the lateral epicondyle indicates a positive test.



➤ Maudsley's test –

Examiner resist the extension of third digit of hand, stressing the extensor digitorum muscle and tendon. A positive test is indicated by pain over lateral epicondyle.



Differential diagnosis

- Radial tunnel syndrome : posterior interosseous nerve entrapment between the fibres of supinator muscle. Clinically pain will increase with resisted supination. Pain is located 3-4 cm distal to lateral epicondyle.
- Osteochondritis dissecans of the elbow : patient may complaint of snapping or locking. Maximum tenderness found posterior to lateral epicondyle.

Treatment

- 90% of tennis elbow will resolve spontaneously within 6-12 months.
- First step is to identify and restriction or modification of the activities of the activities which cause pain.
- In acute stages use of ice pack, use of NSAIDS can be useful.
- Compression strap applied.
- Tennis elbow belt
- Injection Corticosteroids.
- Physical therapy – to strength muscles, tendons and to enhance repair of torn tendon.



Exercises for Tennis Elbow Relief

- 1 Eccentric Exercise**
10 reps x 3 sets



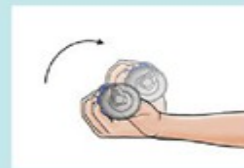
- 2 Forearm Extensor Stretch**
hold for 30 seconds x 3 sets



- 3 Tricep Stretch**
hold for 30 seconds x 3 sets



- 4 Forearm Flexor Stretch**
10 reps x 3 sets



- 5 Ball squeezes**
hold for 10 seconds x 2 sets



- 6 "Drawing the Sword"**
10 reps x 3 sets



- 7 Forearm Pronation**
10 reps x 3 sets



- 8 Bicep curls**
10 reps x 3 sets



- 9 Hammer curls**
10 reps x 3 sets





Thank you!

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