

Lateral Elbow Tendinopathy



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Lateral Elbow Tendinopathy (LET): commonly known as tennis elbow, a condition characterised by inflammation of the tendons that attach the forearm muscles to the lateral aspect of the elbow. The tendons involved are those that connect to the extensor carpi radialis brevis muscle, which sits on the lateral aspect of the forearm. These tendons are responsible for one's ability to extend the wrist and fingers.

Causes:

- Repetitive & forceful movements of the forearm and wrist
- Predisposed activities and occupations: plumbing, tennis, painting

Pathophysiology:

- Microtears at the origin of the extensor carpi radialis brevis → may also originate in the extensor digitorum communis or extensor carpi radialis longus tendons
- Areas of microtears associated with hypovascularity, proximal and distal to the lateral epicondyle
- Damaged tendons exhibit oedema & disruption of the normal parallel orientation of the collagen fibres
- Tissue remodelling of the tendon leads to tendon calcification

Presentation

- Gradual onset
- Dominant arm typically affected
- Painful or burning sensation at the lateral epicondyle
- **Weak grip strength** and difficulty picking up or holding objects
- May present with hand tremor
- May present with numbness/paraesthesia that start at the elbow and travel to one or more fingers
- Elbow pain during or after flexion and extension

Management

- **Patient education and advice** - Explain nature of LET - typically resolves within 12-18 months; Activity modification for aggravating activities, while maintaining activity where possible; Advise patient to discuss work arrangement with their employer if work-related activities are exacerbating symptoms; Ergonomic advice
- **Lifestyle advice** - avoid repetitive stretch shortening cycles, weight loss & increased aerobic exercise
- **Eccentric strengthening exercise combined with isometric contractions** - improves pain, function, and strength - exercise 5x per week and work into mild pain - focus on progressive tendon loading within acceptable pain limits
- **Occupational interventions** - minimising work tasks requiring deviated wrist postures, forceful exertions, repetitive movements & adequate rest periods
- **Psychosocial factors** - understanding factors that influence pain e.g. cognitive and emotional factors - give advice regarding stress management
- Steroid injection - improvement in pain seen at 6 weeks post-injection
- Orthotics - counterforce brace provides significant relief regarding the frequency and severity of pain at rest in the short term (2-12 weeks)

Diagnosis

- Clinical diagnosis based on subjective history and physical examination - aims to provoke pain in the affected tendon by loading
- **Cozen's test** - resisted wrist extension - positive = sudden pain in the lateral epicondyle
- **Mill's test** - passive stretch with the wrist in flexion and pronation - positive = sudden pain in the lateral epicondyle
- **Maudsley's test** - resisted extension of the third digit of the hand - positive = sudden pain in the lateral epicondyle
- MRI/Ultrasound imaging - detects tendon thickening



Want to learn more?

With AcePhysio the learning journey doesn't stop here! Take a look at our further reading recommendations below to become an expert in Lateral Elbow Tendinopathy:

1. Ortega-Castillo M, Medina-Porqueres I, (2015) Effectiveness of the Eccentric Exercise Therapy in Physically Active Adults with Symptomatic Shoulder Impingement or Lateral Epicondylar Tendinopathy. A Systematic Review, Journal of Science and Medicine in Sport.
2. Descatha A et al, (2016) Lateral epicondylitis and physical exposure at work? A review of prospective studies and meta-analysis, Arthritis Care and Research
3. Shiri R, Viikari-Juntura E, Varonen H, et al. Prevalence and determinants of lateral and medial epicondylitis: a population study. Am J Epidemiol. 2006 Dec 1;164(11):1065-74.