ENTITLEMENT ELIGIBILITY GUIDELINES

CHRONIC EPICONDYLITIS

Lateral Epicondylitis (Tennis Elbow)
Medial Epicondylitis (Golfer's Elbow)
Also known as Tendinosis/Tendinitis

MPC 01319
ICD-9 726.3

DEFINITION

Epicondylitis is a condition of the elbow.

The term *Epicondylitis* is used to describe soft-tissue conditions characterized by pain in the region of the epicondyle. The pain is exacerbated by use of either the extensor or flexor muscles of the forearm.

Lateral Epicondylitis (Tennis Elbow) is a term used to describe a soft-tissue condition characterized by pain and point tenderness in the region of the lateral epicondyle. It is the result of degenerative tendinosis of the extensor carpi radialis brevis muscle.

Medial Epicondylitis (Golfer's Elbow) is a term used to describe a soft-tissue condition characterized by pain and point tenderness in the region of the medial condyle. It is the result of degenerative tendinosis of the pronator teres and flexor carpi radialis muscles.

Please note: Entitlement should be granted for a *chronic* condition only. For VAC purposes, "chronic" means that the condition has existed for at least 6 months. Signs and symptoms are generally expected to persist despite medical attention, although they may wax and wane over the 6 month period and thereafter.

DIAGNOSTIC STANDARD

Diagnosis by a qualified medical practitioner is required. For pension purposes, location must be specified as to lateral or medial, and evidence of duration of a disability for at least 6 months should be provided.

X-rays are frequently normal. They may exclude pathology such as osteomyelitis, bone spurs, and intra-articular pathology.

The test for *Lateral Epicondylitis* is Cozen's test, which consists of pronation of the forearm with resisted wrist extension and radial deviation to determine if pain occurs. The test for *Medial Epicondylitis* is a clinical test in which pain is exacerbated on resisted pronation of the forearm with wrist flexion.

ANATOMY AND PHYSIOLOGY

The elbow contains three separate articulations. The humeroulnar joint is a modified hinge joint that allows flexion and extension. The humeroradial joint is a combined hinge and pivot joint that permits flexion and extension, as well as rotation of the head of the radius on the capitellum of the humerus. The proximal radial ulnar joint facilitates rotation during supination and pronation.

Osseous stability is reinforced by the medial and lateral ligament complexes. Four muscle groups act on the elbow:

- The major flexors include the biceps brachii, brachioradialis and brachialis muscles.
- The extensors are the triceps and anconeus muscles.
- The supinators include the supinator and biceps brachii muscles.
- The pronators include the pronator quadratus, pronator teres and flexor carpi radialis muscles.

The elbow also has complex innervation.

The fibres of the muscles end in tendons (fibrous cords of connective tissue) which attach the muscles to a bone or other structure. Most of the muscle-tendon units of the distal upper extremity originate in the elbow region from the distal aspects of the humerus and insert into the phalanges, thus spanning several different joints (interphalangeal, metacarpophalangeal, wrist joints and elbow joint).

Although all tendons are at potential risk of injury, the medial and lateral epicondyle sites seem more susceptible to repetitive motion disorders. The normal recovery tolerance of the tendon is exceeded in repetitive overuse of the tendon, e.g. less than 10 minute break for every hour is felt to exceed the optimum work-rest ratio. However, the precise pathology of work/activity-related tendinous disorders has not been fully characterized. Most studies of pathological changes in chronic tendon injuries demonstrate degenerative changes with some fibrovascular hyperplasia, and no acute inflammatory changes. These disorders are commonly referred to in the literature as *"tendinitis",* although the term implies that inflammation is the primary pathologic process. The term *"tendinosis"*, which refers to a degenerative process, is regarded by some as a more accurate descriptor.

As the terminology related to inflammation around the tendons is not fully resolved, the terms *"tendinitis"*, *"tendinosis"* and *"epicondylitis"* will be used interchangeably for pension purposes to describe failed tendon-healing.

CLINICAL FEATURES

Lateral Epicondylitis is more common than Medial Epicondylitis. Rarely, both sides are affected simultaneously. Both types occur in persons of either gender, generally between 30 - 50 years of age.

Onset of symptoms in *Lateral* and *Medial Epicondylitis* is gradual.

The symptoms of *Lateral Epicondylitis* include:

- lateral elbow pain exacerbated by repetitive wrist movements
- pain emanating from the lateral aspect of the elbow
- grip weakness

Physical examination findings for Lateral *Epicondylitis* include:

- tenderness to palpation over the lateral epicondyle
- pain localized to lateral epicondyle with resisted wrist extension and supination
- lateral elbow pain exacerbated by repetitive wrist movements

The symptoms of *Medial Epicondylitis* include:

- pain emanating from the medial aspect of the elbow
- grip weakness, but less than with Lateral Epicondylitis
- medial elbow pain exacerbated by repetitive wrist movements

Physical examination findings for *Medial Epicondylitis* include:

- tenderness to palpation of the medial epicondyle
- pain localized to the medial epicondyle with resisted wrist flexion and pronation.

PENSION CONSIDERATIONS

A. CAUSES AND/OR AGGRAVATION

THE TIMELINES CITED BELOW ARE NOT BINDING. EACH CASE SHOULD BE ADJUDICATED ON THE EVIDENCE PROVIDED AND ITS OWN MERITS.

The specific anatomic site (lateral/medial) must be identified.

1. <u>Overuse prior to clinical onset or aggravation</u>

For overuse to cause or aggravate Chronic Epicondylitis, the following should be evident*:

The overuse activity should be performed for at least 60 days out of 120

consecutive days;
Signs/symptoms should begin during the overuse activity, or within 7 days of cessation of the activity; *and*
Signs/symptoms should be ongoing or recurrent for at least 6 months to be considered "chronic" for pension purposes.

**The definitions and criteria apply to a normal joint. The total time per day or total number of days required to qualify as overuse may be less when the joint is abnormal or where other pertinent circumstances exist. To illustrate:*
1) A combination of relevant factors (where only 1 factor is required for overuse) may reduce the total time per day required to qualify as overuse, e.g. activity involving both high repetition and extreme posture as defined may require performance of the overuse activity less than 2 hours per day, OR activity involving extreme posture as defined and a level of high repetition which is in excess of the definition (e.g. 10 times per minute) may require performance of the overuse activity less than 2 hours per day.
2) A combination of one or more relevant factors performed to excess for more than 2 hours per day may reduce the total number of days required to qualify as overuse, e.g. activity of high repetition in the order of 10 times per minute performed 4 hours per day may require performance of the overuse activity for less than 60 out of 120 consecutive days.

Overuse means high repetition and/or high force and/or extreme posture in the soft tissues around the elbow joint for a substantial part of the day prior to clinical onset or aggravation.
High repetition means actions performed more than 2 to 4 times a minute, or cycles less than 30 seconds.
High force means hand weights of more than 4 kg.
Extreme posture means over half of range of movement of the elbow joint.
Substantial part of the day means for a total of 2 hours or more per working day.

Determination of a service-relationship for an overuse syndrome will generally depend on whether the overuse factors can be seen to have arisen out of or to be directly connected with the performance of military duties.
Occupations and activities known to cause and/or aggravate *Lateral Epicondylitis* include, but are not limited to, the following:

- racquet sports, including tennis
- throwing sports
- swimming
- lifting and throwing snow
- musician
- construction workers
- boiler makers

- electricians
- carpenters
- butchers/meat packers
- plumbers
- sign language interpreters

Occupations and activities known to cause and/or aggravate *Medial Epicondylitis* include, but are not limited to, the following:

- golf
- racquet sports
- pitching in baseball
- throwing sports
- carrying a heavy suitcase

2. Specific trauma prior to clinical onset or aggravation

For specific trauma to cause or aggravate Epicondylitis, the following should be evident:

Within 24 hours of the injury, development of tenderness, pain, swelling, discoloration, or altered mobility, or any other pertinent sign or symptom, should occur in the elbow joint, *and*

Signs/symptoms should recur, either continuously or intermittently, from the time of the specific trauma to the time of diagnosis.

Specific trauma is physical injury to the soft tissue around the elbow joint occurring prior to onset or aggravation of Epicondylitis.

3. Inability to obtain appropriate clinical management

B. MEDICAL CONDITIONS WHICH ARE TO BE INCLUDED IN ENTITLEMENT/ASSESSMENT

C. COMMON MEDICAL CONDITIONS WHICH MAY RESULT IN WHOLE OR IN PART FROM CHRONIC EPICONDYLITIS AND/OR ITS TREATMENT

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