



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
ULNAR NEUROPATHY AT THE ELBOW
(Reasonable Hypothesis)
(No. 65 of 2017)

The Repatriation Medical Authority determines the following Statement of Principles under subsection 196B(2) of the *Veterans' Entitlements Act 1986*.

Dated 3 November 2017

The Common Seal of the
Repatriation Medical Authority
was affixed to this instrument
at the direction of:

A handwritten signature in black ink, appearing to read 'Nicholas Saunders'.

Professor Nicholas Saunders AO
Chairperson

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1 Name

This is the Statement of Principles concerning *ulnar neuropathy at the elbow (Reasonable Hypothesis)* (No. 65 of 2017).

2 Commencement

This instrument commences on 4 December 2017.

3 Authority

This instrument is made under subsection 196B(2) of the *Veterans' Entitlements Act 1986*.

4 Application

This instrument applies to a claim to which section 120A of the VEA or section 338 of the *Military Rehabilitation and Compensation Act 2004* applies.

5 Definitions

The terms defined in the Schedule 1 - Dictionary have the meaning given when used in this instrument.

6 Kind of injury, disease or death to which this Statement of Principles relates

- (1) This Statement of Principles is about ulnar neuropathy at the elbow and death from ulnar neuropathy at the elbow.

*Meaning of **ulnar neuropathy at the elbow***

- (2) For the purposes of this Statement of Principles, ulnar neuropathy at the elbow means an acquired persistent disturbance of function of the ulnar nerve in the region of the elbow, in the presence of:
- (a) altered sensation, pain or weakness in the distribution of the ulnar nerve; and
 - (b) electrodiagnostic evidence that confirms impaired ulnar nerve conduction across the elbow.

Note 1: Ulnar nerve dysfunction may be localised to the arcade of Struthers, the medial intermuscular septum of the arm, the retroepicondylar groove of the medial epicondyle, humeroulnar aponeurotic arcade (cubital tunnel), or the outlet from flexor carpi ulnaris muscle (deep flexor pronator aponeurosis).

Note 2: Ulnar neuropathy at the elbow may coexist with carpal tunnel syndrome.

*Death from **ulnar neuropathy at the elbow***

- (3) For the purposes of this Statement of Principles, ulnar neuropathy at the elbow, in relation to a person, includes death from a terminal event or condition that was contributed to by the person's ulnar neuropathy at the elbow.

Note: **terminal event** is defined in the Schedule 1 – Dictionary.

7 Basis for determining the factors

The Repatriation Medical Authority is of the view that there is sound medical-scientific evidence that indicates that ulnar neuropathy at the elbow and death from ulnar neuropathy at the elbow can be related to relevant service rendered by veterans, members of Peacekeeping Forces, or members of the Forces under the VEA, or members under the MRCA.

Note: **relevant service** is defined in the Schedule 1 – Dictionary.

8 Factors that must exist

At least one of the following factors must as a minimum exist before it can be said that a reasonable hypothesis has been raised connecting ulnar neuropathy at the elbow or death from ulnar neuropathy at the elbow with the circumstances of a person's relevant service:

- (1) having a fracture of the bones of the affected elbow, including fracture of the medial epicondyle of the humerus, before the clinical onset of ulnar neuropathy at the elbow;
- (2) having trauma to the affected elbow within the two years before the clinical onset of ulnar neuropathy at the elbow;

Note: **trauma to the affected elbow** is defined in the Schedule 1 - Dictionary.

- (3) performing repetitive and forceful activities involving flexion and extension of the affected elbow:
 - (a) for a cumulative period of at least 90 hours, within a continuous period of six months before the clinical onset of ulnar neuropathy at the elbow; and
 - (b) where the repetitive and forceful activities have not ceased more than 30 days before the clinical onset of ulnar neuropathy at the elbow;

Note: Examples of repetitive and forceful activities include lifting, moving or carrying a load greater than ten kilograms, using hand saws or using large, hand-held power machinery, climbing vertical ladders, ammunitioning, using a hand-held piece of equipment such as a jackhammer or shovel, and overhead throwing.

- (4) holding a tool, device or instrument in position, with the wrist in an extended position and the affected elbow in a flexed position:
 - (a) for a cumulative period of at least 90 hours, within a continuous period of six months before the clinical onset of ulnar neuropathy at the elbow; and
 - (b) where this activity has not ceased more than 30 days before the clinical onset of ulnar neuropathy at the elbow;
 - (5) using the affected elbow as a support in a posture that is required as part of the activity being performed:
 - (a) with the forearm pronated on a hard surface, or holding the arm with the elbow flexed by 30° or more; and
 - (b) for a cumulative period of at least 90 hours, within a continuous period of six months before the clinical onset of ulnar neuropathy at the elbow; and
 - (c) where this activity has not ceased more than 30 days before the clinical onset of ulnar neuropathy at the elbow;
- Note: Examples of using the elbow as a support include bicycling in the aero position, firing a hand-held weapon, or being required to adopt this posture due to undertaking activity in a cramped or confined space.
- (6) having a surgical procedure under general anaesthesia, within the two months before the clinical onset of ulnar neuropathy at the elbow;
 - (7) having a surgical procedure to the affected elbow, including elbow arthroscopy, within the one year before the clinical onset of ulnar neuropathy at the elbow;
 - (8) being hospitalised, or confined to bed in a supine position, for at least two days within the 30 days before the clinical onset of ulnar neuropathy at the elbow;
 - (9) daily self-propulsion of a manual wheelchair:
 - (a) for a cumulative period of at least 60 hours within a continuous period of six months before the clinical onset of ulnar neuropathy at the elbow; and
 - (b) where this activity has not ceased more than 30 days before the clinical onset of ulnar neuropathy at the elbow;
 - (10) having paraplegia at the time of the clinical onset of ulnar neuropathy at the elbow;
 - (11) using elbow or forearm crutches:
 - (a) for a cumulative period of at least 60 hours within a continuous period of six months before the clinical onset of ulnar neuropathy at the elbow; and
 - (b) where this activity has not ceased more than 30 days before the clinical onset of ulnar neuropathy at the elbow;

- (12) having an inflammatory or degenerative joint disease from the specified list of inflammatory and degenerative joint diseases, involving the affected elbow, at the time of the clinical onset of ulnar neuropathy at the elbow;

Note: *specified list of inflammatory and degenerative joint diseases* is defined in the Schedule 1 - Dictionary.

- (13) having amyloidosis at the time of the clinical onset of ulnar neuropathy at the elbow;

Note: *amyloidosis* is defined in the Schedule 1 - Dictionary.

- (14) having haemodialysis or peritoneal dialysis for at least the one year before the clinical onset of ulnar neuropathy at the elbow;

- (15) having a cerebrovascular accident with hemiplegia, excluding transient ischaemic attack or transient symptoms with infarction, before the clinical onset of ulnar neuropathy at the elbow;

- (16) having an external burn to the affected arm requiring hospitalisation, within the five years before the clinical onset of ulnar neuropathy at the elbow;

- (17) being pregnant within the three months before the clinical onset of ulnar neuropathy at the elbow;

- (18) having an infection involving the affected ulnar nerve in the region of the elbow at the time of the clinical onset of ulnar neuropathy at the elbow;

Note: Examples of an infection involving the affected ulnar nerve include *Mycobacterium leprae* (leprosy) and tuberculosis.

- (19) smoking at least ten pack-years of cigarettes, or the equivalent thereof in other tobacco products, before the clinical onset of ulnar neuropathy at the elbow, and:

- (a) smoking commenced at least five years before the clinical onset of ulnar neuropathy at the elbow; and
- (b) where smoking has ceased, the clinical onset of ulnar neuropathy at the elbow has occurred within five years of cessation;

Note: *pack-years of cigarettes, or the equivalent thereof in other tobacco products* is defined in the Schedule 1 - Dictionary.

- (20) having a lesion as specified at the elbow that compresses or displaces the affected ulnar nerve at the time of the clinical onset of ulnar neuropathy at the elbow;

Note: *lesion as specified* is defined in the Schedule 1 - Dictionary.

- (21) having diabetes mellitus at the time of the clinical onset of ulnar neuropathy at the elbow;

- (22) having acromegaly before the clinical onset of ulnar neuropathy at the elbow;

Note: *acromegaly* is defined in the Schedule 1 - Dictionary.

- (23) having a fracture of the bones of the affected elbow, including fracture of the medial epicondyle of the humerus, before the clinical worsening of ulnar neuropathy at the elbow;

- (24) having trauma to the affected elbow within the two years before the clinical worsening of ulnar neuropathy at the elbow;

Note: *trauma to the affected elbow* is defined in the Schedule 1 - Dictionary.

- (25) performing repetitive and forceful activities involving flexion and extension of the affected elbow:
- (a) for a cumulative period of at least 90 hours, within a continuous period of six months before the clinical worsening of ulnar neuropathy at the elbow; and
 - (b) where the repetitive and forceful activities have not ceased more than 30 days before the clinical worsening of ulnar neuropathy at the elbow;

Note: Examples of repetitive and forceful activities include lifting, moving or carrying a load greater than ten kilograms, using hand saws or using large, hand-held power machinery, climbing vertical ladders, ammunitioning, using a hand-held piece of equipment such as a jackhammer or shovel, and overhead throwing.

- (26) holding a tool, device or instrument in position, with the wrist in an extended position and the affected elbow in a flexed position:

- (a) for a cumulative period of at least 90 hours, within a continuous period of six months before the clinical worsening of ulnar neuropathy at the elbow; and
- (b) where this activity has not ceased more than 30 days before the clinical worsening of ulnar neuropathy at the elbow;

- (27) using the affected elbow as a support in a posture that is required as part of the activity being performed:

- (a) with the forearm pronated on a hard surface, or holding the arm with the elbow flexed by 30° or more; and
- (b) for a cumulative period of at least 90 hours, within a continuous period of six months before the clinical worsening of ulnar neuropathy at the elbow; and
- (c) where this activity has not ceased more than 30 days before the clinical worsening of ulnar neuropathy at the elbow;

Note: Examples of using the elbow as a support include bicycling in the aero position, firing a hand-held weapon, or being required to adopt this posture due to undertaking activity in a cramped or confined space.

- (28) having a surgical procedure under general anaesthesia, within the two months before the clinical worsening of ulnar neuropathy at the elbow;

- (29) having a surgical procedure to the affected elbow, including elbow arthroscopy, within the one year before the clinical worsening of ulnar neuropathy at the elbow;
- (30) being hospitalised, or confined to bed in a supine position, for at least two days within the 30 days before the clinical worsening of ulnar neuropathy at the elbow;
- (31) daily self-propulsion of a manual wheelchair:
 - (a) for a cumulative period of at least 60 hours within a continuous period of six months before the clinical worsening of ulnar neuropathy at the elbow; and
 - (b) where this activity has not ceased more than 30 days before the clinical worsening of ulnar neuropathy at the elbow;
- (32) having paraplegia at the time of the clinical worsening of ulnar neuropathy at the elbow;
- (33) using elbow or forearm crutches:
 - (a) for a cumulative period of at least 60 hours within a continuous period of six months before the clinical worsening of ulnar neuropathy at the elbow; and
 - (b) where this activity has not ceased more than 30 days before the clinical worsening of ulnar neuropathy at the elbow;
- (34) having an inflammatory or degenerative joint disease from the specified list of inflammatory and degenerative joint diseases, involving the affected elbow, at the time of the clinical worsening of ulnar neuropathy at the elbow;

Note: *specified list of inflammatory and degenerative joint diseases* is defined in the Schedule 1 - Dictionary.

- (35) having amyloidosis at the time of the clinical worsening of ulnar neuropathy at the elbow;
Note: *amyloidosis* is defined in the Schedule 1 - Dictionary.
- (36) having haemodialysis or peritoneal dialysis for at least the one year before the clinical worsening of ulnar neuropathy at the elbow;
- (37) having a cerebrovascular accident with hemiplegia, excluding transient ischaemic attack or transient symptoms with infarction, before the clinical worsening of ulnar neuropathy at the elbow;
- (38) having an external burn to the affected arm requiring hospitalisation, within the five years before the clinical worsening of ulnar neuropathy at the elbow;
- (39) being pregnant within the three months before the clinical worsening of ulnar neuropathy at the elbow;

- (40) having an infection involving the affected ulnar nerve in the region of the elbow at the time of the clinical worsening of ulnar neuropathy at the elbow;

Note: Examples of an infection involving the affected ulnar nerve include *Mycobacterium leprae* (leprosy) and tuberculosis.

- (41) smoking at least ten pack-years of cigarettes, or the equivalent thereof in other tobacco products, before the clinical worsening of ulnar neuropathy at the elbow, and:

- (a) smoking commenced at least five years before the clinical worsening of ulnar neuropathy at the elbow; and
- (b) where smoking has ceased, the clinical worsening of ulnar neuropathy at the elbow has occurred within five years of cessation;

Note: *pack-years of cigarettes, or the equivalent thereof in other tobacco products* is defined in the Schedule 1 - Dictionary.

- (42) having a lesion as specified at the elbow that compresses or displaces the affected ulnar nerve at the time of the clinical worsening of ulnar neuropathy at the elbow;

Note: *lesion as specified* is defined in the Schedule 1 - Dictionary.

- (43) having diabetes mellitus at the time of the clinical worsening of ulnar neuropathy at the elbow;

- (44) having acromegaly before the clinical worsening of ulnar neuropathy at the elbow;

Note: *acromegaly* is defined in the Schedule 1 - Dictionary.

- (45) inability to obtain appropriate clinical management for ulnar neuropathy at the elbow.

9 Relationship to service

- (1) The existence in a person of any factor referred to in section 8, must be related to the relevant service rendered by the person.
- (2) The factors set out in subsections 8(23) to 8(45) apply only to material contribution to, or aggravation of, ulnar neuropathy at the elbow where the person's ulnar neuropathy at the elbow was suffered or contracted before or during (but did not arise out of) the person's relevant service.

10 Factors referring to an injury or disease covered by another Statement of Principles

In this Statement of Principles:

- (1) if a factor referred to in section 8 applies in relation to a person; and

- (2) that factor refers to an injury or disease in respect of which a Statement of Principles has been determined under subsection 196B(2) of the VEA;

then the factors in that Statement of Principles apply in accordance with the terms of that Statement of Principles as in force from time to time.

Schedule 1 - Dictionary

Note: See Section 5

1 Definitions

In this instrument:

acromegaly means a chronic disease of adults resulting from hypersecretion of growth hormone after closure of the epiphyses.

amyloidosis means the accumulation of insoluble fibrillar proteins in organs or tissues of the body such that vital function is compromised.

lesion as specified means:

- (a) benign or malignant neoplasm;
- (b) bony fragment or foreign body;
- (c) calcification;
- (d) cyst;
- (e) ganglion;
- (f) gouty tophus;
- (g) haemorrhage or haematoma;
- (h) lymphoedema;
- (i) scar;
- (j) tuberculoma; or
- (k) another pathological lesion that compresses or displaces the ulnar nerve.

Note: This definition includes thickening, scarring or calcification of the ulnar collateral ligament.

MRCA means the *Military Rehabilitation and Compensation Act 2004*.

pack-years of cigarettes, or the equivalent thereof in other tobacco products means a calculation of consumption where one pack-year of cigarettes equals 20 tailor-made cigarettes per day for a period of one calendar year, or 7 300 cigarettes. One tailor-made cigarette approximates one gram of tobacco or one gram of cigar or pipe tobacco by weight. One pack-year of tailor-made cigarettes equates to 7.3 kilograms of smoking tobacco by weight. Tobacco products mean cigarettes, pipe tobacco or cigars, smoked alone or in any combination.

relevant service means:

- (a) operational service under the VEA;
- (b) peacekeeping service under the VEA;
- (c) hazardous service under the VEA;
- (d) British nuclear test defence service under the VEA;
- (e) warlike service under the MRCA; or
- (f) non-warlike service under the MRCA.

Note: ***MRCA*** and ***VEA*** are also defined in the Schedule 1 - Dictionary.

specified list of inflammatory and degenerative joint diseases means:

- (a) amyloid arthropathy;
- (b) gout;
- (c) haemophilic arthropathy;
- (d) neuropathic arthropathy;
- (e) nodular fasciitis;
- (f) osteoarthritis;
- (g) other inflammatory arthritis requiring treatment with a disease modifying agent or a biological agent;
- (h) rheumatoid arthritis;
- (i) sarcoidosis;
- (j) systemic lupus erythematosus; or
- (k) systemic sclerosis.

terminal event means the proximate or ultimate cause of death and includes the following:

- (a) pneumonia;
- (b) respiratory failure;
- (c) cardiac arrest;
- (d) circulatory failure; or
- (e) cessation of brain function.

trauma to the affected elbow means a discrete event involving the application of significant physical force to or through the affected elbow joint, that causes damage to the joint and the development, within 24 hours of the event occurring, of symptoms and signs of pain and tenderness, and either altered mobility or range of movement of the elbow joint. These symptoms and signs must last for a period of at least seven days following their onset, save for where medical intervention for the trauma to that joint has occurred and that medical intervention involves one of the following:

- (a) immobilisation of the elbow joint, by splinting or similar external agent;
- (b) injection of corticosteroids or local anaesthetics into that joint; or
- (c) surgery to that joint.

Note: Examples of acute trauma include dislocation of the elbow joint, tearing or stretching of the ulnar collateral ligament, and medial epicondyle apophysitis.

ulnar neuropathy at the elbow—see subsection 6(2).

VEA means the *Veterans' Entitlements Act 1986*.