



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
FRACTURE
(Reasonable Hypothesis)
(No. 62 of 2024)

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

Dated 20 August 2024.

Professor Terence Campbell AM
Chairperson
by and on behalf of
The Repatriation Medical Authority

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1 Name

This is the Statement of Principles concerning *fracture (Reasonable Hypothesis)* (No. 62 of 2024).

2 Commencement

This instrument commences on 24 September 2024.

3 Authority

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

4 Repeal

The Statement of Principles concerning fracture No. 94 of 2015 (Federal Register of Legislation No. F2015L01340) made under subsection 196B(2) of the VEA is repealed.

5 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.

6 Definitions

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

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

(1) This Statement of Principles is about fracture and death from fracture.

Meaning of fracture

(2) For the purposes of this Statement of Principles, fracture:

- (a) means an acquired break of bone as a result of an applied force that ordinarily would cause bone breakage in a healthy bone; and
- (b) includes:
 - (i) acute vascular shock, acute compartment syndrome, or fat embolism resulting from the fractured bone;
 - (ii) avulsion, crush, comminuted, burst, or blowout fracture;
 - (iii) closed or compound/open fracture;
 - (iv) fracture of bone contiguous with an orthopaedic implant; and
 - (v) growth plate fractures;

- (vi) periosteal, muscular, fascial, skin, nerve or vascular damage directly caused by the displaced fractured bone;
 - (vii) stress fracture of the fatigue type;
 - (viii) torsion or spiral fracture; and
 - (ix) wound infection as a result of penetration of the skin by bony fracture fragments (compound fracture);
- (c) excludes:
- (i) pathological fracture;
 - (ii) bone stress injury/bone marrow oedema not being a stress fracture;
 - (iii) stress fracture of the insufficiency type;
 - (iv) osteonecrosis;
 - (v) periostitis;
 - (vi) fracture of teeth;
 - (vii) fracture of cartilage;
 - (viii) fracture of an orthopaedic implant including a screw, nail, fixation plate or prosthesis; and
 - (ix) spondylolysis.

Note: Clinical worsening could include fracture non-union but not an additional fracture. An additional fracture would require further invocation of the fracture statement of principles.

Death from fracture

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

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

8 Basis for determining the factors

The Repatriation Medical Authority is of the view that there is sound medical-scientific evidence that indicates that fracture and death from fracture 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: *MRCA*, *relevant service* and *VEA* are defined in the Schedule 1 – Dictionary.

9 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 fracture or death from fracture with the circumstances of a person's relevant service:

- (1) having significant physical force applied to or through the affected bone at the time of clinical onset;

- (2) for stress fracture only, having significant repetitive loading stress to the affected bone prior to clinical onset;

Note: Examples of situations involving significant repetitive loading stress includes military training, weight training, athletics or running.

- (3) for stress fracture only, having significant chronic repetitive loading stress to the affected bone due to abnormal force intensity or direction of application, at the time of clinical onset;

Note: An example of chronic repetitive stress due to changed force intensity or force direction would be an uncorrected substantial leg length inequality, or a substantial valgus or varus joint malalignment.

- (4) smoking at least 5 cigarettes per day, or the equivalent thereof in other tobacco products, during treatment for fracture prior to fracture non-union;

Note 1: One gram of tobacco is considered to be equivalent to one cigarette.

Note 2: Fracture non-union is considered to be a clinical worsening of the fracture.

- (5) having diabetes mellitus at the time of the fracture non-union;

Note: Fracture non-union is considered to be a clinical worsening of the fracture.

- (6) having osteoporosis at the time of the fracture non-union;

Note: Fracture non-union is considered to be a clinical worsening of the fracture.

- (7) having vitamin D deficiency, with a serum 25(OH)D level of less than 50 nanomoles per litre at the time of the fracture non-union;

Note: Fracture non-union is considered to be a clinical worsening of the fracture.

- (8) having a Body Mass Index (BMI) of 40 or greater at the time of the fracture non-union;

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

Note 2: Fracture non-union is considered to be a clinical worsening of the fracture.

- (9) inability to obtain appropriate clinical management for fracture before clinical worsening.

10 Relationship to service

- (1) The existence in a person of any factor referred to in section 9, must be related to the relevant service rendered by the person.
- (2) The clinical worsening aspects of factors set out in section 9 apply only to material contribution to, or aggravation of, fracture where the person's fracture was suffered or contracted before or during (but did not arise out of) the person's relevant service.

11 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 9 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 6

1 Definitions

In this instrument:

BMI means W/H^2 where:

- (a) W is the person's weight in kilograms; and
- (b) H is the person's height in metres.

fracture—see subsection 7(2).

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

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 defined in the Schedule 1 - Dictionary.

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.

VEA means the *Veterans' Entitlements Act 1986*.