



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
DECOMPRESSION ILLNESS
(Reasonable Hypothesis)
(No. 23 of 2023)

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

Dated 24 April 2023.

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

Professor Terence Campbell AM
Chairperson

Contents

1	Name	3
2	Commencement	3
3	Authority	3
4	Repeal	3
5	Application.....	3
6	Definitions	3
7	Kind of injury, disease or death to which this Statement of Principles relates	3
8	Basis for determining the factors	4
9	Factors that must exist.....	4
10	Relationship to service.....	5
11	Factors referring to an injury or disease covered by another Statement of Principles	5
Schedule 1 - Dictionary		7
1	Definitions	7

1 Name

This is the Statement of Principles concerning *decompression illness (Reasonable Hypothesis)* (No. 23 of 2023).

2 Commencement

This instrument commences on 23 May 2023.

3 Authority

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

4 Repeal

The Statement of Principles concerning decompression sickness No. 13 of 2015 (Federal Register of Legislation No. F2014L01830) made under subsection 196B(2) of the VEA is repealed.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 decompression illness and death from decompression illness.

Meaning of decompression illness

- (2) For the purposes of this Statement of Principles, decompression illness:
- (a) means an injury caused by the formation of bubbles of nitrogen and other inert gases within tissues and blood vessels, as a result of a reduction in the pressure surrounding the person, and;
 - (b) includes:
 - (i) arterial gas embolism not due to pulmonary barotrauma; and
 - (ii) decompression sickness; and
 - (c) excludes:
 - (i) altitude illness;

- (ii) arterial gas embolism due to pulmonary barotrauma;
- (iii) barotrauma;
- (iv) ebullism;
- (v) osteonecrosis;
- (vi) high pressure neurological syndrome/inert gas narcosis;
and
- (vii) cerebrovascular accident not due to an arterial gas embolism.

Note 1: Clinical manifestation of decompression illness includes musculoskeletal, cutaneous, lymphatic, cardiopulmonary, inner ear or neurological signs or symptoms.

Note 2: Inert gases include nitrogen, argon, helium, xenon and krypton.

Death from decompression illness

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

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 decompression illness and death from decompression illness 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 decompression illness or death from decompression illness with the circumstances of a person's relevant service:

- (1) experiencing a substantial episode of decompression whilst:
 - (a) surfacing from an underwater dive that required decompression stops according to relevant diving decompression tables;
 - (b) flying at >5,486 metres (>18,000 feet) altitude in an unpressurised aircraft, high altitude balloon or high altitude parachute;
 - (c) flying, parachuting or ballooning within the no flying time interval after underwater diving, where the relevant diving decompression tables recommended a no flying time interval;
 - (d) ascending to the surface from a submerged submarine or vessel at >90 metres seawater (296 feet seawater) with a normal internal pressure, or ascending to the surface from a submerged submarine or vessel at increased internal pressure;

- (e) suffering loss of cabin pressure in an aircraft flying at >5,486 metres (>18,000 feet) altitude or in a spacecraft above the von Karman line;
- (f) returning to surface air pressure after working in a hyperbaric compressed air environment including working in a tunnel, caisson or tunnel boring machine;
- (g) transferring from a higher pressure to a lower pressure environment whilst in space including donning an extravehicular space suit;
- (h) being in a hypobaric chamber;
- (i) returning to surface air pressure after being in a hyperbaric chamber including hyperbaric oxygen therapy chambers; or
- (j) returning to surface air pressure after being within a pressure vessel during hyperbaric pressure testing including aircraft cabin excessive leak testing, submarine pressure testing, and nuclear power station pressure testing;

within 7 days before the clinical onset of decompression illness;

Note 1: Substantial episodes of decompression involves a rapid substantial reduction in the ambient pressure exerted by the envelope of gas or water surrounding the person where the person had been at higher pressure for a substantial period.

Note 2: Underwater diving includes breath hold diving, yo-yo or bounce diving, umbilical/hookah/hard hat diving, SCUBA diving, rebreather diving, and saturation diving. This underwater diving does not including diving within normobaric diving bells or armoured suits.

Note 3: A decompression stop is a procedure where the diver is required to stop at a specified depth for a specified time interval to allow the inert gas to clear from their body.

- (2) inability to obtain appropriate clinical management for decompression illness.

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 factor set out in subsection 9(2) applies only to material contribution to, or aggravation of, decompression illness where the person's decompression illness 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:

decompression illness—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 also 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*.