



**Australian Government**  
**Repatriation Medical Authority**

**Statement of Principles**  
**concerning**  
**VASCULAR NEUROCOGNITIVE DISORDER**  
**(Balance of Probabilities)**  
**(No. 10 of 2023)**

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The Repatriation Medical Authority determines the following Statement of Principles under subsection 196B(3) of the *Veterans' Entitlements Act 1986*.

Dated 27 February 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 .....	5
9	Factors that must exist.....	5
10	Relationship to service.....	7
11	Factors referring to an injury or disease covered by another Statement of Principles .....	8
<b>Schedule 1 - Dictionary .....</b>		<b>9</b>
1	Definitions .....	9

**1 Name**

This is the Statement of Principles concerning *vascular neurocognitive disorder (Balance of Probabilities)* (No. 10 of 2023).

**2 Commencement**

This instrument commences on 27 March 2023.

**3 Authority**

This instrument is made under subsection 196B(3) of the *Veterans' Entitlements Act 1986*.

**4 Repeal**

The Statement of Principles concerning vascular dementia No. 79 of 2014 (Federal Register of Legislation No. F2014L01141) made under subsection 196B(3) of the VEA is repealed.

**5 Application**

This instrument applies to a claim to which section 120B of the VEA or section 339 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 vascular neurocognitive disorder and death from vascular neurocognitive disorder.

*Meaning of vascular neurocognitive disorder*

- (2) For the purposes of this Statement of Principles, vascular neurocognitive disorder means a chronic vascular disorder of the brain, meeting the following clinical diagnostic criteria (derived from DSM-5-TR):
- A. Evidence of major neurocognitive disorder or mild neurocognitive disorder.
  - B. The clinical features are consistent with a vascular aetiology, as suggested by either of the following:
    - (i) onset of the cognitive deficits is temporally related to one or more documented cerebrovascular events; or

- (ii) evidence for decline is prominent in complex attention (including processing speed) and frontal-executive function.
- C. There is evidence of the presence of cerebrovascular disease from history, physical examination, and/or neuroimaging considered sufficient to account for the neurocognitive deficits.
- D. Vascular neurocognitive disorder includes:
- (i) acquired diffuse white matter disease (Binswanger disease);
  - (ii) multi-infarct dementia;
  - (iii) post-stroke dementia;
  - (iv) strategic infarct dementia;
  - (v) subcortical ischaemic vascular dementia;
  - (vi) dementia, major neurocognitive disorder or mild neurocognitive disorder due to vascular disease, including atherosclerosis;
  - (vii) vascular mild cognitive impairment without dementia.
- E. The cognitive deficits in Criteria A, B, C and D are not primarily due to any of the following:
- (i) delirium;
  - (ii) another mental disorder (for example, major depressive disorder, schizophrenia); or
  - (iii) inherited diffuse white matter disease, mitochondrial disorders, a neurodegenerative disease (for example, Alzheimer disease, Parkinson's disease, Huntington's chorea), brain tumour, subdural haematoma, the effects of a substance, or systemic disorder (for example, hypothyroidism, vitamin B12 or folic acid deficiency, niacin deficiency, hypercalcaemia, neurosyphilis, human immunodeficiency virus infection).

Note 1: *DSM-5-TR*, *major neurocognitive disorder* and *mild neurocognitive disorder* are defined in the Schedule 1 – Dictionary.

Note 2: Vascular neurocognitive disorder is also known as vascular dementia.

- (3) While vascular neurocognitive disorder attracts ICD-10-AM code F01, in applying this Statement of Principles the meaning of vascular neurocognitive disorder is that given in subsection (2).
- (4) For subsection (3), a reference to an ICD-10-AM code is a reference to the code assigned to a particular kind of injury or disease in *The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM)*, Tenth Edition, effective date of 1 July 2017, copyrighted by the Independent Hospital Pricing Authority, ISBN 978-1-76007-296-4.

#### *Death from vascular neurocognitive disorder*

- (5) For the purposes of this Statement of Principles, vascular neurocognitive disorder, in relation to a person, includes death from a

terminal event or condition that was contributed to by the person's vascular neurocognitive disorder.

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

## 8 Basis for determining the factors

On the sound medical-scientific evidence available, the Repatriation Medical Authority is of the view that it is more probable than not that vascular neurocognitive disorder and death from vascular neurocognitive disorder can be related to relevant service rendered by veterans 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 exist before it can be said that, on the balance of probabilities, vascular neurocognitive disorder or death from vascular neurocognitive disorder is connected with the circumstances of a person's relevant service:

- (1) having a cerebrovascular accident or subarachnoid haemorrhage before the clinical onset of vascular neurocognitive disorder;
- (2) having a specified disease of the cerebral vessels, in the presence of neuroimaging (magnetic resonance imaging or computed tomography) findings of cerebral white matter lesions, haemorrhage or infarction, before the clinical onset of vascular neurocognitive disorder;

Note 1: *specified disease of the cerebral vessels* is defined in the Schedule 1 – Dictionary.

Note 2: *neuroimaging (magnetic resonance imaging or computed tomography) findings* is defined in the Schedule 1 – Dictionary.

- (3) having hypertension at least 5 years before the clinical onset of vascular neurocognitive disorder;
- (4) having sick sinus syndrome, atrial fibrillation or atrial flutter, at the time of the clinical onset of vascular neurocognitive disorder;
- (5) having carotid artery disease, ischaemic heart disease or heart failure before the clinical onset of vascular neurocognitive disorder;
- (6) having cardiac surgery within the 12 months before the clinical onset of vascular neurocognitive disorder;
- (7) having diabetes mellitus for at least the 5 years before the clinical onset of vascular neurocognitive disorder;
- (8) having smoked tobacco products:
  - (a) in an amount of at least 20 pack-years before the clinical onset of vascular neurocognitive disorder; and

(b) commencing at least 5 years before the clinical onset of vascular neurocognitive disorder; and

if smoking has ceased before the clinical onset of vascular neurocognitive disorder, then that onset occurred within 20 years of cessation;

Note: *one pack-year* is defined in the Schedule 1 - Dictionary.

(9) an inability to undertake any physical activity greater than 3 METs for at least 5 years within the 20 years before the clinical onset of vascular neurocognitive disorder;

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

(10) having depressive disorder at least 5 years before the clinical onset of vascular neurocognitive disorder;

(11) having chronic kidney disease before the clinical onset of vascular neurocognitive disorder;

Note: *chronic kidney disease* is defined in the Schedule 1 - Dictionary.

(12) inhaling ambient, chronically polluted air as specified for at least 2,000 hours within the 5 years before the clinical onset of vascular neurocognitive disorder;

Note: *ambient, chronically polluted air as specified* is defined in the Schedule 1 – Dictionary

(13) having moderate to severe traumatic brain injury at least 5 years before the clinical onset of vascular neurocognitive disorder;

(14) having a cerebrovascular accident or subarachnoid haemorrhage before the clinical worsening of vascular neurocognitive disorder;

(15) having a specified disease of the cerebral vessels, in the presence of neuroimaging (magnetic resonance imaging or computed tomography) findings of cerebral white matter lesions, haemorrhage or infarction, before the clinical worsening of vascular neurocognitive disorder;

Note: *specified disease of the cerebral vessels* is defined in the Schedule 1 – Dictionary

Note 2: *neuroimaging (magnetic resonance imaging or computed tomography) findings* is defined in the Schedule 1 – Dictionary.

(16) having hypertension at least 5 years before the clinical worsening of vascular neurocognitive disorder;

(17) having sick sinus syndrome, atrial fibrillation or atrial flutter, at the time of the clinical worsening of vascular neurocognitive disorder;

(18) having carotid artery disease, ischaemic heart disease or heart failure before the clinical worsening of vascular neurocognitive disorder;

(19) having cardiac surgery within the 12 months before the clinical worsening of vascular neurocognitive disorder;

- (20) having diabetes mellitus for at least the 5 years before the clinical worsening of vascular neurocognitive disorder;
- (21) having smoked tobacco products:
  - (a) in an amount of at least 20 pack-years before the clinical worsening of vascular neurocognitive disorder; and
  - (b) commencing at least 5 years before the clinical worsening of vascular neurocognitive disorder; and

if smoking has ceased before the clinical worsening of vascular neurocognitive disorder, then that onset occurred within 20 years of cessation;

Note: *one pack-year* is defined in the Schedule 1 - Dictionary.

- (22) an inability to undertake any physical activity greater than 3 METs for at least 5 years within the 20 years before the clinical worsening of vascular neurocognitive disorder;

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

- (23) having depressive disorder at least 5 years before the clinical worsening of vascular neurocognitive disorder;
- (24) having chronic kidney disease before the clinical worsening of vascular neurocognitive disorder;

Note: *chronic kidney disease* is defined in the Schedule 1 - Dictionary.

- (25) inhaling ambient, chronically polluted air as specified for at least 2,000 hours within the 5 years before the clinical worsening of vascular neurocognitive disorder;

Note: *ambient, chronically polluted air as specified* is defined in the Schedule 1 – Dictionary

- (26) having moderate to severe traumatic brain injury at least 5 years before the clinical worsening of vascular neurocognitive disorder;
- (27) inability to obtain appropriate clinical management for vascular neurocognitive disorder.

## 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 factors set out in subsections 9(14) to 9(27) apply only to material contribution to, or aggravation of, vascular neurocognitive disorder where the person's vascular neurocognitive disorder 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(3) 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:

***albuminuria*** means an albumin to creatinine ratio of at least 3 milligrams/millimole.

***ambient, chronically polluted air as specified*** means air with average annual concentrations of particulate matter with an aerodynamic diameter of < 2.5 µm (PM2.5) exceeding 25 µg/m<sup>3</sup>.

***cerebral arteriosclerosis*** means thickening of the walls of small arteries or arterioles of the brain, due to cell proliferation or hyaline deposition.

***chronic kidney disease*** means:

- (a) having a glomerular filtration rate of less than 60 ml/min/1.73 m<sup>2</sup> for at least 3 months;
- (b) having albuminuria for at least 3 months;
- (c) having kidney damage, as evidenced by renal biopsy, imaging studies, urinary sediment abnormalities or other markers of abnormal renal function; or
- (d) having had a kidney transplant.

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

***DSM-5-TR*** means the American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision. Washington, DC, American Psychiatric Association, 2022.

***major neurocognitive disorder*** means:

- (a) evidence of significant cognitive decline from a previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition) based on:
  - (i) concern of the individual, a knowledgeable informant, or the clinician that there has been a significant decline in cognitive function; and
  - (ii) a substantial impairment in cognitive performance, documented by standardised neuropsychological testing or another qualified clinical assessment; and
- (b) the cognitive deficits interfere with independence in everyday activities (that is, at a minimum, requiring assistance with complex instrumental activities of daily living such as paying bills or managing medications).

**MET** means a unit of measurement of the level of physical exertion. 1 MET = 3.5 ml of oxygen/kg of body weight per minute, 1.0 kcal/kg of body weight per hour or resting metabolic rate.

**mild neurocognitive disorder** means evidence of modest cognitive decline from a previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition) based on:

- (a) concern of the individual, a knowledgeable informant, or the clinician that there has been a mild decline in cognitive function; and
- (b) a modest impairment in cognitive performance, documented by standardised neuropsychological testing or another qualified clinical assessment.

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

**neuroimaging (magnetic resonance imaging or computed tomography) findings** means an image of an interior of a body obtained by medical techniques, that is usually obtained at a date after the clinical onset of the disease.

**one pack-year** means the amount of tobacco consumed in smoking 20 cigarettes per day for a period of 1 year, or an equivalent amount of tobacco products.

Note 1: An equivalent amount of tobacco products is 7,300 grams of smoking tobacco by weight, either in cigarettes, pipe tobacco or cigars, or a combination of same. For pipe tobacco, cigars or combinations of multiple tobacco types, 1 gram of tobacco is considered to be equal to one cigarette.

Note 2: Pack-years are calculated by dividing the number of cigarettes smoked per day by 20 and multiplying this number by the number of years the person has smoked. For example, smoking 10 cigarettes per day for 10 years is equal to 5 pack-years, and smoking 40 cigarettes per day for 10 years is equal to 20 pack-years.

**relevant service** means:

- (a) eligible war service (other than operational service) under the VEA;
- (b) defence service (other than hazardous service and British nuclear test defence service) under the VEA; or
- (c) peacetime service under the MRCA.

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

**specified disease of the cerebral vessels** means:

- (a) antiphospholipid syndrome;
- (b) cerebral amyloid angiopathy;
- (c) cerebral arteriolosclerosis;
- (d) cerebral venous thrombosis;
- (e) hippocampal sclerosis of vascular origin (seen in temporal lobe epilepsy, hypoxic/ischaemic brain injury);
- (f) inflammatory or immunologically mediated vasculitis;
- (g) intravascular lymphomatosis (a type of non-Hodgkin lymphoma);
- (h) laminar cortical necrosis; or
- (i) Moyamoya disease;

Note: **cerebral arteriolosclerosis** is 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.

***vascular neurocognitive disorder***—see subsection 7(2).

***VEA*** means the *Veterans' Entitlements Act 1986*.