



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

**Statement of Principles**  
**concerning**  
**CHRONIC SOLVENT-INDUCED**  
**NEUROCOGNITIVE DISORDER**  
**(Reasonable Hypothesis)**  
**(No. 109 of 2021)**

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

Dated 26 November 2021

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

Professor Terence Campbell AM  
Chairperson

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**1 Name**

This is the Statement of Principles concerning *chronic solvent-induced neurocognitive disorder (Reasonable Hypothesis)* (No. 109 of 2021).

**2 Commencement**

This instrument commences on 20 December 2021.

**3 Authority**

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

**4 Repeal**

The Statement of Principles concerning chronic solvent encephalopathy No. 71 of 2013 (Federal Register of Legislation No. F2013L01886) made under subsection 196B(2) of the VEA is repealed.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 chronic solvent-induced neurocognitive disorder and death from chronic solvent-induced neurocognitive disorder.

*Meaning of chronic solvent-induced neurocognitive disorder*

- (2) For the purposes of this Statement of Principles, chronic solvent-induced neurocognitive disorder:
- (a) means irreversible brain injury meeting the following diagnostic criteria:
    - (i) 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:

- concern of the individual, a knowledgeable informant, or the clinician that there has been a significant decline in cognitive function; and
  - a substantial impairment in cognitive performance, documented by standardised neuropsychological testing;
- (ii) the cognitive deficits interfere with independence in everyday activities;
  - (iii) there must be evidence from the history, physical examination, or laboratory findings that the deficits are aetiologically related to the persisting neurological effects of organic solvents;
  - (iv) the neurocognitive impairments do not occur exclusively during the course of a delirium and persist beyond the usual duration of intoxication and acute withdrawal;
  - (v) the involved organic solvent and duration and extent of exposure are capable of producing the neurocognitive impairment;
  - (vi) the temporal course of the neurocognitive deficits is consistent with the timing of organic solvent exposure; and
  - (vii) the neurocognitive disorder is not attributable to another medical condition or is not better explained by another mental disorder; and

- (b) excludes alcohol-induced neurocognitive disorder and medication-induced neurocognitive disorder.

Note 1: This definition is derived from the definition of substance-induced neurocognitive disorder contained in DSM-5.

Note 2: *DSM-5* is defined in the Schedule 1 - Dictionary.

#### ***Death from chronic solvent-induced neurocognitive disorder***

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

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 chronic solvent-induced neurocognitive disorder and death from chronic solvent-induced neurocognitive disorder 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 chronic solvent-induced neurocognitive disorder or death from chronic solvent-induced neurocognitive disorder with the circumstances of a person's relevant service:

- (1) having a severe substance use disorder involving inhalation of a solvent from the Specified List 1 of solvents within the 5 years before the clinical onset of chronic solvent-induced neurocognitive disorder;

Note: *severe substance use disorder* and *Specified List 1 of solvents* are defined in the Schedule 1 - Dictionary.

- (2) inhaling, ingesting or having cutaneous contact with a solvent from the Specified List 2 of solvents, where inhalation occurred in an unventilated and confined space, on more days than not for a consecutive period of at least 5 years before the clinical onset of chronic solvent-induced neurocognitive disorder, and if exposure has ceased before the clinical onset of chronic solvent-induced neurocognitive disorder, then that onset occurred within 1 year of cessation;

Note: *Specified List 2 of solvents* is defined in the Schedule 1 - Dictionary.

- (3) having at least 50 episodes of acute solvent intoxication due to a solvent from the Specified List 2 of solvents within a consecutive period of 2 years before the clinical onset of chronic solvent-induced neurocognitive disorder, and where the last episode of acute solvent intoxication occurred within the 2 years before the clinical onset of chronic solvent-induced neurocognitive disorder;

Note: *acute solvent intoxication* and *Specified List 2 of solvents* are defined in the Schedule 1 - Dictionary.

- (4) having an episode of acute solvent intoxication due to a solvent from the Specified List 3 of solvents, with evidence of associated persistent brain damage on imaging, at the time of the clinical onset of chronic solvent-induced neurocognitive disorder;

Note: *acute solvent intoxication* and *Specified List 3 of solvents* are defined in the Schedule 1 - Dictionary.

- (5) inability to obtain appropriate clinical management for chronic solvent-induced 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 factor set out in subsection 9(5) applies only to material contribution to, or aggravation of, chronic solvent-induced neurocognitive disorder where the person's chronic solvent-induced 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(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:

***acute solvent intoxication*** means clinically significant problematic behavioural or psychological changes (for example, belligerence, assaultiveness, apathy, impaired judgement) that develop during or shortly after, short-term, high-dose exposure to a solvent by inhalation, ingestion or dermal contact. These changes are accompanied by 2 or more of the following signs or symptoms that also develop during or shortly after solvent exposure:

- (a) blurred vision or diplopia;
- (b) depressed reflexes;
- (c) dizziness;
- (d) euphoria;
- (e) generalised muscle weakness;
- (f) incoordination;
- (g) lethargy;
- (h) nystagmus;
- (i) psychomotor retardation;
- (j) slurred speech;
- (k) stupor or coma;
- (l) tremor; or
- (m) unsteady gait;

where the signs or symptoms are not attributable to another medical condition and are not better explained by another disorder of mental health, including substance use disorder due to intoxication with another substance.

***chronic solvent-induced neurocognitive disorder***—see subsection 7(2).

***DSM-5*** means the American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013.

***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.

***severe substance use disorder*** means a disorder of mental health characterised by a problematic pattern of use of a substance leading to clinically significant impairment or distress, as manifested by at least 6 of the following criteria, occurring within a 12-month period:

- (a) the substance is often taken in larger amounts or over a longer period than was intended;
- (b) there is a persistent desire or unsuccessful efforts to cut down or control substance use;
- (c) a great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects;
- (d) craving, or a strong desire or urge to use the substance;
- (e) recurrent substance use resulting in a failure to fulfil major role obligations at work, school, or home;
- (f) continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of substances;
- (g) important social, occupational, or recreational activities are given up or reduced because of substance use;
- (h) recurrent substance use in situations in which it is physically hazardous;
- (i) continued substance use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance; or
- (j) tolerance, defined by either:
  - (i) a need for markedly increased amounts of the substance to achieve intoxication or desired effect; or
  - (ii) a markedly diminished effect with continued use of the same amount of the substance.

***Specified List 1 of solvents*** means:

- (a) bromomethane;
- (b) butane;
- (c) carbon disulphide;
- (d) dichloromethane;
- (e) dichloroethane;
- (f) ethyl acetate;
- (g) petrol;
- (h) styrene;
- (i) tetrachloroethylene;
- (j) toluene;
- (k) trichloroethylene;
- (l) white spirit; or
- (m) xylene.

***Specified List 2 of solvents*** means:

- (a) bromomethane;
- (b) carbon disulphide;
- (c) dichloroethane;



- (d) dichloromethane;
- (e) ethyl acetate;
- (f) styrene;
- (g) tetrachloroethylene;
- (h) toluene;
- (i) trichloroethylene;
- (j) white spirit; or
- (k) xylene.

***Specified List 3 of solvents*** means:

- (a) bromomethane;
- (b) carbon disulphide;
- (c) chloromethane;
- (d) dichloromethane;
- (e) dichloroethane;
- (f) ethyl acetate;
- (g) ethylene glycol;
- (h) styrene;
- (i) tetrachloroethylene;
- (j) toluene;
- (k) trichloroethylene;
- (l) white spirit; or
- (m) xylene.

***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*.