



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
POISONING FROM PLANTS OR FUNGI
(Reasonable Hypothesis)
(No. 49 of 2019)

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

Dated 26 April 2019

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 *poisoning from plants or fungi (Reasonable Hypothesis)* (No. 49 of 2019).

2 Commencement

This instrument commences on 27 May 2019.

3 Authority

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

4 Repeal

The Statement of Principles concerning poisoning and toxic reaction from plants and fungi No. 84 of 2010 (Federal Register of Legislation No. F2010L02839) made under subsection 196B(2) of the VEA is repealed.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 poisoning from plants or fungi and death from poisoning from plants or fungi.

Meaning of poisoning from plants or fungi

- (2) For the purposes of this Statement of Principles, poisoning from plants or fungi:
- (a) means illness, injury or death from the toxic effects of a plant or fungus; and
 - (b) includes the toxic effects of:
 - (i) ingesting mushrooms, berries or roots;
 - (ii) ingesting food contaminated with a mycotoxin such as aflatoxin;
 - (iii) ingesting honey contaminated with a plant toxin such as tutin; and

- (iv) using a herbal medicine containing a plant toxin such as a pyrrolizidine alkaloid or aristolochic acid; and
- (c) excludes:
 - (i) allergic contact dermatitis;
 - (ii) irritant contact dermatitis;
 - (iii) photocontact dermatitis;
 - (iv) blepharitis;
 - (v) conjunctivitis;
 - (vi) malignant neoplasms;
 - (vii) substance use disorder;
 - (viii) coeliac disease;
 - (ix) food allergy; and
 - (x) the effects of exposure to pharmaceuticals, cosmetics, toiletries, alcohol and commercially prepared tobacco.

Note 1: Plant includes all parts of a plant, plant extract, dried plant and a herbal medicine.

Note 2: Fungus includes all parts of a mushroom, mushroom extract, dried mushroom and mycotoxins such as aflatoxin produced from fungi such as *Aspergillus*.

Death from poisoning from plants or fungi

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

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 poisoning from plants or fungi and death from poisoning from plants or fungi 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 poisoning from plants or fungi or death from poisoning from plants or fungi with the circumstances of a person's relevant service:

- (1) ingesting, inhaling, injecting or having cutaneous, intradermal, mucosal or ocular exposure to a toxin from a plant or fungus within the seven days before the clinical onset of poisoning from plants or fungi;

Note: A toxin from a fungus includes a mycotoxin (such as aflatoxin) contaminating foodstuffs (such as alcohol, eggs, fruit, grains, herbs, honey, meat, milk and milk products, nuts and seeds).

- (2) consuming milk, milk products, eggs or meat within the two weeks before the clinical onset of poisoning from plants or fungi, where those products were from an animal that ingested a plant from the Specified List 1 of plants;

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

- (3) consuming honey within the two weeks before the clinical onset of poisoning from plants or fungi, where the honey was derived from plants containing a plant toxin from the specified list of plant toxins;

Note: *specified list of plant toxins* is defined in the Schedule 1 - Dictionary.

- (4) for poisoning manifesting as delayed hepatotoxicity, delayed nephrotoxicity or delayed neurotoxicity only, ingesting, inhaling, injecting or having cutaneous, intradermal, mucosal or ocular exposure to a plant from the Specified List 2 of plants within the two years before the clinical onset of poisoning from plants or fungi;

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

- (5) for poisoning manifesting as delayed hepatotoxicity, delayed neurotoxicity or delayed thyrotoxicity only, consuming milk, milk products, eggs or meat within the two years before the clinical onset of poisoning from plants or fungi, where those products were from an animal that ingested a plant from the Specified List 3 of plants;

Note: *Specified List 3 of plants* is defined in the Schedule 1 - Dictionary.

- (6) for poisoning manifesting as delayed hepatotoxicity only, consuming honey within the two years before the clinical onset of poisoning from plants or fungi, where the honey was derived from plants containing a pyrrolizidine alkaloid;

Note: Examples of plants containing a pyrrolizidine alkaloid include, but are not limited to, *Borago officinalis* (borage), *Crotalaria sagittalis* (rattlebox), *Cynoglossum officinale* (hound's tongue), *Echium plantagineum* (Patterson's curse), *Heliotropium europaeum* (heliotrope), *Senecio jacobaea* (tansy ragwort) and *Symphytum officinale* (comfrey).

- (7) inability to obtain appropriate clinical management for poisoning from plants or fungi.

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(7) applies only to material contribution to, or aggravation of, poisoning from plants or fungi where the person's poisoning from plants or fungi 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:

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

poisoning from plants or fungi—see subsection 7(2).

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 plant toxins means:

- (a) grayanotoxin;
- (b) triptolide; or
- (c) tutin.

Specified List 1 of plants means:

- (a) *Ageratina altissima* (white snakeroot);
- (b) *Bigelovia* species, *Haplopappus heterophyllus* and *Isocoma pluriflora* (rayless goldenrod);
- (c) *Colchicum autumnale* (autumn crocus); or
- (d) *Conium maculatum* (hemlock).

Specified List 2 of plants means:

- (a) *Aristolochiaceae* species (plants containing aristolochic acid);
- (b) *Artemisia* species (plants containing thujone);
- (c) *Camellia sinensis* (green tea extract);
- (d) *Chelidonium majus* (greater celandine);
- (e) *Cimicifuga racemose* (black cohosh);
- (f) furanocoumarins (plants containing psoralens);
- (g) *Larrea tridentate* (chaparral);
- (h) *Piper methysticum* (kava extract); or
- (i) plants containing a pyrrolizidine alkaloid.

Note 1: Examples of plants containing psoralens (furanocoumarins) include, but are not limited to, *Ruta graveolens* (rue), *Apium graveolens* (celery fruits), *Angelica archangelica* (angelica) and *Petroselinum crispum* (parsley).

Note 2: Examples of plants containing a pyrrolizidine alkaloid include, but are not limited to, *Borago officinalis* (borage), *Crotalaria sagittalis* (rattlebox), *Cynoglossum officinale* (hound's tongue), *Echium plantagineum* (Patterson's curse), *Heliotropium europaeum* (heliotrope), *Senecio jacobaea* (tansy ragwort) and *Symphytum officinale* (comfrey).

Specified List 3 of plants means:

- (a) *Cruciferae* species;
- (b) plants containing a pyrrolizidine alkaloid; or
- (c) plants containing a quinolizidine alkaloid.

Note 1: Examples of plants containing a pyrrolizidine alkaloid include, but are not limited to, *Borago officinalis* (borage), *Crotalaria sagittalis* (rattlebox), *Cynoglossum officinale* (hound's tongue), *Echium plantagineum* (Patterson's curse), *Heliotropium europaeum* (heliotrope), *Senecio jacobaea* (tansy ragwort) and *Symphytum officinale* (comfrey).

Note 2: Examples of plants containing a quinolizidine alkaloid include, but are not limited to, *Lupinus* species (lupines, blue bonnets), *Cytisus scoparius* (Scotch broom), *Laburnum anagyroides* (golden chain tree) and *Thermopsis montana* (mountain thermopsis).

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*.