



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
GRAVES DISEASE
(Reasonable Hypothesis)
(No. 7 of 2022)

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

Dated 24 December 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 *Graves disease (Reasonable Hypothesis)* (No. 7 of 2022).

2 Commencement

This instrument commences on 31 January 2022.

3 Authority

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

4 Repeal

The Statement of Principles concerning Graves' disease No. 33 of 2013 (Federal Register of Legislation No. F2013L00736) made under subsections 196B(2) and (8) of the VEA is repealed.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 Graves disease and death from Graves disease.

Meaning of Graves disease

- (2) For the purposes of this Statement of Principles, Graves disease means a chronic autoimmune disease primarily affecting the thyroid gland, in which thyroid antibodies activate the thyroid-stimulating hormone receptor, causing thyroid hyperplasia and excessive thyroid hormone synthesis and secretion.

Note 1: The thyroid-stimulating immunoglobulins can also affect the eyes, causing a characteristic ophthalmopathy (Graves orbitopathy), and less commonly the skin, causing a characteristic dermopathy (pretibial myxoedema).

Note 2: Presenting features typically include a diffuse hyperplastic goitre and hyperthyroidism, although some patients may be euthyroid or hypothyroid during the course of the disease.

Note 3: Graves disease may present as a thyrotoxic crisis.

Note 4: *thyrotoxic crisis* is defined in the Schedule 1 - Dictionary.

- (3) While Graves disease attracts ICD-10-AM code E05.0 or E05.5, in applying this Statement of Principles the meaning of Graves disease 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 Graves disease

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

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 Graves disease and death from Graves disease 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 Graves disease or death from Graves disease with the circumstances of a person's relevant service:

- (1) having iodine excess within the 6 months before the clinical onset of Graves disease;
Note 1: Iodine excess may be due to consuming foods, dietary supplements or medications with a high content of iodine.
Note 2: *iodine excess* is defined in the Schedule 1 - Dictionary.
- (2) taking a drug from the specified list of drugs within the 2 years before the clinical onset of Graves disease;
Note: *specified list of drugs* is defined in the Schedule 1 - Dictionary.
- (3) being treated with alemtuzumab or antithymocyte globulin within the 10 years before the clinical onset of Graves disease;
- (4) taking amiodarone for a continuous period of at least 6 weeks, within the 2 years before the clinical onset of Graves disease;

- (5) undergoing a course of therapeutic radiation for cancer, where the thyroid gland was in the field of radiation, within the 25 years before the clinical onset of Graves disease;
- (6) having received iodine-131 (radioactive iodine) for the treatment of nodular goitre within the 10 years before the clinical onset of Graves disease;
- (7) having smoked tobacco products:
 - (a) in an amount of at least 3 pack-years before the clinical onset of Graves disease; and
 - (b) if smoking has ceased before the clinical onset of Graves disease, then that onset occurred within 10 years of cessation;

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

- (8) being pregnant or within the 18 months postpartum at the time of the clinical onset of Graves disease;
- (9) having ethanol injection into the thyroid gland for the treatment of a thyroid adenoma within the 6 months before the clinical onset of Graves disease;
- (10) having trauma to the eye within the 6 months before the clinical onset of Graves disease;

Note: Trauma to the eye may include blunt or penetrating physical injury to the eye.

- (11) for Graves disease first presenting as thyrotoxic crisis only, having an acute precipitating event within the 48 hours before the clinical onset of Graves disease;

Note: *acute precipitating event* and *thyrotoxic crisis* are defined in the Schedule 1 - Dictionary.

- (12) having iodine excess within the 6 months before the clinical worsening of Graves disease;

Note 1: Iodine excess may be due to consuming foods, dietary supplements or medications with a high content of iodine.

Note 2: *iodine excess* is defined in the Schedule 1 - Dictionary.

- (13) taking a drug from the specified list of drugs within the 2 years before the clinical worsening of Graves disease;

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

- (14) being treated with alemtuzumab or antithymocyte globulin within the 10 years before the clinical worsening of Graves disease;
- (15) taking amiodarone for a continuous period of at least 6 weeks, within the 2 years before the clinical worsening of Graves disease;

- (16) undergoing a course of therapeutic radiation for cancer, where the thyroid gland was in the field of radiation, within the 25 years before the clinical worsening of Graves disease;
- (17) having received iodine-131 (radioactive iodine) for the treatment of nodular goitre within the 10 years before the clinical worsening of Graves disease;
- (18) having smoked tobacco products:
 - (a) in an amount of at least 3 pack-years before the clinical worsening of Graves disease; and
 - (b) if smoking has ceased before the clinical worsening of Graves disease, then that worsening occurred within 10 years of cessation;

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

- (19) being pregnant or within the 18 months postpartum at the time of the clinical worsening of Graves disease;
- (20) having ethanol injection into the thyroid gland for the treatment of a thyroid adenoma within the 6 months before the clinical worsening of Graves disease;
- (21) having trauma to the eye within the 6 months before the clinical worsening of Graves disease;

Note: Trauma to the eye may include blunt or penetrating physical injury to the eye.
- (22) for thyrotoxic crisis only, having an acute precipitating event within the 48 hours before that clinical worsening of Graves disease;

Note: *acute precipitating event* and *thyrotoxic crisis* are defined in the Schedule 1 – Dictionary.
- (23) inability to obtain appropriate clinical management for Graves disease.

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(12) to 9(23) apply only to material contribution to, or aggravation of, Graves disease where the person's Graves disease 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 precipitating event means a physical or psychological stimulus or event that causes a sudden, intense psychological or physical response.

Note: Examples of an acute precipitating event include:

- (a) abrupt cessation or lowering of anti-thyroid therapy;
- (b) acute illness such as acute myocardial infarction, stroke and congestive heart failure;
- (c) acute iodine load;
- (d) experiencing an acute, severe, emotional stressor;
- (e) infection;
- (f) parturition;
- (g) physical trauma or injury; and
- (h) surgery.

Graves disease—see subsection 7(2).

iodine excess means:

- (a) an average intake of more than 1,100 micrograms of iodine per day for adults, or more than 900 micrograms per day for those aged 18 years and under, for a continuous period of at least 3 months; or
- (b) a urinary iodine concentration of greater than 300 micrograms per litre, or greater than 500 micrograms per litre for pregnant women.

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

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) 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 drugs means:

- (a) antiretroviral therapy;

- (b) immune checkpoint inhibitors;
- (c) interferon alpha;
- (d) interleukin-2; or
- (e) tyrosine kinase inhibitors.

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.

thyrotoxic crisis means a constellation of severe and life-threatening symptoms of rapid onset in a patient with biochemical evidence of elevated thyroid hormones. Characteristic symptoms and signs are fever, marked tachycardia, heart failure, tremor, nausea and vomiting, diarrhoea, dehydration, restlessness, extreme agitation, delirium and coma.

Note 1: Thyrotoxic crisis is also known as thyroid storm.

Note 2: Thyrotoxic crisis may be the first presentation of undiagnosed Graves disease or may complicate existing Graves disease.

VEA means the *Veterans' Entitlements Act 1986*.