



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
AORTIC ANEURYSM AND AORTIC WALL
DISORDERS
(Reasonable Hypothesis)
(No. 21 of 2021)

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

Dated 24 December 2020

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

Professor Nicholas Saunders AO
Chairperson

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1 Name

This is the Statement of Principles concerning *aortic aneurysm and aortic wall disorders (Reasonable Hypothesis)* (No. 21 of 2021).

2 Commencement

This instrument commences on 25 January 2021.

3 Authority

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

4 Repeal

The Statement of Principles concerning aortic aneurysm No. 9 of 2012 (Federal Register of Legislation No. F2012L00017) made under subsections 196B(2) and (8) of the VEA is repealed.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 aortic aneurysm and aortic wall disorders and death from aortic aneurysm and aortic wall disorders.

Meaning of aortic aneurysm and aortic wall disorders

- (2) For the purposes of this Statement of Principles:
- (a) aortic aneurysm means permanent dilatation of the wall of the thoracic or abdominal aorta; and
 - (b) aortic wall disorders means:
 - (i) aortic dissection;
 - (ii) aortic intramural haematoma;
 - (iii) false aneurysm of the aorta;
 - (iv) periaortic haematoma;
 - (v) rupture of the aorta; and
 - (vi) symptomatic penetrating aortic ulcer.

Note 1: Aortic dissection can arise in an aortic aneurysm or can occur without a preceding aortic aneurysm.

Note 2: *aortic dissection*, *false aneurysm of the aorta* and *symptomatic penetrating aortic ulcer* are defined in the Schedule 1 - Dictionary.

- (3) While aortic aneurysm and aortic wall disorders attract ICD-10-AM code I71, in applying this Statement of Principles the meaning of aortic aneurysm and aortic wall disorders 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 aortic aneurysm and aortic wall disorders

- (5) For the purposes of this Statement of Principles, aortic aneurysm or an aortic wall disorder, in relation to a person, includes death from a terminal event or condition that was contributed to by the person's aortic aneurysm or aortic wall 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 aortic aneurysm or an aortic wall disorder and death from aortic aneurysm or an aortic wall 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 aortic aneurysm or an aortic wall disorder or death from aortic aneurysm or an aortic wall disorder with the circumstances of a person's relevant service:

- (1) having hypertension before the clinical onset of aortic aneurysm or an aortic wall disorder;
- (2) being obese for at least five years within the 20 years before the clinical onset of aortic aneurysm or an aortic wall disorder;

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

- (3) having dyslipidaemia before the clinical onset of aortic aneurysm or an aortic wall disorder;

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

- (4) where smoking has not permanently ceased, having smoked at least one pack-year of tobacco products before the clinical onset of aortic aneurysm or an aortic wall disorder;

Note: *pack-year of tobacco products* is defined in the Schedule 1 - Dictionary.

- (5) where smoking has permanently ceased before the clinical onset of aortic aneurysm or an aortic wall disorder:

- (a) having smoked at least five pack-years of tobacco products; or
(b) having smoked at least one pack-year but less than five pack-years of tobacco products, and the clinical onset of aortic aneurysm or an aortic wall disorder has occurred within 20 years of smoking cessation;

Note: *pack-year of tobacco products* is defined in the Schedule 1 - Dictionary.

- (6) where exposure to second-hand smoke has not permanently ceased, being exposed to second-hand smoke for at least 1,000 hours before the clinical onset of aortic aneurysm or an aortic wall disorder;

Note: *being exposed to second-hand smoke* is defined in the Schedule 1 - Dictionary.

- (7) where exposure to second-hand smoke has permanently ceased before the clinical onset of aortic aneurysm or an aortic wall disorder:

- (a) being exposed to second-hand smoke for at least 5,000 hours; or
(b) being exposed to second-hand smoke for at least 1,000 hours but less than 5,000 hours, and the clinical onset of aortic aneurysm or an aortic wall disorder has occurred within five years of the last exposure to second-hand smoke;

Note: *being exposed to second-hand smoke* is defined in the Schedule 1 - Dictionary.

- (8) having hyperhomocysteinaemia before the clinical onset of aortic aneurysm or an aortic wall disorder;

- (9) having chronic kidney disease before the clinical onset of aortic aneurysm or an aortic wall disorder;

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

- (10) an inability to consume an average of at least 100 grams per day of any combination of fruit and vegetables, for at least five consecutive years within the 20 years before the clinical onset of aortic aneurysm or an aortic wall disorder;

- (11) having infection with human immunodeficiency virus at the time of the clinical onset of aortic aneurysm or an aortic wall disorder;

- (12) having infection of the affected part of the aorta with a bacterial or fungal organism before the clinical onset of aortic aneurysm or an aortic wall disorder;

Note: Examples of organisms which can cause an aortic aneurysm include *Staphylococcus* species, *Salmonella* species, *Streptococcus pneumoniae*, *Treponema pallidum* (the organism that causes syphilis), and species belonging to the *Mycobacterium tuberculosis* complex (the organism that causes tuberculosis).

- (13) having autoimmune aortitis or vasculitis before the clinical onset of aortic aneurysm or an aortic wall disorder;

Note: Examples of autoimmune diseases that may cause aortitis or vasculitis include giant cell arteritis, ankylosing spondylitis, Behcet disease, reactive arthritis, rheumatoid arthritis and systemic lupus erythematosus.

- (14) having trauma to the affected part of the aorta before the clinical onset of aortic aneurysm or an aortic wall disorder;

- (15) having a solid organ transplant before the clinical onset of aortic aneurysm or an aortic wall disorder;

- (16) having non-aneurysmal aortic atherosclerotic disease at the time of the clinical onset of aortic aneurysm or an aortic wall disorder;

- (17) taking a fluoroquinolone antibiotic in the three months before the clinical onset of aortic aneurysm or an aortic wall disorder;

- (18) for aortic wall disorders only:

- (a) undertaking physical activity of five METs or more within the 24 hours before the clinical onset of an aortic wall disorder;

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

- (b) being pregnant within the six weeks before the clinical onset of an aortic wall disorder;

- (c) having invasion of the affected part of the aorta by a malignant neoplasm at the time of the clinical onset of an aortic wall disorder;

- (d) having erosion of the affected part of the aorta due to inflammation of a contiguous tissue or organ at the time of the clinical onset of an aortic wall disorder;

Note: Examples of inflammatory conditions that can cause erosion of the wall of the aorta are acute and chronic pancreatitis.

- (e) taking a drug from the specified list of drugs in the 72 hours before the clinical onset of an aortic wall disorder;

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

- (f) having infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) at the time of the clinical onset of an aortic wall disorder;

Note: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus which causes coronavirus disease 2019 (COVID-19).

- (19) having hypertension before the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (20) being obese for at least five years within the 20 years before the clinical worsening of aortic aneurysm or an aortic wall disorder;

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

- (21) having dyslipidaemia before the clinical worsening of aortic aneurysm or an aortic wall disorder;

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

- (22) where smoking has not permanently ceased, having smoked at least one pack-year of tobacco products before the clinical worsening of aortic aneurysm or an aortic wall disorder;

Note: *pack-year of tobacco products* is defined in the Schedule 1 - Dictionary.

- (23) where smoking has permanently ceased before the clinical worsening of aortic aneurysm or an aortic wall disorder:

- (a) having smoked at least five pack-years of tobacco products; or
(b) having smoked at least one pack-year but less than five pack-years of tobacco products, and the clinical worsening of aortic aneurysm or an aortic wall disorder has occurred within 20 years of smoking cessation;

Note: *pack-year of tobacco products* is defined in the Schedule 1 - Dictionary.

- (24) where exposure to second-hand smoke has not permanently ceased, being exposed to second-hand smoke for at least 1,000 hours before the clinical worsening of aortic aneurysm or an aortic wall disorder;

Note: *being exposed to second-hand smoke* is defined in the Schedule 1 - Dictionary.

- (25) where exposure to second-hand smoke has permanently ceased before the clinical worsening of aortic aneurysm or an aortic wall disorder:

- (a) being exposed to second-hand smoke for at least 5,000 hours; or
(b) being exposed to second-hand smoke for at least 1,000 hours but less than 5,000 hours, and the clinical worsening of aortic aneurysm or an aortic wall disorder has occurred within five years of the last exposure to second-hand smoke;

Note: *being exposed to second-hand smoke* is defined in the Schedule 1 - Dictionary.

- (26) having hyperhomocysteinaemia before the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (27) having chronic kidney disease before the clinical worsening of aortic aneurysm or an aortic wall disorder;

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

- (28) an inability to consume an average of at least 100 grams per day of any combination of fruit and vegetables, for at least five consecutive years within the 20 years before the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (29) having infection with human immunodeficiency virus at the time of the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (30) having infection of the affected part of the aorta with a bacterial or fungal organism before the clinical worsening of aortic aneurysm or an aortic wall disorder;

Note: Examples of organisms which can cause an aortic aneurysm include *Staphylococcus* species, *Salmonella* species, *Streptococcus pneumoniae*, *Treponema pallidum* (the organism that causes syphilis), and species belonging to the *Mycobacterium tuberculosis* complex (the organism that causes tuberculosis).

- (31) having autoimmune aortitis or vasculitis before the clinical worsening of aortic aneurysm or an aortic wall disorder;

Note: Examples of autoimmune diseases that may cause aortitis or vasculitis include giant cell arteritis, ankylosing spondylitis, Behcet disease, reactive arthritis, rheumatoid arthritis and systemic lupus erythematosus.

- (32) having trauma to the affected part of the aorta before the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (33) having a solid organ transplant before the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (34) taking a fluoroquinolone antibiotic in the three months before the clinical worsening of aortic aneurysm or an aortic wall disorder;

- (35) for aortic wall disorders only:

- (a) undertaking physical activity of five METs or more within the 24 hours before the clinical worsening of an aortic wall disorder;

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

- (b) being pregnant within the six weeks before the clinical worsening of an aortic wall disorder;

- (c) having invasion of the affected part of the aorta by a malignant neoplasm at the time of the clinical worsening of an aortic wall disorder;

- (d) having erosion of the affected part of the aorta due to inflammation of a contiguous tissue or organ at the time of the clinical worsening of an aortic wall disorder;

Note: Examples of inflammatory conditions that can cause erosion of the wall of the aorta are acute and chronic pancreatitis.

- (e) taking a drug from the specified list of drugs in the 72 hours before the clinical worsening of an aortic wall disorder;

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

- (f) having infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) at the time of the clinical worsening of an aortic wall disorder;

Note: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus which causes coronavirus disease 2019 (COVID-19).

- (36) inability to obtain appropriate clinical management for aortic aneurysm or an aortic wall 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(19) to 9(36) apply only to material contribution to, or aggravation of aortic aneurysm or an aortic wall disorder where the person's aortic aneurysm or aortic wall 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:

abnormality of kidney structure or function means:

- (a) having a glomerular filtration rate of less than 60 mL/min/1.73 m²; or
- (b) having kidney damage, as evidenced by renal biopsy, imaging studies, albuminuria, urinary sediment abnormalities or other markers of abnormal renal function; or
- (c) having had a kidney transplant.

aortic aneurysm and aortic wall disorders—see subsection 7(2).

aortic dissection means separation of the layers of the aortic wall due to an intimal tear.

being exposed to second-hand smoke means being in an enclosed space and inhaling smoke from burning tobacco products or smoke that has been exhaled by another person who is smoking.

being obese means having a Body Mass Index (BMI) of 30 or greater.

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

BMI means W/H^2 where:

- (a) W is the person's weight in kilograms; and
- (b) H is the person's height in metres.

chronic kidney disease means an abnormality of kidney structure or function that has been present for at least three months.

Note: ***abnormality of kidney structure or function*** is also defined in the Schedule 1 - Dictionary.

dyslipidaemia means persistently abnormal blood lipid levels, diagnosed by a medical practitioner and evidenced by:

- (a) a serum high density lipoprotein cholesterol level less than 1.0 mmol/L; or
- (b) a serum low density lipoprotein level greater than 4.0 mmol/L; or
- (c) a serum triglyceride level greater than or equal to 2.0 mmol/L; or
- (d) a total serum cholesterol level greater than 5.5 mmol/L; or
- (e) the regular administration of drug therapy to normalise blood lipid levels.

false aneurysm of the aorta, also known as pseudoaneurysm, means a breach in the wall of the aorta such that blood leaks through the aortic wall but is contained by the adventitia or surrounding perivascular soft tissue.

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.

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

pack-year of tobacco products means:

- (a) 20 cigarettes per day for a period of one calendar year; or
- (b) 7,300 cigarettes in a period of one calendar year; or
- (c) 7,300 grams of smoking tobacco by weight, either in cigarettes, pipe tobacco or cigars, or a combination of same, in a period of one calendar year.

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) 3,4-methylenedioxymethamphetamine (ecstasy);
- (b) amphetamine;
- (c) cocaine;
- (d) crystal methamphetamine (ice); or
- (e) methamphetamine (speed).

symptomatic penetrating aortic ulcer means penetration of the aortic wall resulting in clinical manifestations of sudden onset of chest or back pain, haemodynamic instability, intramural haematoma, aortic dissection, aortic aneurysm or aortic rupture.

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*.