



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

**Statement of Principles**  
**concerning**  
**HYPERACUSIS**  
**(Balance of Probabilities)**  
**(No. 28 of 2021)**

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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 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 *hyperacusis (Balance of Probabilities)* (No. 28 of 2021).

## 2 Commencement

This instrument commences on 25 January 2021.

## 3 Authority

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

## 4 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.

## 5 Definitions

The terms defined in the Schedule 1 - Dictionary have the meaning given when used in this instrument.

## 6 Kind of injury, disease or death to which this Statement of Principles relates

- (1) This Statement of Principles is about hyperacusis and death from hyperacusis.

### *Meaning of hyperacusis*

- (2) For the purposes of this Statement of Principles, hyperacusis:
  - (a) means a disorder of sound tolerance or perception in which there is increased sensitivity or decreased tolerance to certain everyday sounds at levels that would not disturb most individuals; and
  - (b) causes significant distress and impairment in social, occupational, recreational, and other day-to-day activities; and
  - (c) must have persisted for at least three months.

Note 1: The sounds may be perceived as uncomfortably loud, unpleasant, frightening or painful.

Note 2: Sounds generated within the body may also cause hyperacusis.

### *Death from hyperacusis*

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

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

## 7 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 hyperacusis and death from hyperacusis 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.

## 8 Factors that must exist

At least one of the following factors must exist before it can be said that, on the balance of probabilities, hyperacusis or death from hyperacusis is connected with the circumstances of a person's relevant service:

- (1) being exposed to a peak sound pressure level at the tympanic membrane of at least 140 dB(C) before the clinical onset of hyperacusis;

Note: *dB(C)* is defined in the Schedule 1 - Dictionary.

- (2) being exposed to a sound pressure level at the tympanic membrane of at least 85 dB(A) as an 8-hour time-weighted average (TWA) with a 3-dB exchange rate for a cumulative period of at least one year before the clinical onset of hyperacusis;

Note: *dB(A)* and *time-weighted average (TWA) with a 3-dB exchange rate* are defined in the Schedule 1 - Dictionary.

- (3) having acoustic shock at the time of the clinical onset of hyperacusis;

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

- (4) having an episode of otitic barotrauma within the 30 days before the clinical onset of hyperacusis;

Note: Otitic barotrauma is also known as otic barotrauma.

- (5) being exposed to an explosive blast within the 30 days before the clinical onset of hyperacusis;

- (6) having concussion or moderate to severe traumatic brain injury within the 30 days before the clinical onset of hyperacusis;

- (7) having blunt trauma to the head causing a fracture of the temporal bone within the 30 days before the clinical onset of hyperacusis;

- (8) having stapedectomy or surgery involving the insular cortex or another part of the brain involved in central auditory processing within the 30 days before the clinical onset of hyperacusis;

- (9) having an inner ear disorder of the affected ear from the specified list of inner ear disorders at the time of the clinical onset of hyperacusis;

Note: *specified list of inner ear disorders* is defined in the Schedule 1 - Dictionary.

- (10) having Meniere's disease at the time of the clinical onset of hyperacusis;
- (11) having paralysis of the facial nerve on the affected side at the time of the clinical onset of hyperacusis;
- Note 1: The facial nerve is also known as the seventh cranial nerve.
- Note 2: Facial nerve paralysis is also known as Bell's palsy.
- Note 3: Conditions that can cause paralysis of the facial nerve include autoimmune disease, multiple sclerosis and viral infection.
- (12) having a viral or bacterial infection from the specified list of viral or bacterial infections within the 30 days before the clinical onset of hyperacusis;
- Note: *specified list of viral or bacterial infections* is defined in the Schedule 1 - Dictionary.
- (13) having dysfunction of the stapedius muscle or the tensor tympani muscle on the affected side at the time of the clinical onset of hyperacusis;
- (14) having a cerebrovascular accident within the 30 days before the clinical onset of hyperacusis;
- (15) having multiple sclerosis at the time of the clinical onset of hyperacusis;
- (16) being exposed to a peak sound pressure level at the tympanic membrane of at least 140 dB(C) before the clinical worsening of hyperacusis;
- Note: *dB(C)* is defined in the Schedule 1 - Dictionary.
- (17) being exposed to a sound pressure level at the tympanic membrane of at least 85 dB(A) as an 8-hour time-weighted average (TWA) with a 3-dB exchange rate for a cumulative period of at least one year before the clinical worsening of hyperacusis;
- Note: *dB(A)* and *time-weighted average (TWA) with a 3-dB exchange rate* are defined in the Schedule 1 - Dictionary.
- (18) having acoustic shock at the time of the clinical worsening of hyperacusis;
- Note: *acoustic shock* is defined in the Schedule 1 - Dictionary.
- (19) having an episode of otitic barotrauma within the 30 days before the clinical worsening of hyperacusis;
- Note: Otitic barotrauma is also known as otic barotrauma.
- (20) being exposed to an explosive blast within the 30 days before the clinical worsening of hyperacusis;
- (21) having concussion or moderate to severe traumatic brain injury within the 30 days before the clinical worsening of hyperacusis;

- (22) having blunt trauma to the head causing a fracture of the temporal bone within the 30 days before the clinical worsening of hyperacusis;
- (23) having stapedectomy or surgery involving the insular cortex or another part of the brain involved in central auditory processing within the 30 days before the clinical worsening of hyperacusis;
- (24) having an inner ear disorder of the affected ear from the specified list of inner ear disorders at the time of the clinical worsening of hyperacusis;

Note: *specified list of inner ear disorders* is defined in the Schedule 1 - Dictionary.

- (25) having Meniere's disease at the time of the clinical worsening of hyperacusis;
- (26) having paralysis of the facial nerve on the affected side at the time of the clinical worsening of hyperacusis;

Note 1: The facial nerve is also known as the seventh cranial nerve.

Note 2: Facial nerve paralysis is also known as Bell's palsy.

Note 3: Conditions that can cause paralysis of the facial nerve include autoimmune disease, multiple sclerosis and viral infection.

- (27) having a viral or bacterial infection from the specified list of viral or bacterial infections within the 30 days before the clinical worsening of hyperacusis;

Note: *specified list of viral or bacterial infections* is defined in the Schedule 1 - Dictionary.

- (28) having dysfunction of the stapedius muscle or the tensor tympani muscle on the affected side at the time of the clinical worsening of hyperacusis;
- (29) having a cerebrovascular accident within the 30 days before the clinical worsening of hyperacusis;
- (30) having multiple sclerosis at the time of the clinical worsening of hyperacusis;
- (31) inability to obtain appropriate clinical management for hyperacusis.

## **9 Relationship to service**

- (1) The existence in a person of any factor referred to in section 8, must be related to the relevant service rendered by the person.
- (2) The factors set out in subsections 8(16) to 8(31) apply only to material contribution to, or aggravation of, hyperacusis where the person's hyperacusis was suffered or contracted before or during (but did not arise out of) the person's relevant service.

**10 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 8 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 5

## 1 Definitions

In this instrument:

***acoustic shock*** means the development of acoustic shock symptoms within 30 days of being exposed to a brief, sudden, unexpected, loud sound.

Note: ***acoustic shock symptoms*** is also defined in the Schedule 1 - Dictionary.

***acoustic shock symptoms*** means the acoustic shock symptoms identified in *Work Health and Safety (Managing Noise and Preventing Hearing Loss at Work) Code of Practice 2015*, including:

- (a) a feeling of fullness in the ear;
- (b) burning sensations or sharp pain around or in the ear;
- (c) dizziness;
- (d) hypervigilance;
- (e) numbness, tingling or soreness down the side of face, neck or shoulder; and
- (f) tinnitus.

Note: The sounds associated with the development of acoustic shock symptoms include crackles, hisses, whistles, shrieks and high-pitched noises.

***dB(A)*** means the sound pressure level in decibels measured by a sound level meter using a type A electronic filter.

***dB(C)*** means the sound pressure level in decibels measured by a sound level meter using a type C electronic filter. The type C filter is used to measure peak or impact sound pressure levels.

***hyperacusis***—see subsection 6(2).

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

***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 list of inner ear disorders*** means:

- (a) lateral semicircular canal dysplasia;
- (b) perilymphatic fistula;
- (c) stapes hypermobility; or
- (d) superior semicircular canal dehiscence.

***specified list of viral or bacterial infections*** means:

- (a) neurosyphilis;
- (b) Lyme disease;



- (c) *Orientia tsutsugamushi* infection (scrub typhus); or
- (d) *Rickettsia prowazekii* infection.

***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.

**time-weighted average (TWA) with a 3-dB exchange rate** means the time-weighted average noise exposure level calculated according to the following formulae and shown in the table:

$$TWA = 10.0 \times \text{Log}(D/100) + 85$$

where D = daily dose; and

$$D = [C_1/T_1 + C_2/T_2 + \dots + C_n/T_n] \times 100$$

where C<sub>n</sub> = total time of exposure at a specified noise level; and

T<sub>n</sub> = exposure duration for which noise at this level becomes hazardous

Table of noise exposure levels and durations based on 3-dB(A) exchange rate

Exposure Level, L (dB(A))	Duration, T			Exposure Level, L (dB(A))	Duration, T		
	Hours	Minutes	Seconds		Hours	Minutes	Seconds
80	25	24	—	106	—	3	45
81	20	10	—	107	—	2	59
82	16	—	—	108	—	2	22
83	12	42	—	109	—	1	53
84	10	5	—	110	—	1	29
85	8	—	—	111	—	1	11
86	6	21	—	112	—	—	56
87	5	2	—	113	—	—	45
88	4	—	—	114	—	—	35
89	3	10	—	115	—	—	28
90	2	31	—	116	—	—	22
91	2	—	—	117	—	—	18
92	1	35	—	118	—	—	14
93	1	16	—	119	—	—	11
94	1	—	—	120	—	—	9
95	—	47	37	121	—	—	7
96	—	37	48	122	—	—	6
97	—	30	—	123	—	—	4
98	—	23	49	124	—	—	3
99	—	18	59	125	—	—	3
100	—	15	—	126	—	—	2
101	—	11	54	127	—	—	1
102	—	9	27	128	—	—	1
103	—	7	30	129	—	—	1
104	—	5	57	130-140	—	—	<1
105	—	4	43	—	—	—	—

Source: National Institute of Occupational Safety and Health 1998 Guidelines Publication No. 98-126

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