

## Revocation and Determination

of

## Statement of Principles concerning

# TINNITUS

ICD-10-AM CODE: H93.1

### *Veterans' Entitlements Act 1986*

1. The Repatriation Medical Authority under subsection **196B(2)** of the *Veterans' Entitlements Act 1986* (the Act):
  - (a) revokes Instrument No.7 of 2001; and
  - (b) determines in its place the following Statement of Principles.

#### **Kind of injury, disease or death**

2. (a) This Statement of Principles is about **tinnitus** and **death from tinnitus**.
  - (b) For the purposes of this Statement of Principles, "**tinnitus**" means a persistent perception of endogenous noise heard in the ear, attracting ICD-10-AM code H93.1

#### **Basis for determining the factors**

3. The Repatriation Medical Authority is of the view that there is sound medical-scientific evidence that indicates that **tinnitus and death from tinnitus** can be related to relevant service rendered by veterans, members of Peacekeeping Forces, or members of the Forces.

### **Factors that must be related to service**

4. Subject to clause 6, at least one of the factors set out in clause 5 must be related to any relevant service rendered by the person.

### **Factors**

5. The factors that must as a minimum exist before it can be said that a reasonable hypothesis has been raised connecting **tinnitus** or **death from tinnitus** with the circumstances of a person's relevant service are:
  - (a) being exposed to an impulsive noise of at least 130 dBA without adequate ear protection within the 48 hours immediately before the clinical onset of tinnitus; or
  - (b) being exposed to noise of at least 85 dBA as an 8-hour time-weighted average (TWA) with a 3-dB exchange rate without adequate ear protection for 180 days immediately before the clinical onset of tinnitus; or
  - (c) suffering trauma to the auditory apparatus at the time of the clinical onset of tinnitus; or
  - (d) suffering from sensorineural hearing loss at the time of the clinical onset of tinnitus; or
  - (e) undergoing a course of treatment with an ototoxic drug from the specified list within the year immediately before the clinical onset of tinnitus; or
  - (f) undergoing a course of treatment with salicylate or quinine derivatives, for a condition for which the drug cannot be ceased or substituted, at the time of the clinical onset of tinnitus; or
  - (g) suffering from a source of vascular sound proximal to the affected ear at the time of the clinical onset of tinnitus; or
  - (h) suffering from an intracranial neoplasm at the time of the clinical onset of tinnitus; or
  - (j) suffering from otosclerosis at the time of the clinical onset of tinnitus; or
  - (k) suffering from Meniere's disease at the time of the clinical onset of tinnitus; or

- (m) suffering at least one episode of otitic barotrauma within the 30 days immediately before the clinical onset of tinnitus; or
- (n) being exposed to an impulsive noise of at least 130 dBA without adequate ear protection within the 48 hours immediately before the clinical worsening of tinnitus; or
- (o) being exposed to noise greater than 85 dBA as an 8-hour time-weighted average (TWA) with a 3-dB exchange rate without adequate ear protection for 180 days immediately before the clinical worsening of tinnitus; or
- (p) suffering trauma to the auditory apparatus at the time of the clinical worsening of tinnitus; or
- (q) suffering from sensorineural hearing loss at the time of the clinical worsening of tinnitus; or
- (r) undergoing a course of treatment with an ototoxic drug from the specified list within the year immediately before the clinical worsening of tinnitus; or
- (s) undergoing a course of treatment with salicylate or quinine derivatives, for a condition for which the drug cannot be ceased or substituted, at the time of the clinical worsening of tinnitus; or
- (t) suffering from a source of vascular sound proximal to the affected ear at the time of the clinical worsening of tinnitus; or
- (u) suffering from an intracranial neoplasm at the time of the clinical worsening of tinnitus; or
- (v) suffering from otosclerosis at the time of the clinical worsening of tinnitus; or
- (w) suffering from Meniere's disease at the time of the clinical worsening of tinnitus; or
- (x) suffering at least one episode of otitic barotrauma within the 30 days immediately before the clinical worsening of tinnitus; or
- (y) inability to obtain appropriate clinical management for the tinnitus.

### **Factors that apply only to material contribution or aggravation**

6. Paragraphs **5(n) to 5(y)** apply only to material contribution to, or aggravation of tinnitus where the person's tinnitus was suffered or contracted before or during (but not arising out of) the person's relevant service; paragraph 8(1)(e), 9(1)(e), 70(5)(d) or 70(5A)(d) of the Act refers.

### **Inclusion of Statements of Principles**

7. In this Statement of Principles if a relevant factor applies and that factor includes an injury or disease in respect of which there is a Statement of Principles then the factors in that last mentioned Statement of Principles apply in accordance with the terms of that Statement of Principles.

### **Other definitions**

8. For the purposes of this Statement of Principles:

**“adequate ear protection”** means a device which plugs the outer ear canal or which covers the outside of the ear so as to protect the wearer from harmful noise;

**“an ototoxic drug from the specified list”** means one of the following:

- (a)  $\alpha$ -difluoromethylornithine;
- (b) 6-amino nicotinamide;
- (c) Amikacin;
- (d) Bumetanide;
- (e) Cisplatin;
- (f) Erythromycin;
- (g) Ethacrynic acid;
- (h) Frusemide;
- (i) Gentamicin;
- (j) Kanamycin;
- (k) Misonidazole;
- (l) Neomycin;
- (m) Netilmicin;
- (n) Nitrogen Mustard;
- (o) Streptomycin;
- (p) Tobramycin;
- (q) Vancomycin;
- (r) Vinblastine;
- (s) Vincristine; or
- (t) Viomycin;

**“a source of vascular sound”** means one of the following:

- (a) acquired arteriovenous fistulae;
- (b) benign intracranial hypertension;
- (c) carotid occlusion;
- (d) carotid stenosis;
- (e) cerebral atherosclerosis;
- (f) glomus jugulare tumour;
- (g) intracranial aneurysm; or
- (h) Paget’s disease of the skull;

**“death from tinnitus”** in relation to a person includes death from a terminal event or condition that was contributed to by the person’s tinnitus;

**“ICD-10-AM code”** means a number assigned to a particular kind of injury or disease in The International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian Modification (ICD-10-AM), Second Edition, effective date of 1 July 2000, copyrighted by the National Centre for Classification in Health, Sydney, NSW, and having ISBN 1 86487 271 3;

**“impulsive noise”** means noise which is characterised by a sharp rise and a rapid decay in sound levels and is less than one second in duration;

**“intracranial neoplasm”** means a neoplasm affecting the brain, meninges, skull or cranial nerves;

**“Meniere’s disease”** means a clinical condition characterised by fluctuating hearing loss, tinnitus, a sense of fullness in the involved ear associated with recurring attacks of rotational vertigo of sudden onset, often associated with nausea and vomiting;

**“otosclerosis”** means a primary disorder of the labyrinthine capsule, characterised by new bone formation commonly involving the footplate of the stapes;

**“relevant service”** means:

- (a) operational service; or
- (b) peacekeeping service; or
- (c) hazardous service;

**“sensorineural hearing loss”** means a permanent hearing threshold shift of 25 decibels (dB) or more, at 500, 1000, 1500, 2000, 3000 or 4000

hertz (Hz) due to a defect in the cochlea or the auditory nerve, but excluding congenital deafness;

**“terminal event”** means the proximate or ultimate cause of death and includes:

- (a) pneumonia;
- (b) respiratory failure;
- (c) cardiac arrest;
- (d) circulatory failure; or
- (e) cessation of brain function;

**“trauma to the auditory apparatus”** means injury to the tympanic membrane, ear ossicles, cochlea or acoustic nerve caused by trauma to the head;

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

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

where D = daily dose; and

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

where  $C_n$  = total time of exposure at a specified noise level,

$T_n$  = exposure duration for which noise at this level becomes hazardous

Table of noise exposure levels and durations based on 3-dBA exchange rate

Exposure Level, <i>L</i> (dBA)	Duration, <i>T</i>			Exposure Level, <i>L</i> (dBA)	Duration, <i>T</i>		
	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

**Application**

9. This Instrument applies to all matters to which section 120A of the Act applies.

Dated this *First* day of *May* 2001

The Common Seal of the )  
Repatriation Medical Authority )  
was affixed to this instrument )  
in the presence of: )

KEN DONALD  
CHAIRMAN