

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.43 of 1996; 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) undergoing a course of treatment with an ototoxic drug from the specified list within the year immediately before the clinical onset of tinnitus; or
 - (e) 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
 - (f) suffering from a source of vascular sound proximal to the affected ear at the time of the clinical onset of tinnitus; or
 - (g) suffering from an intracranial neoplasm at the time of the clinical onset of tinnitus; or
 - (h) suffering from otosclerosis at the time of the clinical onset of tinnitus; or
 - (j) suffering from Meniere's disease at the time of the clinical onset of tinnitus; or
 - (k) suffering at least one episode of aural barotrauma within the 30 days immediately before the clinical onset of tinnitus; or

- (m) 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
- (n) 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
- (o) suffering trauma to the auditory apparatus at the time of the clinical worsening of tinnitus; or
- (p) undergoing a course of treatment with an ototoxic drug from the specified list within the year immediately before the clinical worsening of tinnitus; or
- (q) 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
- (r) suffering from a source of vascular sound proximal to the affected ear at the time of the clinical worsening of tinnitus; or
- (s) suffering from an intracranial neoplasm at the time of the clinical worsening of tinnitus; or
- (t) suffering from otosclerosis at the time of the clinical worsening of tinnitus; or
- (u) suffering from Meniere's disease at the time of the clinical worsening of tinnitus; or
- (v) suffering at least one episode of aural barotrauma within the 30 days immediately before the clinical worsening of tinnitus; or
- (w) inability to obtain appropriate clinical management for the tinnitus.

Factors that apply only to material contribution or aggravation

6. Paragraphs 5(m) to 5(w) 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) α -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;

“aural barotrauma” means injury to the ear arising from the difference between atmospheric and intratympanic pressure;

“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;

“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

“**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.

Application

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

Dated this *Third* day of *January* 2001

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

KEN DONALD
CHAIRMAN