

Noise-Induced Hearing Loss consultation

November 10, 2026 to January 30, 2026

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February 17, 2026

Sent via email: Consultation Secretariat@wsib.on.ca

WSIB Policy Consultation Team
Workplace Safety and Insurance Board
200 Front Street West
Toronto, ON M5V 3J1

Re: Submission on proposed Amendments to the Noise-Induced Hearing Loss (NIHL) policy

Dear Members of the WSIB Policy Consultation Team,

I am writing to provide formal feedback on the proposed revisions to the Noise-Induced Hearing Loss (NIHL) policy. We appreciate the WSIB's efforts to modernize the policy framework, align thresholds with recognized standards, and introduce greater clarity in several areas, including audiometric assessment requirements and noise exposure thresholds.

While we acknowledge the positive elements of the proposed changes, we wish to highlight several areas of concern and offer recommendations to ensure the policy remains evidence-based, fair, and administratively consistent. Our comments focus primarily on the removal of the presbycusis deduction, the new tinnitus entitlement guidance, and the absence of a statutory limitation period for claims filed long after exposure has ended.

1. Importance of Strengthening WSIB's assessment of Occupational Noise-Induced Hearing Loss (NIHL).

A large proportion of NIHL claims are now being filed many years, often decades, after a worker has left the noisy work environment. This delay significantly complicates causation analysis. Over long periods, age-related decline, medical conditions, and non-occupational noise exposure can all contribute to hearing loss, making it increasingly difficult to distinguish true occupational NIHL from other etiologies. Strengthening the WSIB's assessment process is therefore essential to ensure that entitlement decisions remain evidence-based, fair, and scientifically defensible.

It is also important to recognize the typical evolution pattern of occupational NIHL. Scientific literature and long-standing clinical observations show that the NIHL develops within the **first 5 years of excessive noise exposure**, with the rate of deterioration slowing thereafter. By approximately **10 to 15 years** after initial exposure, NIHL generally **stabilizes**, unless exposure intensifies or new risk factors emerge. Finally, the general scientific consensus is that an NIHL **stops progressing after the end of exposure**. This predictable pattern is a critical diagnostic indicator and should be explicitly considered when adjudicating claims.

To support more accurate and consistent decision-making, the WSIB should also incorporate the most current criteria and best practices outlined by the American College of Occupational and Environmental Medicine (ACOEM). The ACOEM's guidance emphasizes objective measurement, pattern recognition, and the exclusion of alternative causes/elements that are especially important when claims are submitted long after the period of exposure.

Key ACOEM-aligned recommendations for improved NIHL assessment.

- Use audiometric patterns consistent with NIHL, including the characteristic 3–6 kHz notch, and differentiate from patterns typical of presbycusis or medical conditions.
- Evaluate the symmetry of hearing loss, as occupational NIHL is typically bilateral and relatively symmetrical.
- Assess the temporal relationship between exposure and onset, ensuring the reported progression aligns with known NIHL development timelines, including early rapid decline and later stabilization (initial 5–15-year period).
- Exclude alternative medical causes, such as ototoxic drugs, middle-ear disease, hereditary factors, or systemic illnesses.
- Verify sufficient intensity and duration of occupational noise exposure, supported by objective records or credible evidence.
- Consider the cumulative effect of non-occupational noise exposure, including firearms, music, and power tools.

2. New guidance for tinnitus entitlement.

We recognize the importance of addressing tinnitus as a potential consequence of NIHL. However, tinnitus is inherently subjective, and without clear evidentiary requirements, the risk of non-occupational tinnitus being accepted as work-related increases substantially.

Recommendations:

- Require objective evidence of NIHL before tinnitus entitlement is granted, including verified noise exposure and audiometric confirmation.
- Standardize diagnostic requirements, including ENT specialist assessment and documentation of onset relative to workplace exposure.
- Exclude alternative medical causes, such as ototoxic drugs, injuries, inner-ear disease, illnesses personal such as diabetic Meniere, TMJ disorder, etc.
- Introduce a minimum hearing loss threshold for tinnitus claims to prevent acceptance of tinnitus-only claims without measurable NIHL.

3. Modification of the current presbycusis (Age) deduction calculation.

The proposed elimination of the automatic 0.5 dB-per-year age-related deduction after age 60 represents a significant shift in how permanent impairment ratings are calculated. Without a clear replacement mechanism, there is a substantial risk that hearing loss caused by aging or other non-occupational factors could be reflected in the permanent impairment percentage, potentially resulting in lump-sum awards that are not attributable to occupational noise exposure. In addition, the absence of a standardized age-related adjustment may increase the complexity of adjudication, requiring more extensive medical analysis and prolonging the entitlement process for both workers and decision-makers.

Recommendations:

- Establish clear, objective criteria for case-by-case assessment of age-related hearing loss, including audiometric patterns, medical risk factors, and non-occupational noise exposure.
- Implement a standardized medical questionnaire to ensure consistent evaluation of presbycusis and other non-occupational contributors.
- Require independent medical evaluations (IMEs) for claimants over age 60 or for claims filed more than 5 years after the end of exposure.
- Consider reinstating a modified age-adjustment model, such as a reduced or capped deduction, to reflect modern aging research while preventing over-compensation.

- Require documented evidence of sustained occupational noise exposure for older claimants, supported by employer noise records and audiometric patterns consistent with NIHL.

4. Recommendation to the WSIB: Establishing Standardized Hearing Aid Pricing and Impairment-Based Coverage.

To improve fairness, cost-effectiveness, and alignment with clinical needs, it is recommended that the Workplace Safety and Insurance Board (WSIB) collaborate with the public healthcare system and relevant governmental agencies to establish standardized price ranges for each category of hearing aids. In addition, hearing aid coverage should be tied directly to the worker's level of hearing impairment once the minimum eligibility threshold is met.

This approach ensures that workers receive devices appropriate to their functional needs while also supporting long-term sustainability of Non-Economic Loss (NEL) costs.

Here's a clean, structured list of the recommendations you outlined—organized so they can be inserted directly into a report, memo, or policy proposal.

Recommendations:

4.1. Establish Standardized Hearing Aid Price Ranges

- Collaborate with the public healthcare system and relevant governmental agencies to negotiate standardized price ranges for each category of hearing aids.
- Create transparent pricing bands for basic, mid-range, advanced, and specialized devices.
- Use coordinated procurement to reduce cost variability and prevent overbilling.

4.2. Implement an impairment-based Coverage model.

- Determine hearing aid coverage based on the worker's level of impairment once the minimum eligibility threshold is met.
- Develop a standardized impairment scale (e.g., light, moderate, marked, severe).
- Align each impairment level with an appropriate category of hearing aid technology.

4.3. Match device type to functional need.

- Ensure workers receive hearing aids that correspond directly to their clinical and functional requirements.
- Prevent unnecessary provision of high-cost devices when lower-tier technology is sufficient.

4.4. Reduce and Stabilize NEL Costs.

- Lower long-term Non-Economic Loss (NEL) expenditures by ensuring appropriate device selection.
- Improve predictability of NEL awards through standardized pricing and coverage criteria, including device replacement.
- Ensure coverage, promote access, and establish regulation for **OTC hearing aids**.

4.5. Develop Supporting Clinical and Administrative Guidelines.

- Create clear guidelines for audiologists on impairment assessment and device selection.
- Implement standardized reporting templates for hearing evaluations.

5. Absence of a statutory limitation period.

The proposed policy does not include a limitation period for filing NIHL claims, allowing claims to be submitted decades after exposure has ended, including post-retirement. This significantly increases the likelihood that hearing loss due to presbycusis, disease, or personal activities will be incorrectly attributed to occupational noise. In addition, when claims are filed so long after a worker has left the noisy environment, it becomes extremely difficult, often nearly impossible, for employers to meaningfully challenge or disprove exposure. Historical noise records may no longer exist, witnesses may be unavailable, and the workplace conditions may have changed entirely. As a result, employers face a substantial evidentiary disadvantage, increasing the risk that non-occupational hearing loss will be accepted as work-related by default.

Recommendations:

- Introduce a reasonable limitation period, such as 1–5 years after last exposure, consistent with other jurisdictions.
- Require stronger evidence for late claims, including mandatory ENT review, employer exposure verification, and assessment of non-occupational risk factors.
- Provide clear adjudication guidance for claims filed long after exposure, including how to weigh aging and other medical factors.
- Encourage and support employer Hearing Conservation programs, which provide baseline and periodic audiometric data essential for distinguishing NIHL from age-related decline.

Conclusion:

We support the WSIB's commitment to modernizing the NIHL policy and emphasize that the issues identified above must be resolved to ensure fairness, consistency, and scientific rigor. Implementing these measures will reduce the risk of misclassifying non-occupational or age-related hearing loss as NIHL, particularly in cases submitted long after noise exposure has ceased. Strengthening these safeguards will also support cost mitigation by ensuring that benefits and devices are provided only when clinically justified and directly attributable to occupational exposure.

We appreciate the opportunity to participate in this consultation and would welcome further discussion or clarification as needed.

Sincerely,



Julie Manchuk on behalf of Air Canada
Manager, Disability Management - Central Region



From: elmira@arnoldhearing.ca
To: [Consultation Secretariat](#)
Subject: Noise-Induced Hearing Loss Draft for Consultation Feedback
Date: Wednesday, January 28, 2026 11:33:15 AM

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Hello,

I am writing to provide feedback on the proposed [Noise Induced Hearing Loss \(NIHL\) policy](#), with particular concern regarding the use of bone conduction thresholds in hearing loss calculations and the omission of 4000Hz in the selection of audiometric frequencies to determine noise-induced hearing impairment.

- I think many clinicians will argue the definition of hearing loss should include the four [key speech frequencies](#) of 500, 1000, 2000, and 4000Hz NOT 3000Hz <https://www.ncbi.nlm.nih.gov/books/NBK613286/>. 4000Hz plays a critical roll in consonant discrimination, speech clarity and real-world communicative function. Emphasis on 3000Hz rather than 4000Hz risks underestimating the presence and severity of NIHL, and contradicts the established pathophysiology of NIHL listed below .
 - The [Office of the Worker Adviser](#) states that a typical audiogram of NIHL will show:
 - hearing that is normal, or close to it, at the low frequencies (500-1000 Hz)
 - hearing loss in the range of 3000 to 6000 Hz
 - a classic dip or “notch” at 4000 Hz with recovery in the higher frequencies
 - Use of bone conduction thresholds are not an appropriate primary metric for determining NIHL-related impairment. Bone conduction testing is subject to technical (transducer placement and contact pressure, occlusion effect, acoustic radiation, skull thickness etc.) and calibration limitations. Bone conduction thresholds show more variability than air-conduction thresholds across frequencies and could even result in false or non-pathologic air-bone gaps. Bone conduction will help identify type of hearing loss (sensorineural, conductive, mixed); [air bone gaps less than 15dB are not considered clinically significant](#) but can drastically impact the 4-frequency average if they are used. Additionally, false air-bone gaps can occur and are not always

indicative of conductive components. Contrastingly, air conduction thresholds reflect the individual's functional hearing ability.

- <https://www.audiologyonline.com/articles/vanishing-air-bone-gap-audiology-901>
- https://audiologyincorporated.com/wp-content/uploads/Bone-Conduction-Reference-Threshold-Levels-A-Multicenter-Study-AAS-2023.pdf?utm_source=chatgpt.com
- <https://www.audiologyonline.com/ask-the-experts/carhart-s-notch-new-research-184#:~:text=Thus%2C%20for%20any%20BC%20disorder,a%20typical%20hearing%20threshold%20measurement>
- <https://www.ncbi.nlm.nih.gov/books/NBK578179/>

For these reasons, AIR CONDUCTION thresholds of 500, 1000, 2000 and 4000Hz should be included in the hearing threshold average under the “hearing loss” definition of NIHL. Alternatively, using audiometric thresholds at 1000, 2000, 3000, 4000Hz to define NIHL is likely even more sensitive.

If you have any questions, please let me know.

Best,

Emily

Audiologist, Reg. CALSPO

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www.arnoldhearing.ca



ASSOCIATION OF HEARING INSTRUMENT PRACTITIONERS OF ONTARIO

Association of Hearing Instrument Practitioners of Ontario

Re: WSIB Consultation on NIHL Policy Updates

Date: Tuesday, January 20th, 2026

To Whom It May Concern,

The Association of Hearing Instrument Practitioners of Ontario (AHIP) supports WSIB's proposed updates to the Noise-Induced Hearing Loss (NIHL) policy. We acknowledge that changing the entitlement threshold to 26.25 dB and removing the presbycusis deduction aligns with current AMA processes.

To further enhance the quality of entitlement decisions and to better align with scientific consensus and the communication needs of the injured worker, we recommend one additional refinement to the policy.

Recommendation: Include 4 kHz in the NIHL Entitlement Calculations

Reason 1: NIHL often presents as a notch at 4 kHz. Medicolegal guidelines identify notches around 4 kHz as a hallmark of NIHL¹. Excluding 4 kHz from calculations risks producing false positives for NIHL by placing increased weight on frequencies less likely to be affected by workplace exposure.

Reason 2: 4 kHz is critical for speech intelligibility: Consonant sounds, essential for understanding speech are concentrated in the 2–4 kHz range². Removing speech frequencies above 3.1 kHz can reduce correctly identified words by up to 10% when in noise². Including 4 kHz increases WSIB's ability to gauge the worker's functional hearing impairment.

Reason 3: Earlier Intervention: Including 4 kHz may allow WSIB to identify NIHL claims sooner. Early detection of NIHL allows for timely interventions in the workplace setting, reducing future claims and ensuring employers take a more proactive approach to hearing protection. This also enables workers with NIHL to obtain treatment closer to actual time of injury. Prolonged untreated hearing loss is associated with increased risks of cognitive decline, depression, social isolation, and reduced quality of life.

The importance of 4 kHz to accurately assess injury caused by noise exposure is reflected in the entitlement for Veteran's Affairs Canada (VAC):

“For purposes, a hearing loss disability exists when there an audiogram indicating a total decibel sum hearing loss (DSHL) of 100 dB or greater at the 3 frequencies of 500, 1000, 2000, and 3000 Hz in either ear, or 50 dB or more in both ears at 4000 Hz.”

(Veterans Affairs Canada, 2019)

While we understand WSIB’s desire to align with the American Medical Association’s practices, AHIP also encourages consideration of policy guidance from the Canadian Federal Government as well.

Additionally, WSIB may wish to consider excluding 500 Hz, which is rarely impacted by occupational noise⁴. Excluding 500 Hz may help avoid false positives caused by other conditions more frequently associated with hearing loss at these frequencies.

In conclusion, adding 4 kHz would support WSIB’s initiative to reduce the number of false positive NIHL claims by increasing the diagnostic sensitivity of their entitlement formulas. It also better aligns WSIB calculations with those for Veteran’s, showing WSIB also respects the well-established audiometric signature of NIHL with a 4 kHz notch. Lastly, including this important speech frequency allows WSIB’s impairment calculations to better reflect the real-world communication challenges experienced by the worker as a result of the injury.

Thank you for considering this recommendation. We appreciate the opportunity to contribute to this important consultation.

Sincerely,

Association of Hearing Instrument Practitioners of Ontario

1. Lutman, M. E., de Carpentier, J., & Green, K. (2025). *Guidelines for diagnosis of noise-induced hearing loss and their specificity*. *Clinical Otolaryngology*. Advance online publication. <https://doi.org/10.1111/coa.14268> [orcid.org] 2. Aniansson, G. (1974). Methods for assessing high frequency hearing loss in every-day listening situations. *Acta Oto-Laryngologica. Supplementum*, 320, 1–50. 3. Veterans Affairs Canada. (2019, February). *Chapter 9 – Hearing Loss and Ear Impairment*. Table of Disabilities. Retrieved January 8, 2026, from <https://www.veterans.gc.ca/> 4. Natarajan, N., Batts, S., & Stankovic, K. M. (2023). *Noise-induced hearing loss*. *Journal of Clinical Medicine*, 12(6), 2347. <https://doi.org/10.3390/jcm12062347>

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To: WSIB Consultation Secretariat

Re: Feedback on Draft Policy 16-01-04 (Noise-Induced Hearing Loss) and the Hearing Services Program

I am writing to express my opposition to the proposed changes to the Noise-Induced Hearing Loss (NIHL) policy, specifically the increase in the initial entitlement threshold. Furthermore, I wish to remark on the recent transition of the Hearing Services Program from a fee-for-service model to a bundled fee system, which I believe negatively impacts the quality of care provided to Ontario's injured workers. As a clinician in Northwestern Ontario, I see a large number of injured workers from many types of occupations in mining, forestry, aviation, heavy machining, and construction.

1. Increased Claims are a Result of Awareness, Not Exposure

The WSIB's proposal to increase the entitlement threshold from 22.5 dB to 26.25 dB appears to be a reactionary measure to rising claim volumes. However, this increase is not likely due to worsening workplace safety, but rather an increase in health literacy and hearing loss awareness.

- According to Statistics Canada (Health Reports, 2018), while millions of Canadians are exposed to workplace noise, many only seek assistance later in life as public education regarding hearing health and the availability of assistive technology has improved.
- The rise in claims represents a "success" in reaching workers who previously suffered in silence. Shifting the criteria now effectively punishes workers for becoming better informed with their health.

2. Failure of the Bundled Fee System

The transition from a fair fee-for-service model to the current "bundle" system (Initial and Ongoing Service Bundles) is a poor fiscal policy decision that directly affects the level of care workers receive.

- **Lack of Clinical Nuance:** The bundle system operates on an "average case" assumption that does not reflect clinical reality. Hearing loss varies significantly in complexity; a "one-size-fits-all" fee does not accurately compensate clinicians for the additional time required to treat workers with severe impairments, dexterity issues, or complex rehabilitation needs.
- **Disincentivizing Quality Care:** By capping compensation regardless of the number of visits or the depth of service required, the WSIB is placing a financial strain on audiology clinics. This pressure can lead to shorter appointment times and reduced access to the personalized adjustments that are crucial for a worker's successful adaptation to hearing aids.

3. Impact on WSIB's Integrity as a Decision-Maker

Changing entitlement criteria while simultaneously squeezing the clinicians who provide the service reflects poorly on the WSIB. When decisions appear to be driven by a desire to keep paid insurer premiums in-house rather than meeting the clinical needs of the injured, the WSIB fails its mandate. Keeping the current 22.5 dB criteria and returning to a model that respects the clinician's time is essential to ensuring that workers receive the compensation and care they were promised.

I urge the WSIB to reconsider these restrictive changes and maintain the current standards for the benefit of Ontario's workforce.

Sincerely,

Brendan McDonald, Au.D., M.Cl.Sc., M.A., R.Aud
CASLPO #8211



Thursday, January 22, 2026

The Consultation Secretariat WSIB

Consultation_Secretariat@wsib.on.ca

Re: Noise-Induced hearing loss (NIHL) policy consultation

The Canadian Academy of Audiology (CAA) welcomes this opportunity to respond to the request for consultation for an updated Noise Induced Hearing Loss (NIHL) operational policy. CAA is a professional association supporting Provincial and National Audiology members who provide clinical, research and related services. Our Ontario members total 404. Among our members are specialists and researchers in noise induced hearing loss. We offer comments and suggestions below.

Executive Summary from the CAA:

- The CAA welcomes the removal of the “-0.5 dB/year after age 60” subtraction since there is very little in the way of research on this topic. Noise exposure, when younger, is a significant factor but ultimately presbycusis becomes the dominant factor by age 79 (Rosenhall et al., 1990).
- The draft is quite vague in several areas such as whether workers can be exposed to levels on the order of 85 dBA and still receive compensation given a sufficient number of years. The section “Evidentiary requirements for initial entitlement”, point 3, (page 3) needs to be clarified significantly, especially in view of the ISO 1999 (R. 2013) model mentioned in section 3. “Determine whether the NIHL is due to occupational noise exposure claims that meet or exceed the NET” (page 5). This section deals with the cumulative exposure which is well-defined in ISO 1999 but allows for long-term hearing loss with exposures of only 85 dBA.
- Since the late 1980s, the WSIB in Ontario has approved NIHL claims for high school music teachers and others in the performing artists industry where all noise exposure criteria have been met. The Province of British Columbia also shares this policy, and there is a large body of peer reviewed literature demonstrating that music exposure (MIHL) is similar noise exposure (NIHL). See for example Russo et al. (2013) and Ontario Ministry of Labour “Safety Guidelines for the Live Performance Industry” (1993).
- The entire section on “Consistency of audiogram pattern with NIHL” beginning on page 4 of your draft, needs to be removed. There is very little evidence that a notch or a dip pattern is consistent (or even necessary) for a compensable hearing loss caused by noise exposure. In





fact, Barrs et al. (1994) points out that only about 37% of noise exposed individuals have such a “notch” in their audiometric configuration.

- The CAA is concerned about the vagueness of statements such as “the decision-maker assesses the totality of the evidence to determine whether sufficient work-related exposure can be established” (page 3). Will there be a sufficiently clear explanation so that an audiologist can provide assistance to a worker in an appeal?
- In the section called “Claims that do not meet the NET” (pages 5 and 6), the relevant factors should be accepted by both audiologists and medical specialists such as Otolaryngologists- the factors (such as diabetes) can be gleaned from case histories as well as known chemical and drug interactions- this is all part of the academic training of audiologists that are registered in Ontario by CASLPO. And some of the relevant factors are only marginally within the domain of medical specialties such as the assessment of “intermittent, abrupt, or explosive sounds” (page 6). Specifically, this last item is circular- the relevant noise regulation in Ontario does not require a measure of kurtosis which would be necessary in order to establish whether the noise (or music) is sufficiently an explosive sound, so how would this be established? This is included in the training of Audiologists.
- The Canadian Academy of Audiology has several suggested changes for the definitions, both for internal consistency as well as to cover aspects the definition that had not been considered.
- Members of the Canadian Academy of Audiology would be happy to work with the WSIB to address these points.
- For a full list of references and current over of factors affecting hearing from occupational noise see Fligor, B., Chasin, M., & Neitzel, R. (2027). Noise Exposure. In the Handbook of Clinical Audiology, 8th edition., Edited Chasin, M. (in press- manuscript available on request from Marshall.Chasin@rogers.com).

Submission from the Canadian Academy of Audiology (CAA):

Removal of the -0.5 dB/year correction for those workers over age 60:

The Canadian Academy of Audiology supports the removal of the -0.5 dB/year correction for workers over the age of 60. There has never been significant data underlying such an assumption despite this topic being on the agenda of almost every conference of the National Hearing Conservation Association (HNCA) meeting since the 1980s. Rosenhall et al. (1990) clearly identified that while presbycusis is certainly a factor in hearing loss for those over the age of 60, the effects of presbycusis become much more dominant and by age 79, the measured hearing loss is similar to their age-

matched peers who have never been exposed to occupational sources of noise. Rosenhall and his colleagues showed that over the years, ISO R. 1999 predicts a “toughening” of the hearing mechanism where exposures early in a worker’s career contributes more to permanent hearing loss than if the same exposure was later in their career (see Figure 1). Its “metaphorically” as if the cochlea becomes toughened over time- while there is no histologic data to support this, there are many references that refer to this “toughening”. Regardless of the neuro-physiology involved, ultimately as the years pass, presbycusis as a primary source of hearing loss, becomes a much more dominant factor. This gradual flattening of hearing loss progression is predicted by ISO R.1999. An age correction for someone who is over 60 and has just begun their occupational career may make sense, but given that most industrial workers have already reached this “flattening” part of the ISO curve by the time they reach age 60 (or even less), it makes no sense to include an age correction.

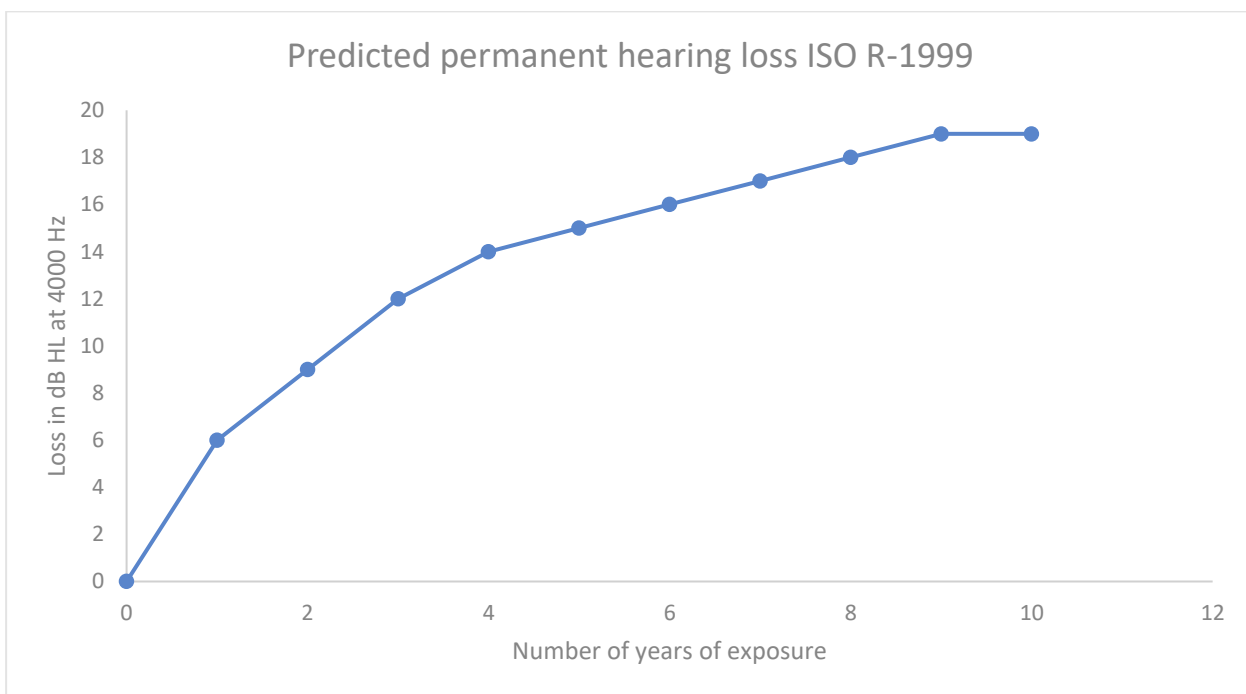


Figure 1: Rosenhall et al. (1990) demonstrate that ISO R. 1999 predicts a gradual reduction of additional hearing loss from noise as the number of years of exposure increases. This supports that an age-correction would have differing accuracies for different workers; especially comparing a 60-year old worker who has only been exposed to noise for 5 years vs. a 60-year old worker who has been exposed for 35 years. Some of the literature refers to this “slowing down” of hearing loss as “asymptotic” hearing loss, despite the inaccurate usage of that term.

ISO R. 1999 as a noise model:

The Canadian Academy of Audiology agrees that the most valid model of long-term noise exposure is the International Standards Organization (ISO) ISO 1999 (R. 2013). The revisions since its initial publication in 1990, (ISO R. 1999- 1990) are minimal. ISO 1999 is based on Lempert and Henderson (1973) and these underlying data were also included in the noise standards of the National Institute of Safety and Health (NIOSH) in the United States.

DbA	Lempert and Henderson (1973)	ISO R.1999
85	5	6
90	11	11
95	20	21

Table I: Adapted from Chasin (XXX), this is the predicted hearing loss at 4000 Hz after only 1 year of noise exposure from the underlying model of ISO R. 1999, showing the similarity. The Lempert and Henderson (1973) model also serves as the basis underlying the National Institute of Safety and Health (NIOSH) in the United States.

An important element of Lempert and Henderson (1973)/ISO R. 1999 is that measurable hearing loss is found for exposures of 85 dBA even after 1 year at 4000 Hz.

Occupational hearing loss with musicians:

And when it comes to long-term music exposure, similar data have been found. Figure 2 is from Russo, Behar, Chasin and Mosher (2013; 2017) showing a good match between ISO R. 1999 and the measured hearing loss from members of Canada's National Ballet. There is actually a statistically significant greater amount of measured hearing loss in the lower frequencies for musicians (at 500 Hz and 1000 Hz) than predicted by ISO R. 1999

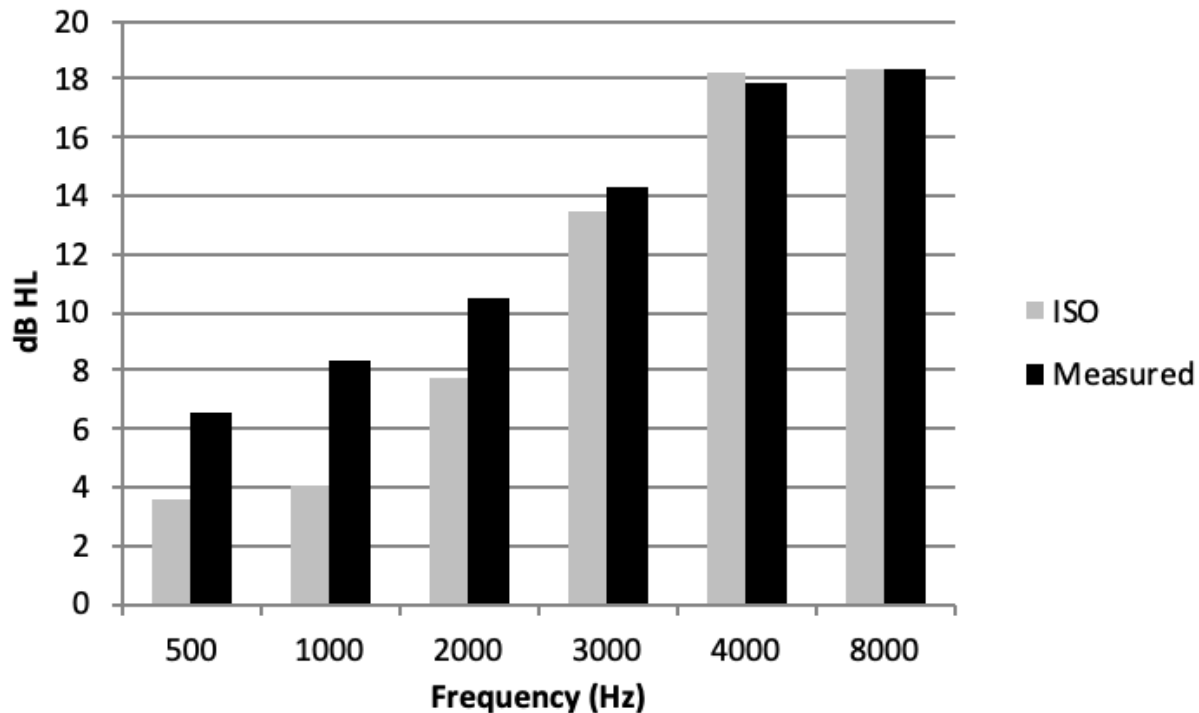


Figure 2: From Russo, Behar, Chasin and Mosher (2013) showing good agreement between ISO R. 1999 and the measured sensori-neural hearing loss of musicians in Canada's National Ballet. There is actually a statistically greater amount of measured hearing loss for professional musicians in the lower frequencies at 500 Hz and 1000 Hz, than predicted by ISO R. 1999

Given these data, the Canadian Academy of Audiology is concerned about both the vagueness of the WSIB NIHL draft policy as well as the lack of mention on non-industrial, yet "occupational" sources of noise-related hearing loss such as music. In institutions such as professional musical groups as well as for high school music teachers, the environment is well-defined with available noise surveys conducted by qualified personnel, fulfilling all the requirements of the WSIB regulations as well as the noise regulation in Ontario. Ontario also has a specific regulation from the Ministry of Labour for those in the performing arts industry (Ontario Ministry of Labour, 1993), which echos the effects of noise and music similar to ISO R. 1999 and that of NIOSH in the United States.

Table II is from Chasin (2006) and shows the range of exposure of over 1000 musicians measured from 3 meters away while playing an "average" mezzo-forte level. While there is some variability, most of the musicians consistently play (and are subject to) levels far in excess of 85 dBA.



Musical Instrument (at 3 meters)*	dB (A-weighted)	dB SPL (peak)
Normal piano practice	60-90	105
Loud piano	70-105	110
Keyboards (electric)	60-110	118
Vocalist	70-85	94
Chamber music (classical)	70-92	99
Violin/viola (near left ear)	85-105	116
Violin/viola	80-90	104
Cello	80-104	112
Acoustic bass	70-94	98
Clarinet	68-82	112
Oboe	74-102	116
Saxophone	75-110	113
Flute	92-105	109
Flute (near right ear)	98-114	118
Piccolo	96-112	120
Piccolo (near right ear)	102-118	126 [†]
French Horn	92-104	107
Trombone	90-106	109
Trumpet	88-108	113
Tympani and Bass drum	74-94	106
Percussion (high hat near left ear)	68-94	125
Amplified guitar (on stage using ear-monitors)	100-106	118
Amplified guitar (on stage with wedge monitors)	105-112	124
Symphonic music	86-102	120-137
Amplified rock music	102-108	140+
Portable music (eg, iPod) in ear canal (vol = 6)	94	110-130**
iPod in ear canal (vol = full)	105	110-142**

Table II is from Chasin (2006) showing sound levels (dBA) measured from 3 meters while the musician is playing their instrument at an “average” or mezz forte level. Many of these musicians generate levels in excess of 100 dBA with piccolo players being able to generate 126 dB SPL peaks measured on their right shoulder.

Consistency of audiogram pattern with NIHL:

The entire section on “Consistency of audiogram pattern with NIHL” beginning on page 4 of your draft, needs to be removed. There is very little evidence that a notch or a dip pattern is consistent (or even necessary) for a compensable hearing loss caused by noise exposure.

In fact, Barrs et al. (1994) points out that only about 37% of noise exposed individuals have such a “notch” in their audiometric configuration. Nondahl et al. (2009) found that “among participants with a notched audiogram, almost one third did not have a history of occupational noise exposure ... and results were more variable with woman”. Lie et al. (2015) in analyzing the results of over 12,000 railway workers found that 61% of those who were noise exposed had notches... but 51% of workers who were not exposed... also had notches. They state that “Audiometric notches commonly occur

among both noise-exposed and those not exposed to noise in railway personnel. The usefulness of audiometric notches in the diagnosis of NIHL is therefore limited”.

Claims that do not meet the NET:

The relevant factors should be accepted by both audiologists and medical specialists such as Otolaryngologists- the factors (such as diabetes) can be gleaned from case histories as well as known chemical and drug interactions- this is all part of the academic training of audiologists that are registered in Ontario by CASLPO. And some of the relevant factors are only marginally within the domain of medical specialties such as the assessment of “intermittent, abrupt, or explosive sounds” (page 6). Specifically, this last item is circular- the relevant noise regulation in Ontario does not require a measure of kurtosis which would be necessary in order to establish whether the noise (or music) is sufficiently an explosive sound, so how would this be established? This is included in the training of Audiologists.

Since the work of Thiery and Meyer-Bisch in the late 1980s (Thiery and Meyer-Bisch, 1988) we have known that impulsive noise in conjunction with steady state noise, even the in the 87-90 dBA range, can cause much more hearing loss than just the steady state alone, and other studies have shown that high level impulse noise, combined with steady state noise can significantly exacerbate the degree of hearing loss. And more recently Davari and his colleagues (2024) showed that noise induced hearing loss was significantly worse when impulse noise was mixed with steady state noise exposure.

However, nowhere in the Ontario Ministry of Labour noise regulations does it specify measures of kurtosis or similar calculations that are necessary to characterize the effects of impulse noise on hearing. In the absence of such required measures, it would be impossible to properly characterize the potential damage from steady state + impulse noise. (Kulinski, Brungart, and Smalt, 2025). This has nothing to do with the nature of the training that the hearing health care professional possesses.

Concerns regarding definitions (Guidelines section):

Following are some suggested changes to the definitions:

- A-weighted decibel (dBA): “... using a **sound** level meter...” and not “using a noise level meter...”
- Hearing loss: The correct word is “**acuity**” and not “ability”.
- Hearing protection devices (HPDs): means **active or passive** ear plugs, earmuffs,...



- Noise exposure threshold (NET): the phrase should be "... occupational noise, **or music** exposure..."
- Noise-induced hearing loss (NIHL): add in phrase "...both sensorineural and conductive loss, **which is consistent with hearing loss.**
- Tinnitus: remove the last phrase "...in the ears."

References:

Barrs, D.M., Althoff, L.K., Krueger, W.W., & Olsson, J.E. (1994). Work-related noise induced hearing loss: evaluation including evoked potential audiometry. *Otolaryngology- Head and Neck Surgery*, 110(2), 177-184.

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International Organization for Standardization. (1990). *Acoustics- Determination of occupational noise exposure and estimation of noise-induced hearing impairment*. 2nd edition, International Standards Organization (ISO). R.1999/R. 2013, Geneva, Switzerland: Author.

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Nondahl, D.M., Shi, X., Cruickshanks, K.J., Dalton, D.S., Tweed, T.S., Wiley, T.L. & Carmichael, L.L. (2009). *Ear Hear*. December; 30(6): 696–703 doi:10.1097/AUD.0b013e3181b1d418.

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Rosenthal, U., Pedersen, K., & Svanborg, A. (1990). Presbycusis and noise-induced hearing loss, *Ear and Hearing*, 11(4), 257-263.



Canadian Academy of Audiology
Académie Canadienne d'audiologie

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Russo, F.A., Behar, A., Chasin, M., & Mosher, S. (2017). Noise exposure and hearing loss in classical orchestra musicians. International Journal of Industrial Ergonomics, 43, 6, Pages 474-478.
doi.org/10.1016/j.ergon.2012.11.001.

Thiery, L., & Meyer-Bisch, C. (1988). Hearing loss due to partly impulsive industrial noise exposure at levels between 87 and 90 dB(A), Journal of the Acoustical Society of America, Aug; 84(2), 651-659.
doi: 10.1121/1.396844.

We are grateful to WSIB for beginning the work of improving the understanding and policy related to NIHL services. Please do not hesitate to contact us so we can connect you with our experts.

Sincerely,

Jean

Jean Holden MSc MBA
Executive Director
Canadian Academy of Audiology

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January 30, 2026

Mr. Kerry Towndrow
Director, Operations
Workplace Safety and Insurance Board
200 Front Street West
Toronto, Ontario M5V 3J1

Subject: Consultation note for draft Operational Policy Manual (OPM) document 16-01-04 Noise-Induced Hearing Loss

Dear Mr. Towndrow:

The Canadian Vehicle Manufacturers' Association (CVMA) representing Ford Motor Company of Canada, Limited, General Motors of Canada Company, and Stellantis (FCA Canada Inc.) appreciates the opportunity to review the proposed updates to Operational Policy Manual document 16-01-04 Noise-Induced Hearing Loss. Our feedback on the draft Operational Policy Manual (OPM) follows.

In general, CVMA and its members support proposed updates to the OPM to reflect more recently published scientific evidence, to better streamline decision making and provide clarity. The increase in the threshold loss to align with the medical association guidelines is positive and proposed policy changes generally appear clear and easy to apply.

We recognize the policy must respect charter rights and the removal of the age reduction factor, however it is unclear how the draft policy will apply "consideration of age" which is indeed an important consideration in hearing loss. It would be beneficial to include in the policy, or supporting documents, additional details or examples on how "consideration of age" would be applied. This would improve transparency and ensure consistent understanding and application of the policy.

We look forward to continuing our engagement with the WSIB on this policy towards ensuring a clear policy that is consistently applied. Should you wish to discuss our input, please do not hesitate to contact me directly at 416-560-0167.

Yours sincerely,

Karen Hou
Director, Vehicle and Workplace Safety

cc: Kristen Count, WSIB
Starly Catli, WSIB
Consultation_Secretariat@wsib.on.ca

Via Email: Consultation_Secretariat@wsib.on.ca

January 30, 2026

Consultation Secretariat
Workplace Safety & Insurance Board
200 Front St. West
Toronto ON M5V 3J1

These submissions are being provided with respect to the WSIB's proposed changes to Operational Policy Manual Document No. 16-01-04: *Noise-Induced Hearing Loss*.

These submissions have been prepared by Michael Farago, Workers' Compensation Counsel, and Sally Chiappetta-Scapin Workers' Compensation Representative, with the Carpenters' Regional Council.

The Carpenters' Regional Council has 16 local affiliates that include over 30,000 members across the province of Ontario. The members we represent include carpenters, drywallers, industrial carpentry workers, scaffolders, siding installers, and resilient floor layers, as well as some personal support workers and dietary aides employed in long-term care facilities.

Union members who work in the construction sector are often exposed to high levels of noise. This comes from tools that they use, such as hammers and impact guns, as well as from tools, such as jackhammers, used by other trades nearby.

We have reviewed hearing loss claims made during the past three years for which we have information about the outcome of the claim. Based on our review, we can conclude the following:

- Requiring a minimum of 26.25 dB hearing loss in each ear, instead of 22.5 dB would mean that some members who would have previously been entitled to benefits under the old policy would not be entitled under the new policy.

In one case, in particular, the member had asymmetrical hearing loss but the WSIB accepted entitlement to hearing aids based on evidence of hearing loss of 22.5 dB in the better ear.

- We have members who have less than 22.5 dB hearing loss bilaterally who have been advised to obtain hearing aids, but who have been denied due to insufficient hearing loss.

In one case, the WSIB decision letter acknowledged that a member had exposure to 88 dB of noise for 8 hours a day for at least 10 years. However, the member only had hearing loss of 25 dB on one side and 21.25 dB on the other.

In another case, the WSIB accepted that a member was exposed to 86 dB of noise for 8 hours a day for 42 years. However, he only had 11.25 dB of hearing loss in one ear and 17.5dB in the other ear.

- We have a number of members who apply for hearing aids after the age of 60. For these members, removal of the presbycusis deduction factor will be a positive development.

We disagree with the proposal to increase the minimum threshold for initial entitlement to 26.25 dB from 22.5 dB. This change will take away some of our members' entitlement to hearing aids to which they otherwise would have been entitled.

We submit that, if a worker has had sufficient occupational exposure to noise, then their entitlement to hearing aids should be based on the recommendation of their treating health care professional, such as an audiologist or otolaryngologist.

There is scientific evidence to support that hearing loss of at least 20 dB does affect a person's ability to hear, and we see workers making claims for hearing aids with hearing loss less than 26.25 dB and even less than 20 dB bilaterally.

Consider the following,

Chen K, Su S, Chen K, et al. An overview of occupational noise-induced hearing loss among workers: epidemiology, pathogenesis, and preventive measures. *Environmental Health and Preventive Medicine* (2020) 25:65:
<https://doi.org/10.1186/s12199-020-00906-0>

Humes L, The World Health Organization's hearing –impairment grading system: an evaluation for unaided communication in age-related hearing loss. *Int J Audiol*. 2019 Jan;58(1):12-20. Doi: 10.1080/14992027.2018.1518598. Epub 2018 Oct 15. PMID: 30318941; PMCID: PMC6351193.

Squire L, Colombo B, McKinney S. Rapid Audiogram Interpretation. Published 2019
by Plural Publishing, Inc. San Diego, CA

Thank you for taking the time to consider these submissions.

From: [Vanessa Nichols](#)
To: [Consultation Secretariat](#)
Subject: 16-01-04 Noise-Induced Hearing Loss Polic Review
Date: Wednesday, January 28, 2026 11:00:45 AM
Attachments: [Consultation comments for WSIB Policy.docx](#)

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Good morning,

Here is our feedback for the NIHL policy changes.

Vanessa Nichols, MSPH (she/her)
Disability Management Coordinator

Human Resources Division

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Consultation comments for WSIB Policy 16-01-04 Noise-Induced Hearing Loss

1. Hearing Assessment Requirements

Hearing assessments provided by employers should be considered and meaningfully reviewed during adjudication. Greater weight should be given to workplace-specific information such as noise measurements, dosimetry results, and job descriptions, rather than relying on generalized internet sources.

Where external hearing tests are used, a follow-up test after 30 days should be required, in line with CSA Standard 9.3.2.2, to rule out temporary threshold shifts.

2. Employer Access to Decision Materials

Employers should be able to request copies of the evidence used to decide a claim, including external audiograms. This is important for understanding how a decision was reached and for ensuring the process is transparent.

Adjudicators are expected to ask about factors such as ototoxic medications and pre-existing conditions. Employers need confidence that these questions are being asked consistently. It is also unclear whether this information is based solely on worker self-disclosure, and how WSIB verifies that the information is complete and accurate.

4. Exposure in Non-Covered Environments

Many workers hold secondary employment or “side jobs” that may involve significant noise exposure. For example, firefighters working 24-hour shifts often pursue additional employment during their off rotations, including work in construction, a notoriously loud environment.

As the primary employer, we have no control over noise exposure that occurs outside of our workplace. Clarification is needed regarding how secondary or non-covered employment is assessed and factored into adjudication decisions.

5. Cost Splitting for Schedule 2 Employers

Schedule 2 employers should have access to the same cost-relief mechanisms as Schedule 1 employers, including eligibility for the Second Injury and Enhancement Fund (SIEF). Many workers have spent their careers in noisy industries, yet the most recent employer is often held fully responsible for the claim.

Cost splitting for NIHL claims, based on prior employment history, should be available to Schedule 2 employers.

6. Schedule 2 Employers

The NIHL policy should clearly state which sections apply to Schedule 2 employers and which do not. Currently, some policies appear to be written for Schedule 1 employers only, and it is not always clear how they are meant to apply to Schedule 2.



January 30, 2026

WSIB Consultation Secretariat

By email - Consultation_Secretariat@wsib.on.ca

Re: Draft Operational Policy Manual (OPM) document 16-01-04 Noise-Induced Hearing Loss

Thank you for the opportunity to comment on the WSIB's draft Noise-Induced Hearing Loss (NIHL) policy. We appreciate the ongoing efforts to enhance consistency, timeliness, and quality in entitlement decisions related to NIHL claims. We recognize the WSIB as a key system partner in supporting individuals affected by noise-induced hearing loss and value the commitment to greater transparency in decision-making for workers, employers, and the broader community.

About CASLPO

The College of Audiologists and Speech-Language Pathologists of Ontario (CASLPO or "The College") regulates the practice of audiologists and speech-language pathologists in Ontario under the [Audiology and Speech-Language Pathology Act, 1991](#), and the [Regulated Health Professions Act, 1991 \(RHPA\)](#). CASLPO oversees registration, quality assurance, and conduct issues regarding the practice of both professions. CASLPO's mandate is public protection, ensuring Ontarians receive safe, effective care from qualified and competent professionals.

Feedback on Consultation

The proposed WSIB policy impacts the practice of audiologists in Ontario. CASLPO advises audiologists to:

- a) stay informed about funding programs that support individuals with hearing and communication health needs; and
- b) help patients (i.e., clients) in determining their eligibility for, and access to, available funding according to each program's rules (e.g., WSIB, ADP, ODSP).

In supporting patients (i.e., clients) to access funding programs, audiologists must also comply with regulatory expectations, including CASLPO's Practice Standards, Code of Ethics and Professional Misconduct Regulation.



Recognizing the responsibilities of audiologists and CASLPO's public protection mandate, the College offers the following feedback on the proposed draft NIHL policy:

- 1) For clarity, it is suggested that the definition of audiologist on pg. 1 include that the scope of practice of the profession applies to **individuals of all ages**. For example:

***audiologist** means a regulated health professional, registered with the College of Audiologists and Speech-Language Pathologists of Ontario, whose scope of practice includes assessing hearing function and prescribing and fitting hearing aids and other hearing assistive devices in **individuals of all ages**.*

- 2) The definition of hearing assessment on pg. 1 states:

*"hearing assessment means an evaluation of a person's hearing, conducted by a **qualified regulated health professional** [bolding for emphasis], including a review of the person's medical history, the administration of hearing tests, and any additional diagnostic tests or procedures required to determine the presence, nature, and level of hearing loss".*

On pg. 3, however, under section **Hearing assessment requirements for initial entitlement**, the policy says:

"The hearing assessment, including any associated audiogram, must be completed in accordance with the practice standards of the applicable regulatory college or recognized professional association".

Audiologists are the only regulated health professionals in Ontario who carry out hearing assessments for individuals across the life course. The reference to practice standards of a "recognized professional association" implies that unregulated practitioners in Ontario can carry out hearing assessments under this policy. The policy needs to be clear about whether WSIB will accept hearing assessments completed by unregulated practitioners. If assessments will be accepted from unregulated practitioners, it is suggested that this be indicated along with including a definition for these practitioners in the policy.

Additionally, the policy needs to clarify if the involvement of a regulated health professional (i.e., audiologist, or physician) is expected in cases where an assessment for a WSIB applicant is completed by an unregulated practitioner. If involvement of a regulated health professional is expected, the level of their involvement should be clearly defined. For example, pg. 9 of the policy indicates that an audiologist or other regulated health professional's documented confirmation is needed for the Non-Economic Loss (NEL) benefit for tinnitus. CASLPO interprets this to mean that claims for NIHL-related tinnitus must be confirmed by an audiologist or physician.



- 3) It is stated that the aim of the policy is to recognize NIHL as an occupational disease. CASLPO's understanding from the draft policy is the following:
- a. a medical diagnosis of NIHL as an occupational disease is not required to confirm an individual's eligibility for a NIHL claim; and
 - b. documentation submitted from an audiologist that meets the WSIB's requirements is sufficient.

Communicating a medical diagnosis is a controlled act in the RHPA reserved for physicians. CASLPO standards require audiologists to share the results of an assessment with patients. In this regard, audiologists will comment on the nature of a hearing problem, including providing descriptions such as "sensorineural", "conductive" or "mixed" to describe a hearing loss. Audiologists will also advise patients on the possible relationship between a measured hearing loss, the individual's case history, and symptoms or dysfunctions experienced by the individual, including the possibility that a hearing loss may have been caused by occupational noise exposure. However, audiologists **cannot** provide a medical diagnosis of NIHL as an occupational disease.

- 4) CASLPO agrees with the WSIB's decision to remove the presbycusis factor and notes the adjustment of the minimum average hearing threshold to 26.25 dB. The draft policy states (pg. 4) that average hearing level is calculated using the threshold at four key speech frequencies: 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz. However, audiologists assisting WSIB applicants report that many workers with NIHL experience hearing loss at frequencies above 3000 Hz (e.g., 4000-Hz and 6000-Hz). These individuals may be deemed ineligible if higher frequencies are excluded. In the public interest, CASLPO recommends that the WSIB clarify whether claims involving high-frequency hearing loss above 3000 Hz will be considered and identify what supporting evidence would be accepted (e.g., audiologist documentation describing the applicant's activity limitations and participation restrictions).
- 5) The policy is vague regarding how decision makers will evaluate the evidence for NIHL claims. It states that decisions will be made on a "balance of probabilities," meaning the decision-maker must be satisfied, based on the available evidence, that something is more likely than not to be true.

CASLPO recommends that the policy specify the types of evidence that best support NIHL claims and outline how audiologists can assist applicants. For example, under "Employment noise exposure evidence" (p. 6), the policy should clarify whether the required evidence must come from the applicant's employer or if an audiologist can provide the necessary equipment and guidance for workers to collect it. The policy should also define what forms of audiological documentation (e.g., health care



information for determinations of permanent hearing loss and non-economic loss benefits) are considered useful in supporting a claim.

- 6) The Consultation Note, under "Hearing assessment requirements" says, "*The WSIB has developed a comprehensive hearing assessment and standardized audiogram template in collaboration with the **College of Audiologists and Speech-Language Pathologists (CASLPO)** and Association of Hearing Instrument Practitioners (AHIP).*

CASLPO requests the opportunity to review the hearing assessment and standardized audiogram template to ensure it continues to be aligned with the College's practice standards.

- 7) As noted, CASLPO advises audiologists to follow the established protocols of funding programs, assuming these protocols align with regulatory standards and expectations. The College would welcome collaboration with the WSIB on any protocol changes that may intersect with regulatory requirements (e.g., WSIB requests for applicants' personal health information from regulated health professionals for audit purposes). In the public interest, CASLPO currently advises audiologists to obtain and document consent from WSIB applicants before disclosing personal health information. The College would appreciate clarification on whether the WSIB considers such requests to fall under the *Personal Health Information Protection Act, 2004*, [section 39\(1\) a or b](#).

Thank you again for the opportunity to provide feedback on this consultation.

Pam Millett
Chair, CASLPO Board of Directors

Margaret Drent
Registrar and CEO

From: [Ian Cunningham](#)
To: [Consultation Secretariat](#)
Cc: [Martin Benson](#); pgunning@aao-online.ca
Subject: NIHL Consultation
Date: Friday, January 30, 2026 12:24:10 PM
Attachments: [COCA Support PLMHSC Submission to the WSIB NIHL Consultation - Final.pdf](#)

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Good Afternoon,

COCA supports the submission of the Provincial Labour Management Health and Safety Committee (PLMHSC), the committee established pursuant to Section 21 of the Occupational Health and Safety Act to advise the Minister and the CPO on health and safety matters. The PLMHSC's submission is attached to this email for your reference.

Cheers !!!

ian



Ian Cunningham

President

Council of Ontario Construction Associations

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Submission to the WSIB Consultation

RE: Proposed Changes to Noise- Induced Hearing
Loss (NIHL) Policy

On behalf of the Occupational Disease & Research
Labour Management Health and Safety Committee

January 28, 2026

Members of the Occupational Disease and Research Labour Management Health and Safety Committee met in early January 2026 to discuss the proposed changes in the Noise Induced Hearing Loss Policy by the WSIB. The committee is made up representatives of Employers and Labor Unions in the Construction Industry in Ontario. Alongside, there is guest representation from the MLITSD Policy and Prevention Offices, Private Consultants, and Construction Associations.

The Committee has provided feedback on these proposed changes, which are presented in the table below:

Proposed changes in the Policy	Committee Feedback
Aligning the hearing loss and permanent impairment requirements <i>The Consultation Draft of the NIHL Policy sets a minimum average hearing threshold of 26.25 dB for initial entitlement, replacing the previous threshold of 22.5 dB.</i> <i>Threshold of 26.25 dB or greater in each ear represents the minimum level at which hearing loss is recognized as a permanent impairment.</i>	- The committee rejects the change in threshold to 26.25 dB from 22.5 dB - Workers may have delayed access to compensation and support, when hearing loss is between 22.5-26.25 dB - Early prevention of hearing loss progression may be missed due to this raised threshold. - WSIB has the responsibility to provide services/compensation to industry workers prior to the noise regulations coming into effect. - The WSIB addressed a similar issue with mild post-COVID conditions and noted that using AMA guides would not be a fair assessment of their degree of impairment (https://www.wsib.ca/en/administrative-practice-document-permanent-impairment-rating-guidelines-post-covid-conditions-long). The same logic applies to NIHL. A worker with 24-25 dB NIHL may have a real, work-related condition that doesn't meet the AMA Guides impairment threshold – and that worker would be denied health care benefits, etc, under the proposed change.

Removing the presbycusis factor <i>The Consultation Draft of the NIHL Policy removes the presbycusis factor. Under the current NIHL Policy, this factor requires a deduction of 0.5 dB for every year the worker is over the age of 60 at the date of audiogram.</i> <i>Applying a fixed correction factor risks overstating the role of age and understating the potential contribution of occupational noise exposure. For this reason, most compensation boards have moved away from automatic age deductions.</i>	- The committee agrees with this removal of the presbycusis factor - The committee notes that this endorses the need for audiometric testing.
Clarifying the noise exposure threshold (NET) to streamline decision-making <i>The Consultation Draft of the NIHL Policy maintains the existing NET of 90 dBA, measured over an 8-hour workday, for a cumulative duration of at least 5 years, or an equivalent combination of occupational noise level and duration of exposure.</i> <i>The NET is designed to streamline initial entitlement decisions: when the NET is met and NIHL confirmed, the worker's occupational exposure to noise will generally be accepted as sufficient to have caused or significantly contributed to the development of the NIHL, without the need for a more in-depth exposure review.</i>	- The committee noted that 90 dBA over 5 years is a very high standard to meet - Noise exposure in construction is going to be hard to prove. There are daily changes in noise exposure at any given construction worksite. - It was noted that adjacent trades can also cause a worker to be exposed to noise, along with the workers own tasks, which may not be considered here. - The committee recommends to lower the NET to 85 dBA over 5 years, and adjust the equivalency tables. The committee recommends for alignment with the current noise exposure limits as stated in the regulations.

Hearing assessment requirements <i>The Consultation Draft of the NIHL Policy sets out that decision-makers will assess every hearing assessment and audiogram submitted to determine whether the quality of the information is sufficient to be used for NIHL determinations.</i> <i>Furthermore, the Consultation Draft of the NIHL Policy requires that all hearing assessments (including audiograms) conducted after the policy's implementation must include both air and bone conduction testing and need to meet the practice standards of the applicable regulatory college or professional association.</i>	- The committee disagrees with bone conduction testing . - WSIB has to consider the capacity and ability to access bone conduction testing. - WSIB wants to streamline claims, but this proposed change is contrary to that. - WSIB should create incentives to build capacity to do bone conduction testing in Ontario. - Based on the information provided, it is unclear how this change would affect workers who have claims already in process with the WSIB. Additional clarification is requested. - The bar is being raised significantly with this change. This can cause claim delays, causing burdens on workers. - Additional details need to be provided by the WSIB – what does the data indicate and how many workers are being impacted. - While WSIB policy doesn't mandate employer audiometric programs, they could advocate to the MLTSD for audiometric testing (like 8 other provinces), create mechanisms to accept audiometric data from programs, and make it clear that the absence of baseline audiograms does not disadvantage worker claims.
Non-economic loss (NEL) benefits for NIHL <i>The Consultation Draft of the NIHL Policy explains that the degree of work-related permanent impairment resulting from occupational exposure to noise encompasses both the exposure period(s) that is attributable to the employer who significantly contributed to the development of NIHL for initial entitlement to NIHL, and any other prior noise exposure periods where the worker had coverage under the WSIA. Further, the updated policy clarifies that all non-</i>	- Recreational activities can certainly impact hearing. - Non-covered employment can also impact hearing. - Participating in some recreational activities, does not warrant being excluded from compensation - Workers with varied and mixed job histories, which is common in the construction sector, may face reduced eligibility for benefits.

<i>covered exposure is removed from the permanent impairment determination and describes how that is calculated.</i>	
Tinnitus <i>Consultation Draft of the NIHL Policy also includes a section outlining the criteria for entitlement to NIHL-related tinnitus and how the degree of permanent impairment is determined for this condition.</i>	- It was noted that a lot of construction workers suffer from Tinnitus - The minimum two years of continuous history of tinnitus to achieve entitlement seems taxing and delays support to the worker. - New policy is more stringent, and will delay compensation to workers.

Other recommendations from the Committee:

- **It is recommended to the WSIB to involve worker & management representatives along with health experts** in this review process to ensure all perspectives are considered when making any changes.
- It is recommended to the WSIB to implement the **requirement for hearing loss prevention programs and audiometric testing** with employers. This does not necessarily mean every year, but at least every 3- 5 years

From: [Alasdair Cumming](#)
To: [Consultation Secretariat](#)
Subject: feedback on proposed
Date: Tuesday, December 16, 2025 8:03:21 AM

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If you're going to move it to 26.5dB, swap out 500Hz with 4000Hz when we do the calculations

Alasdair Cumming M.Cl.Sc.
Reg. CASLPO Audiologist

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Overview

The WSIB's proposed amendments to its noise-induced hearing loss (NIHL) policy will harm injured workers. They run contrary to developments in science and practices in other jurisdictions. Several of the proposed changes will reduce workers' access to health care, return to work support and fair compensation, contrary to the purposes of the *Workplace Safety and Insurance Act, 1997*.

These submissions address both the substance of the draft policy and the WSIB's consultation process.

Substantively, the draft policy raises the minimum threshold for initial entitlement to 26.25 dB even though contemporary epidemiological and clinical research supports lowering, not increasing, the level at which work-related hearing loss is recognized. It maintains an outdated 90 dBA exposure requirement that is inconsistent with Ontario's own health and safety standards and the 85 dBA benchmark adopted in other Canadian workers' compensation systems. It introduces rigid and scientifically unsupported limits on entitlement where hearing loss is asymmetrical and seeks to bar entitlement for worsening of NIHL after noise exposure has ceased despite emerging evidence and recent Tribunal jurisprudence confirming that NIHL can continue to progress post-exposure.

Process-wise, the WSIB's approach to this consultation is equally problematic. The sole reliance on a highly technical, online, English-only consultation note, coupled with written-only submissions by email, effectively excludes many injured workers—particularly those with disabilities, low literacy, language barriers, or limited internet access—from meaningful participation. This falls short of the Board's statutory obligation under section 161(2) of the WSIA to evaluate the consequences of proposed policy changes to ensure that the purposes of the Act are achieved, and it undermines public confidence in the WSIB's commitment to accessible, good-faith policy development.

About IAVGO

The Industrial Accident Victims Group of Ontario is a community legal aid clinic. IAVGO has been funded for 50 years by Legal Aid Ontario.

IAVGO provides direct services to disabled workers injured on the job, and to the families of those who have been killed on the job. IAVGO's clients live throughout the province.

Our clients include some of the most vulnerable workers in Ontario. Every one of our clients, except for survivors of workers who have died, is a person with a disability or multiple disabilities. All are low-income, often living in poverty because of their inability to continue working.

Most of our clients also have at least one of the following characteristics:

- Racialized

***Submissions of IAVGO Community Legal Clinic to the WSIB Consultation Secretariat
January 30, 2026***

- Live in rural and remote areas of the province
- Limited ability to read or write
- Little or no English language skills
- Low levels of education: usually high-school or below
- Mental health conditions including depression, post-traumatic stress disorder, or addiction
- No or limited Canadian immigration or citizenship
- Little or no job security
- Precarious housing or homelessness

For many years, we have worked alongside precarious and migrant workers to help them access compensation following workplace injuries.



The Board's consultation process is inadequate

This is not a real consultation process. We provide submissions because the Board has shut the door to anything else. Instead of engaging with stakeholders in an accessible way, it:

- Posted information on its website written for graduate-level academics.
 - The consultation webpage is harder to read than the Harvard Law Review.ⁱ
- Failed to directly tell stakeholders about the consultation.
- Accepted submissions only in writing and only by email.

This “consultation” excludes the voices the Board needs to hear. Nearly half of Canadians struggle with literacy.² Many injured workers don’t read or write in English. Many injured workers don’t have reliable access to computers, the internet or email. Workers with disabilities (the people who most need to respond) often need accommodations to participate in consultations like this one.

The Board should start again with a public consultation about how to reform its hearing loss policies. This consultation should include in-person and Zoom hearings where workers can speak directly to the Board.

It is disappointing to keep having to make these basic points about meaningful consultation to the WSIB without any response. We have now raised these same issues in several “consultations” without the WSIB taking any steps to change.

This continual refusal to conduct a meaningful and accessible consultation is a failure of the WSIB’s obligations under section 161(2) of the WSIA to evaluate the consequences of any proposed change in benefits, services, programs and policies to ensure that the purposes of the Act are achieved. The WSIB’s refusal to engage is causing harm:

- Erosion of trust by injured workers who feel ignored and marginalized.
- Ineffective or counterproductive policies that don’t match actual needs or reflect real-world practicalities.
- Policies that aren’t sustainable or adaptable to long-term needs.
- Policies that disproportionately and negatively impact vulnerable or marginalized groups.

The WSIB proposal to increase the minimum threshold for initial entitlement runs contrary to evolving scientific evidence

The proposal to establish 26.25 dB hearing loss as the minimum threshold for initial entitlement to benefits for noise-induced hearing loss—an increase from the current threshold of 22.5 dB—fails to follow the development of medical science and contradicts the purpose of the WSIA to promote health and safety in workplaces, facilitate the return to work and recovery of workers, and compensate workers.ⁱⁱ

The 26.25 dB threshold is outdated, and science supports lowering the threshold to recognize work-related hearing loss—not increasing it. In 2008, the Global Burden of Disease expert group on Hearing Loss reviewed the World Health Organization (WHO) classification for hearing.ⁱⁱⁱ This review resulted in a proposal for a revised classification that reduced the limit for normal hearing from 25 to 20 dB hearing level. The decision to reduce the limit was informed by the extensive clinical experience of this expert group as well as available evidence in the literature.^{iv} Notably, certain literature suggests setting the threshold of normal hearing at 15 dB.^v

Therefore, the 26.25 dB threshold sets a bar for initial entitlement that is out of keeping with the latest developments in science. The WSIB is required to monitor and incorporate evolving scientific evidence into its decisions and policies, particularly for occupational diseases like

NIHL.^{vi} There is no indication in the Board's [Consultation Note](#) that it conducted any scientific research or consulted with the Scientific Advisory Table on Occupational Disease in deciding to increase the minimum threshold for initial entitlement. And since the WSIB has refused to conduct any consultation directly with stakeholders, there is no way for us to determine if it did.

"Alignment" of initial entitlement with the threshold for permanent impairment is a completely inadequate justification to increase the threshold for WSIB health care and other support. The Board is only required to consider the 1990 AMA Guides for the purpose of rating permanent impairment, not for determining whether hearing loss exists, whether it is noise-induced, or whether it is work-related.^{vii} The AMA Guides are outdated, reflecting scientific understanding in 1990 when it was published, and nothing in the law or regulations requires the Board to consider the AMA Guides' criteria as a gatekeeper to entitlement or health care.

The WSIB's threshold for exposure lags the scientific consensus and is inconsistent with other Canadian jurisdictions

The draft policy continues to require exposure at 90 dBA for 5 years (with some recognition of lower exposures down to 84 dBA but only for very long duration exposure). This continued 90 dBA is inexplicably out of touch with cross-jurisdictional health and safety legislation—including Ontario's own legislation—which generally recommend no more than 85 decibels over an 8-hour workday.^{viii ix} The National Institute for Occupational Safety and Health observes that, even at 85 dBA, about 8% of workers could still get serious hearing damage over their career, and the risk increases to 25% at 90 decibels.^x

The 90 dBA exposure threshold is also out of keeping and with the benchmarks set by other Canadian workers' compensation boards. The benchmark for workers' compensation in British Columbia, Alberta, Manitoba, Newfoundland, New Brunswick, Nova Scotia and Saskatchewan is 85 dBA (matching health and safety guidelines).^{xi}

The requirements for entitlement where there is asymmetrical hearing loss fail to reflect current science

The proposed entitlement criteria for asymmetrical hearing loss do not reflect current scientific evidence. The draft policy further limits entitlement by introducing rigid thresholds that preclude claims where asymmetrical hearing loss is present. While the draft appropriately acknowledges that a certain degree of difference between ears can be consistent with occupational noise exposure, its reliance on a strict 15 dB average interaural difference lacks support from recent large-scale research.

For example, da Silva and colleagues tracked over 2,000 metal-industry workers over a 15-year period and found that asymmetries of 15–20 dB or greater at key frequencies were common among workers with clear evidence of noise-induced hearing loss. Their study also demonstrated that noise exposure itself can contribute to increasing asymmetry in the absence of other ear disease. A policy that presumes larger interaural differences are unlikely to be noise-related—absent an obvious one-sided exposure—risks denying entitlement to many genuinely work-related cases, particularly among long-tenured workers with the highest cumulative exposure.^{xii}

The WSIB's proposal to limit entitlement where workers experience worsening is inconsistent with developing science

The WSIB proposes to preclude entitlement for worsening hearing loss suffered after removal from the workplace exposure. This change runs directly counter to recent recognition from the Workplace Safety and Insurance Appeals Tribunal that evolving science shows exactly the contrary. In *Decision No. 1896/19, 2025 ONWSIAT 849 (CanLII)*, the Tribunal rejected the assumption that NIHL stabilizes once noise exposure ends and accepted emerging evidence that noise-induced hearing loss may continue to progress after cessation of exposure. In light of this, a policy that categorically denies entitlement for post-exposure worsening is not simply a choice among competing interpretations; it is inconsistent with the Tribunal's application of current scientific knowledge in a recent appeal.

Section 161(3) of the *Workplace Safety and Insurance Act, 1997* requires the Board to “monitor developments in the understanding of the relationship between workplace insurance and injury and occupational disease, (a) so that generally accepted advances in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this Act.” This provision imposes a positive statutory obligation on the WSIB to ensure that its policies reflect generally accepted advances in health sciences, rather than lag behind or contradict them. A policy change that excludes entitlement for worsening NIHL after exposure has ended—while the Tribunal is expressly recognizing emerging scientific evidence that NIHL can progress post-exposure—conflicts with this duty. It would mean that instead of “reflecting” advances in health science in its benefits and policies as section 161(3) requires, the WSIB is entrenching an outdated assumption that the Tribunal has already found to be inconsistent with the evolving medical evidence on NIHL progression.

Yours truly,

IAVGO Community Legal Clinic



Maryth Yachnin



Jessica Ponting



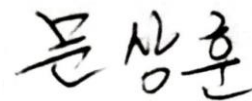
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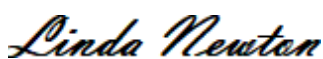
David Arruda



Mary DiNucci



Sang-Hun Mun



Linda Newton



Aleksandar Ivovic



Dora Chan

ⁱ See below - <https://www.thewriter.com/tools/readability>

ⁱⁱ Workplace Safety and Insurance Act, 1997, SO 1997, c 16, Sch A, s 1, <<https://canlii.ca/t/2wt#sec1>>, retrieved on 2026-01-28

ⁱⁱⁱ Stevens G, Flaxman S, Brunskill E, Mascarenhas M, Mathers CD, Finucane M; Global Burden of Disease Hearing Loss Expert Group. Global and regional hearing impairment prevalence: an analysis of 42 studies in 29 countries. *Eur J Public Health*. 2013. February;23(1):146–52. <https://doi.org/10.1093/eurpub/ckr176>

^{iv} Olusanya BO, Davis AC, Hoffman HJ. Hearing loss grades and the International classification of functioning, disability and health. *Bull World Health Organ*. 2019;97(10):725–728. doi:10.2471/BLT.19.230367

^v Clark JG. Uses and abuses of hearing loss classification. *ASHA*. 1981. July; 23(7):493–500.

^{vi} WSA, s. 161 (3). <https://canlii.ca/t/2wt#sec161>

^{vii} General, O Reg 175/98, s. 18

<https://www.canlii.org/en/on/laws/regu/o-reg-175-98/latest/o-reg-175-98.html>

^{viii} Occupational Health and Safety Act, RSO 1990, c O.1, Sch A, O Reg 381/15, Noise (the “Noise Regulation”).

^{ix} NIOSH. (1998). Criteria for a Recommended Standard: Occupational Noise Exposure (DHHS [NIOSH] Publication No. 98–126). Centers for Disease Control and Prevention; Employment and Social Development Canada, Labour Program, Levels of Sound – Canada Occupational Health and Safety Regulations, Part VII (IPG-074), interpretation policy guideline, effective April 2010, online: Government of Canada <https://www.canada.ca/en/employment-social-development/programs/laws-regulations/labour/interpretations-policies/074.html>

^x NIOSH. (1998). Criteria for a Recommended Standard: Occupational Noise Exposure (DHHS [NIOSH] Publication No. 98–126). Centers for Disease Control and Prevention.

^{xi} Hearing Disorders, Factsheet 56:17, Province of British Columbia, updated by Employment Standards Branch, online: Government of British Columbia

<https://www2.gov.bc.ca/gov/content/employment-business/employment-standards-advice/personal-injury-and-workplace-safety/factsheets/specific-health-concerns/hearing-disorders-5617>; Workers’ Compensation Board – Alberta. Occupational hearing loss. Edmonton, AB: WCB-Alberta, June 3, 2025 (Fact sheet WCB-629). Available at:

https://www.wcb.ab.ca/assets/pdfs/employers/EFS_Hearing_loss.pdf; Workers Compensation Appeal Tribunal (Manitoba), Decision #57/24, Appeal File No 4287, online:

<https://www.appeal.mb.ca/public-decisions/display/decision/4287>; WorkplaceNL, Client Services Policy Manual (Policy EN-12, Hearing Loss Entitlement, 18 June 2019) <https://workplacenl.ca/site/uploads/2019/06/EN-12-Hearing-Loss-2019-06-18.pdf>; Workers’ Compensation Board (Nova Scotia), Occupational Noise-Induced Hearing Loss Application (Form, 2017), online: https://www.wcb.ns.ca/sites/default/files/2025-10/Comms-Form-Occupational_Noise_Hearing_Loss_Form_2017.pdf; WorkSafeNB, Policy 21-112, Occupational Hearing Loss (Policy, [Effective Date Not Specified in Document]), online: <https://www.worksafenb.ca/policy-and-legal/policy/view-our-policies/occupational-hearing-loss>; Workers’ Compensation Board (Saskatchewan), Policy POL 01/2023, Hearing Loss (Policy, 1 March 2023), online: <https://www.wcbask.com/policy-and-procedure/hearing-loss-pol-012023>.

^{xii} da Silva VAR, Kruchewsc MM, Lavinsky J, Pauna HF, Guimaraes AC, Castilho AM, Duarte ASM, Crespo AN. Progressive Asymmetry in Occupational Noise-Induced Hearing Loss: A Large Population-Based Cohort Study With a 15-Year Follow-Up. *J Int Adv Otol*. 2021 Nov;17(6):520–525. doi: 10.5152/iao.2021.21139. PMID: 35177389; PMCID: PMC8975394.

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Please email your feedback to Consultation_Secretariat@wsib.on.ca by January 30, 2026. We look forward to hearing from you.

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7	70	Large chunks of The Writer's website
8	65	Reader's Digest
9	60	BBC News website
10	50	<i>The Financial Times</i>
11	40	Most of William Shakespeare
12	30	<i>Harvard Law Review</i>



Submission to the WSIB Consultation

RE: Proposed Changes to Noise- Induced Hearing
Loss (NIHL) Policy

On behalf of the Occupational Disease & Research
Labour Management Health and Safety Committee

January 28, 2026

Members of the Occupational Disease and Research Labour Management Health and Safety Committee met in early January 2026 to discuss the proposed changes in the Noise Induced Hearing Loss Policy by the WSIB. The committee is made up representatives of Employers and Labor Unions in the Construction Industry in Ontario. Alongside, there is guest representation from the MLITSD Policy and Prevention Offices, Private Consultants, and Construction Associations.

The Committee has provided feedback on these proposed changes, which are presented in the table below:

Proposed changes in the Policy	Committee Feedback
Aligning the hearing loss and permanent impairment requirements <i>The Consultation Draft of the NIHL Policy sets a minimum average hearing threshold of 26.25 dB for initial entitlement, replacing the previous threshold of 22.5 dB.</i> <i>Threshold of 26.25 dB or greater in each ear represents the minimum level at which hearing loss is recognized as a permanent impairment.</i>	- The committee rejects the change in threshold to 26.25 dB from 22.5 dB - Workers may have delayed access to compensation and support, when hearing loss is between 22.5-26.25 dB - Early prevention of hearing loss progression may be missed due to this raised threshold. - WSIB has the responsibility to provide services/compensation to industry workers prior to the noise regulations coming into effect. - The WSIB addressed a similar issue with mild post-COVID conditions and noted that using AMA guides would not be a fair assessment of their degree of impairment (https://www.wsib.ca/en/administrative-practice-document-permanent-impairment-rating-guidelines-post-covid-conditions-long). The same logic applies to NIHL. A worker with 24-25 dB NIHL may have a real, work-related condition that doesn't meet the AMA Guides impairment threshold – and that worker would be denied health care benefits, etc, under the proposed change.

Removing the presbycusis factor <i>The Consultation Draft of the NIHL Policy removes the presbycusis factor. Under the current NIHL Policy, this factor requires a deduction of 0.5 dB for every year the worker is over the age of 60 at the date of audiogram.</i> <i>Applying a fixed correction factor risks overstating the role of age and understating the potential contribution of occupational noise exposure. For this reason, most compensation boards have moved away from automatic age deductions.</i>	- The committee agrees with this removal of the presbycusis factor - The committee notes that this endorses the need for audiometric testing.
Clarifying the noise exposure threshold (NET) to streamline decision-making <i>The Consultation Draft of the NIHL Policy maintains the existing NET of 90 dBA, measured over an 8-hour workday, for a cumulative duration of at least 5 years, or an equivalent combination of occupational noise level and duration of exposure.</i> <i>The NET is designed to streamline initial entitlement decisions: when the NET is met and NIHL confirmed, the worker's occupational exposure to noise will generally be accepted as sufficient to have caused or significantly contributed to the development of the NIHL, without the need for a more in-depth exposure review.</i>	- The committee noted that 90 dBA over 5 years is a very high standard to meet - Noise exposure in construction is going to be hard to prove. There are daily changes in noise exposure at any given construction worksite. - It was noted that adjacent trades can also cause a worker to be exposed to noise, along with the workers own tasks, which may not be considered here. - The committee recommends to lower the NET to 85 dBA over 5 years, and adjust the equivalency tables. The committee recommends for alignment with the current noise exposure limits as stated in the regulations.

Hearing assessment requirements <i>The Consultation Draft of the NIHL Policy sets out that decision-makers will assess every hearing assessment and audiogram submitted to determine whether the quality of the information is sufficient to be used for NIHL determinations.</i> <i>Furthermore, the Consultation Draft of the NIHL Policy requires that all hearing assessments (including audiograms) conducted after the policy's implementation must include both air and bone conduction testing and need to meet the practice standards of the applicable regulatory college or professional association.</i>	- The committee disagrees with bone conduction testing . - WSIB has to consider the capacity and ability to access bone conduction testing. - WSIB wants to streamline claims, but this proposed change is contrary to that. - WSIB should create incentives to build capacity to do bone conduction testing in Ontario. - Based on the information provided, it is unclear how this change would affect workers who have claims already in process with the WSIB. Additional clarification is requested. - The bar is being raised significantly with this change. This can cause claim delays, causing burdens on workers. - Additional details need to be provided by the WSIB – what does the data indicate and how many workers are being impacted. - While WSIB policy doesn't mandate employer audiometric programs, they could advocate to the MLTSD for audiometric testing (like 8 other provinces), create mechanisms to accept audiometric data from programs, and make it clear that the absence of baseline audiograms does not disadvantage worker claims.
Non-economic loss (NEL) benefits for NIHL <i>The Consultation Draft of the NIHL Policy explains that the degree of work-related permanent impairment resulting from occupational exposure to noise encompasses both the exposure period(s) that is attributable to the employer who significantly contributed to the development of NIHL for initial entitlement to NIHL, and any other prior noise exposure periods where the worker had coverage under the WSIA. Further, the updated policy clarifies that all non-</i>	- Recreational activities can certainly impact hearing. - Non-covered employment can also impact hearing. - Participating in some recreational activities, does not warrant being excluded from compensation - Workers with varied and mixed job histories, which is common in the construction sector, may face reduced eligibility for benefits.

<i>covered exposure is removed from the permanent impairment determination and describes how that is calculated.</i>	
Tinnitus <i>Consultation Draft of the NIHL Policy also includes a section outlining the criteria for entitlement to NIHL-related tinnitus and how the degree of permanent impairment is determined for this condition.</i>	- It was noted that a lot of construction workers suffer from Tinnitus - The minimum two years of continuous history of tinnitus to achieve entitlement seems taxing and delays support to the worker. - New policy is more stringent, and will delay compensation to workers.

Other recommendations from the Committee:

- **It is recommended to the WSIB to involve worker & management representatives along with health experts** in this review process to ensure all perspectives are considered when making any changes.
- It is recommended to the WSIB to implement the **requirement for hearing loss prevention programs and audiometric testing** with employers. This does not necessarily mean every year, but at least every 3- 5 years

January 30, 2026

WSIB Consultation Secretariat
200 Front Street West
Toronto, Ontario
M5V 3J1

Sent by email to: consultation_secretariat@wsib.on.ca

Dear Consultation Staff,

Re: WSIB Noise Induced Hearing Loss Consultation

Injured Workers Community Legal Clinic is a legal aid clinic with a province-wide mandate. We have specialized in the area of workers' compensation since 1969. As a legal aid clinic, our services are provided without charge to people with little or no income. In addition to legal advice and representation, our mandate includes community development, public legal education and participation in law and policy reform.

Thank you for the opportunity to comment on the proposed draft of policy 16-01-04, Noise-Induced Hearing Loss (NIHL). We support the WSIB's desire to update the NIHL policy, and there are a few positive changes contained therein. However, it is our position that several adjustments to the proposed policy are needed to ensure a just and scientifically sound policy which complies with all relevant legislation.

IWC relies on and endorses the submissions of the Office of the Worker Advisor and the United Steelworkers, which have laid out in great detail and with thorough analysis many concerns and proposed changes.

In short, IWC endorses the submissions of the OWA and USW, and urges the Board to:

- Remove the requirement of having or meeting a permanent impairment threshold in order to grant initial entitlement (and health care). Initial entitlement and permanent impairment criteria are and should remain legally separate.
- Adjust the noise exposure threshold to be based on noise exposure of 85 dBA or equivalent
- Adjust the average hearing loss threshold to 20 dB for initial entitlement
- Include the hearing threshold level at 4000 Hz to the definition of hearing loss for initial entitlement

- Remove the language that can be interpreted as giving decision-makers the ability to deny entitlement to a worker solely based on an audiogram without a classic “notch” or “dip”
- Clarify the policy to make clear that if a worker has noise induced hearing loss and has the required exposure, then initial entitlement should not be denied despite any non-occupational factors (including age-related hearing loss)
- Remove the text of the draft NIHL policy that prioritizes employer noise evidence over a worker’s direct testimony and deems employer noise surveys to be equivalent to surveys done by the provincial government
- Clearly state that air conduction values are used to determine the level of hearing loss in NIHL claims that do not have a diagnosed conductive component
- Ensure the policy reflects that hearing loss can deteriorate after noise exposure ends
- Ensure the “thin skull doctrine” is respected, including when considering exposure in non-covered employment
- Eliminate the proposed section regarding excluding non-covered exposure when determining permanent impairment
- Use 6 months as the minimum duration for entitlement to benefits for tinnitus in NIHL claims
- Ensure reference to other relevant policies including the Mertis and Justice, Traumatic Hearing Loss, Secondary Conditions, and Accidents Resulting from Treatment policies

We thank you in advance for considering the feedback carefully, and adjusting the policy accordingly. We look forward to the opportunity to review the amendments to the proposed policy.

Sincerely,
INJURED WORKERS COMMUNITY LEGAL CLINIC
per:



Kathrin Furniss
Community Legal Worker / Staff Lawyer
kathrin.furniss@iwc.clcj.ca

From: [Rutka, John](#)
To: [Consultation Secretariat](#)
Subject: Re: Draft for Consultation-Noise Induced Hearing Loss and Consultation note for draft Operational Policy Manual (OPM) document 16-01-04 Noise-Induced Hearing Loss
Date: Thursday, January 29, 2026 9:36:25 AM

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Hello,

My name is John Rutka. I am a Professor of Otolaryngology-Head and Neck Surgery at the University Health Network, University of Toronto. My subspecialty interest is in Otology/Neurotology.

I am writing the Operational Policy Branch (OPB) regarding their comprehensive review of NIHL policy and the 2 draft submissions I have had the opportunity to review. Both were forwarded me by the Ontario Association of Professional Audiology Clinics (OAPAC). The OAPAC asked if I could review these documents and provide comment.

By way of introduction in my earlier days when I was a younger practitioner, I was one of the chief consultants for OHL/NIHL related matters at the WSIB in addition to Dr Peter Alberti, Dr Wilfred Goodman and Dr Douglas Snell. I not only saw workers to provide an opinion regarding their hearing loss but also wrote commissioned reports looking at various aspects, questions and controversies at the request of Dr Renee Thakur who was then the Occupational Hearing Loss in-house lead at the time. This subsequently changed when the WSIB hired in-house audiologists who had formally worked at the University Health Network in our Center for Advanced Hearing and Balance Testing such as Christina Lopes, Maria Bobyn, Kendra Stein etc to name a few who became responsible for addressing the not so straight forward cases that in the past would have been sent for outside consultation. Subsequent to this I have become the lead otologic/neurotologic consultant by provincial appointment for the Workplace Safety and Insurance and Appeals Tribunal (WSIAT) and have been responsible for creating Discussion Papers for Hearing Loss and Tinnitus and Dizziness. I have continued to publish on OHL/NIHL and I think it of interest that you may wish to review the following Chapter in **Occupational Hearing Loss**: Harvey K, McLeod R, Magos T, Rutka JA, Occupational Hearing Loss in Canada. (Chapter 41). Occupational Hearing Loss 4th Edition, Sataloff RT, Roehm PC Editors CRC Press, Taylor and Francis Group, Abington, Oxon, UK 2025 for updated information.

My purpose in writing is to provide further input to the proposed policy changes that are currently in a draft for consultation and point out some areas for further consideration. While much of what we know about OHL/NIHL has remained unchanged, with new scientific discoveries, new considerations need to be taken into account. An example of this is the identification of the phenomenon of cochlear synaptopathy by Liberman and Kujawa (from Boston). Their studies provided further explanation that not only could the hair cells in the inner ear be injured from noise exposure but that there was also likely injury to cochlear nerve ganglion cells (from suspected glutamate excitotoxicity) that over time could be responsible for the progressive deterioration of hearing in a worker's hearing and their speech discrimination scores even though they had been removed from a noisy environment years prior. Their findings also point to concern that temporary threshold shifts (TTS's) to hearing may be more harmful than original thought. This is not without controversy but represents at least something that changes our perspective in why hearing may change despite the cessation of noise exposure. You may wish to revisit reference #3 (Leroux T and Pinsonnault-Skvarénina-2018).

Other concerns regard the proposal looking at asymmetric hearing loss is important additionally. Noting that a >15dB average asymmetry would be considered abnormal fails to take into account greater asymmetries to hearing loss can occur at frequencies > 3000 Hz not to mention there being no consideration of word recognition scores (speech discrimination scores) which is the other component

part of the audiogram. My understanding is that within the scope of practice in Ontario, Medical Physicians are responsible for providing diagnosis for a hearing loss. Audiologists and Hearing Instrument Practitioners can perform the necessary testing to identify a hearing loss and certainly should be aware of the clinical implications of such an asymmetry. Providing diagnosis however is not inherent to their role. On clinical grounds, one major concern is whether another cause for the asymmetry such as a vestibular schwannoma (acoustic neuroma) might be missed if one looks purely at what would be considered an "asymmetrical" hearing loss looking at pure tone thresholds

With regards to why there are continued controversies in OHL/NIHL decisions I would like to draw your attention to recommendations that were made in the WSIAT Discussion Paper on Hearing Loss and Tinnitus (2013) Appendix C, Sections 10 and 11. Both sections provide information that remains fundamentally some of the most important aspects along with the tester's ability to ensuring that the most reliable audiogram is provided for compensation purposes.

With the above being said I would be in a position to assist the OPB in a resource position to provide further information and opinions concerning OHL/NIHL from a medical physicians perspective if requested.

Yours sincerely,

John Rutka MD FRCSC

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WSIB Noise-Induced Hearing Loss Consultation

Submission of the Office of the Employer Adviser
January 30, 2026

A. Introduction and OEA Perspective

The Office of the Employer Adviser (OEA) provides expert legal advice, representation and education to Ontario employers on matters arising under the *Workplace Safety and Insurance Act, 1997* (WSIA) and unlawful reprisal matters under section 50 of the *Occupational Health and Safety Act* (OHSA).

The OEA appreciates the opportunity to provide submissions on the Workplace Safety and Insurance Board's (WSIB) proposed revisions to Operational Policy Manual Document No. 16-01-04, *Noise-Induced Hearing Loss* (NIHL). This consultation represents the first comprehensive update to the NIHL policy since its introduction. The OEA recognizes the WSIB's efforts to update the policy with the goals of strengthening consistency, timeliness, transparency and quality in NIHL entitlement decisions.¹

The OEA has identified aspects of the draft NIHL policy that would benefit from further consideration. In general, the OEA suggests that Administrative Practice Documents (or other publicly available guidelines) could accompany the revised policy to provide examples and additional clarity for workers and employers around how these decisions will be made. Where additional comments may be helpful, the information is outlined below.

B. Context and Background

According to the WSIB, total NIHL claims have generally increased year over year since 2009, with significant growth occurring from 2020 onwards.² For example, in 2014 there were 3,675 combined Schedule 1 and Schedule 2 NIHL claims. By 2025, this number had risen to 7,186, an increase of 95.54%.³ A bar graph showing the rise in NIHL claims by registration year is included in Appendix A, Figure 1. A comparison of allowed NIHL claims to all other occupational disease claims is included as Figure 2.

¹ Ontario, Workplace Safety and Insurance Board (WSIB), *Consultation note for draft Operational Policy Manual (OPM) document 16-01-04 Noise-Induced Hearing Loss (NIHL)* (10 November 2025), <https://www.wsib.ca/en/nihlconsultation> [WSIB NIHL Consultation Note].

² WSIB NIHL Consultation Note.

³ Ontario, WSIB, *Health and Safety Statistics: Additional resources: Occupational disease - Schedule 1 and 2 Occupational Disease Claim, Registration Year, Noise Induced Hearing Loss* (data maturity date 31 December 2025) <https://safetycheck.onlineservices.wsib.on.ca/safetycheck/explore/additional/provincialDownloads?lang=en> (accessed 27 January 2026).

From the employer perspective, this growth is notable for several reasons. NIHL is a gradual and cumulative condition rather than a discrete workplace event. It is often claimed years after exposure and claims are highly dependent on historical exposure evidence that may not have been documented or that may no longer be available. In addition, NIHL can be influenced by non-occupational factors, including aging, recreational noise exposure, medications and medical conditions.

C. OEA Policy Recommendations

1. Removal of the Presbycusis Deduction

The draft NIHL policy removes the past policy approach of a presbycusis deduction of 0.5 dB per year over age 60 and replaces it with an individualized assessment of whether non-work-related factors, such as age-related hearing loss, have overwhelmed occupational exposure.

The WSIB NIHL Consultation Note explains that scientific understanding of hearing loss has evolved, and that aging and noise exposure can interact in complex ways. Hearing loss observed with age also reflects cumulative and synergistic effects of both extrinsic and intrinsic factors. For these reasons, some Canadian workers' compensation boards have moved away from automatic age deductions.

OEA Recommendation:

We suggest it would be helpful to have Administrative Practice Documents (or other publicly available guidelines) accompany the revised policy to provide examples and additional clarity for workers and employers around how these decisions will be made. This could also help to promote the consistency of decisions where both age-related and occupational factors may be present.

2. Noise Exposure Threshold and Equivalent Exposure Reconstruction

A defined NET provides an objective reference point that supports consistency and transparency in entitlement determinations, particularly for a condition that often develops long after exposure.

The proposed policy language around exposures that fall below the NET, and the complex interaction between occupational and age-related hearing loss, would benefit from additional clarification regarding how the threshold will function when considering other factors.⁴

⁴ According to the draft NIHL policy other factors include individual susceptibility, exposure to ototoxic substances, or the nature of noise exposure such as continuous noise accompanied by intermittent, abrupt or explosive sounds.

Guidance in situations of multiple employments and changing job duties would assist in ensuring that exposure assessments are based on evidence reflective of employment circumstances and applied with consistency across claims.

OEA Recommendation:

The OEA suggests that Administrative Practice Documents (or other publicly available guidelines) would be helpful to accompany the revised policy and provide examples and additional clarity for workers and employers around how these decisions will be made.

3. Clarification of the 90 dBA Threshold in WSIB Policy vs 85 dBA in the OHSA

The OEA notes that Ontario's occupational health and safety framework and the WSIB's NIHL policy rely on different noise exposure thresholds, reflecting the different purposes of the two regimes. The OHSA threshold is described as a preventive standard designed to trigger protective measures before injury occurs, and the WSIB threshold functions as a causation benchmark intended to identify exposure levels generally sufficient to result in compensable noise-induced hearing loss.

The different thresholds within related systems may not be readily understood by workplace parties and would benefit from clarification.

OEA Recommendation:

If a different standard is maintained in the two regimes, we suggest that the NIHL policy, or a related Administrative Practice Document (or other publicly available guidelines), provide an explanation as to the distinctions in the related systems to support user understanding.

4. Claim Cost Reporting and WISR Impacts

NIHL claims appear on the WSIB Workplace Injury Summary Report (WISR), although those NIHL claims have limited individual cost consequences for an employer.⁵ Certain employers are required to provide their WISR report to project owners as part of procurement and pre-qualification processes. The appearance of a WSIB claim on the report may result in an employer being screened out of a competition, regardless of the nature of the claim.

⁵ The reference to employers here is primarily to Schedule 1 employers in the collective liability system, in contrast to Schedule 2 employers that remain individually liable for the full cost of claims filed by their workers. However, in some cases, Schedule 2 employers may apportion occupational disease claim costs amongst other Schedule 2 employers. See s. 94(4) and Workplace Safety and Insurance Appeals Tribunal *Decision No. 3113/18*, 2019 ONWSIAT 825 (CanLII) at para 28.

OEA submission:

We suggest the WSIB consider, and consult with employers on, measures to mitigate the unintended impacts associated with NIHL claims appearing on the WISR. Options could include allowing NIHL claims to be filtered out of the WISR, presenting them in a separate category with an explanatory note, or otherwise clearly distinguishing non-costed occupational disease claims from other claims.

5. Tinnitus Entitlement Framework

The draft NIHL policy incorporates tinnitus into the NIHL framework and provides for permanent impairment awards of 2% for documented ongoing tinnitus, with the possibility of higher ratings (3-5%) in rare, severe cases. The addition of tinnitus to the NIHL policy supports clarity for system users, given that entitlement requires an accepted occupational hearing loss claim.

OEA Recommendation:

The NIHL policy would benefit from criteria or examples to assist decision-makers and clarify expectations around documentation during the two-year period, and for rare severe cases. This would support consistent evidentiary standards across claims.

6. Audiogram Standards and Assessment Quality

The draft NIHL policy proposes that all hearing assessments conducted after the policy's implementation include both air and bone conduction testing. The WSIB has also developed a comprehensive hearing assessment form and standardized audiogram template in collaboration with the College of Audiologists and Speech-Language Pathologists of Ontario and the Association of Hearing Instrument Practitioners.

OEA Recommendation:

The WSIB could provide guidance on how older audiograms will be assessed relative to the policy's updated testing requirements and/or a transition period.

7. Standard of Proof and Long-Latency Claims

The draft NIHL policy reiterates the balance of probabilities standard of proof and the benefit of doubt principle on an issue-by-issue basis. These principles are foundational to the workers' compensation system.

The unique characteristics of long-latency NIHL claims warrant consideration of how these principles interact with the proposed draft policy. NIHL claims are often filed well after the relevant exposure. In these cases, evidence is frequently incomplete or degraded by time. Employers may no longer be in business, employment records may

have been destroyed in accordance with retention policies, and witnesses may be unavailable.

In this context, the interaction of the balance of probabilities standard, the benefit of doubt principle, and the discretion contemplated by the draft policy highlights the importance of objective criteria to support consistent outcomes.

OEA Recommendation:

The WSIB could consider how evidentiary gaps inherent in long-latency claims are addressed through the benefit of doubt principle to promote transparency and consistency in these cases.

8. Transition, Retroactivity and Implementation

The draft NIHL policy does not currently address how the revised criteria will apply to pending or legacy claims.

We suggest the WSIB plan for post-implementation monitoring and reporting on the final policy changes. For instance, key outcome metrics including acceptance rates, NEL award distributions, claim volumes, and average time from exposure to claim filing. This transparency would assist an assessment of whether the revised policy is achieving its objectives and may be used to inform prevention practices.

OEA Recommendation:

The OEA suggests the development of transition provisions for the revised NIHL policy. In addition, the WSIB could consider post-implementation monitoring and reporting on key outcome metrics.

D. Conclusion

The OEA appreciates the opportunity to share comments about the WSIB's proposed updates to the NIHL policy. NIHL, and occupational disease claims in general, present unique challenges. They involve cumulative conditions that may span decades and involve exposure from multiple employers.

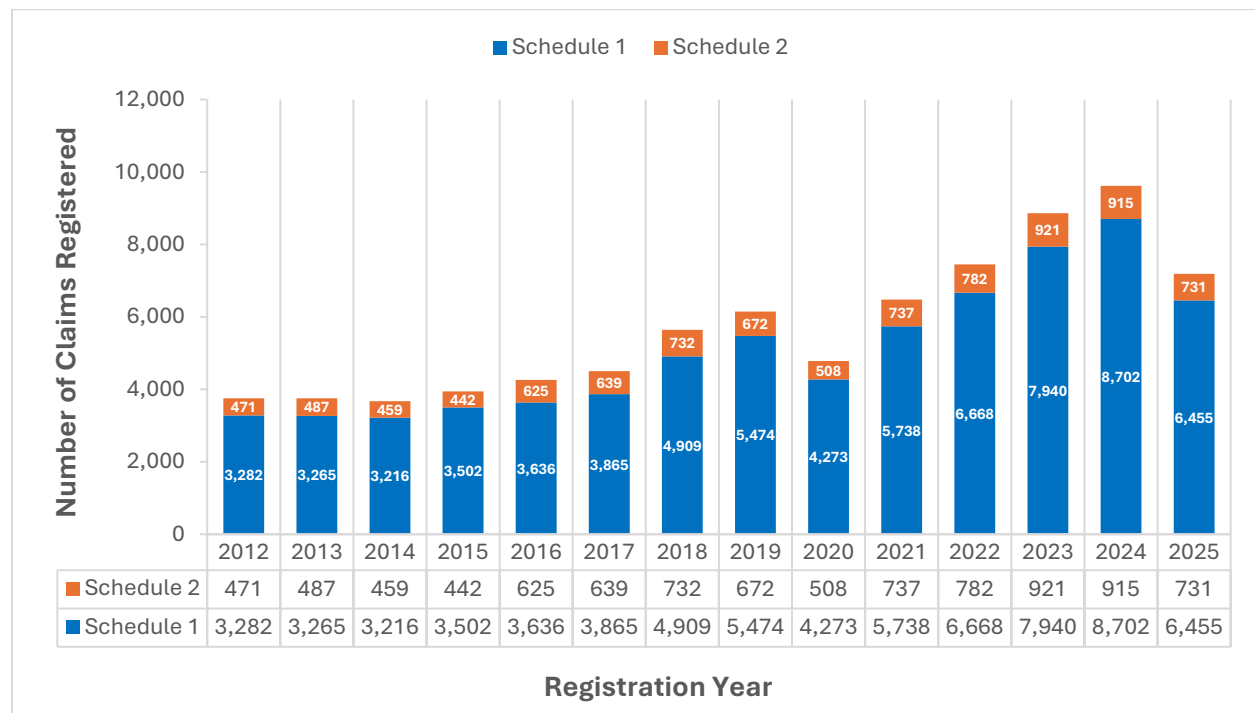
The use of Adjudicative Practice Documents (or other publicly available guidelines) that provide examples and further clarification to support consistent decision making, could enable employers and workers to better engage with the system in these claims.

Appendix A

WSIB NIHL Claim Statistics

Figure 1

NIHL Claim Counts for Schedule 1 and Schedule 2

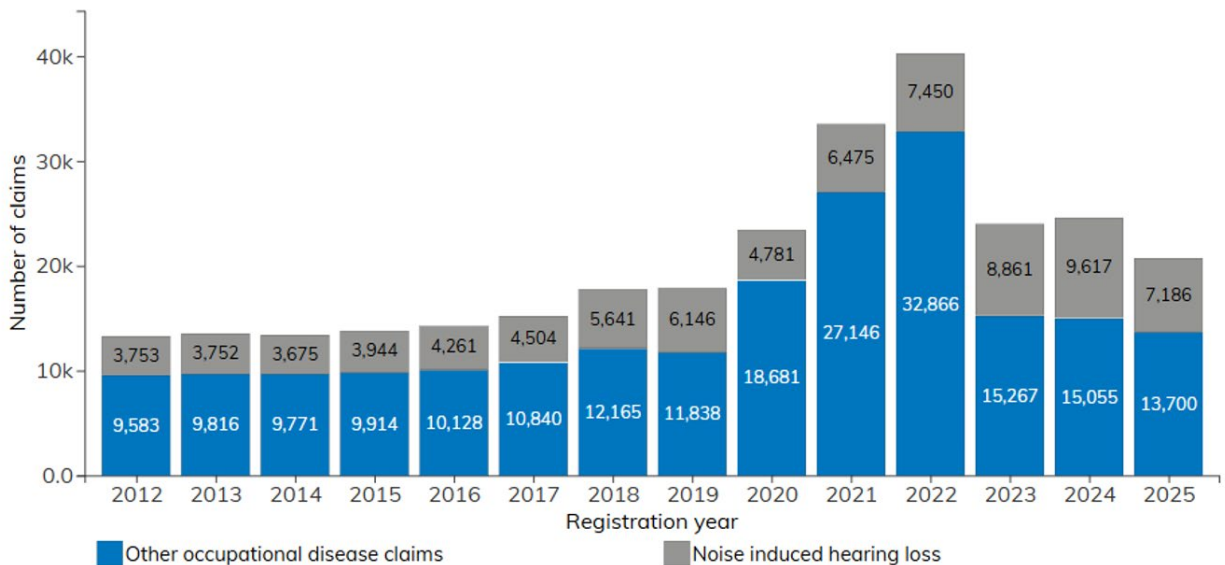


Note. NIHL claim counts for Schedules 1 and 2 are shown for the 2012 to 2025 registration years. Total NIHL claims have generally increased year over year since 2014. Ontario, WSIB, *Health and Safety Statistics: Additional resources: Occupational disease - Schedule 1 and 2 Occupational Disease Claim, Registration Year, Noise Induced Hearing Loss* (data maturity date 31 December 2025)

<https://safetycheck.onlineservices.wsib.on.ca/safetycheck/explore/additional/provincialDownloads?lang=en> (accessed 27 January 2026).

Figure 2

Allowed Schedule 1 and Schedule 2 NIHL Claims as Compared to all other Occupational Disease Claims



Note. Allowed NIHL claims for Schedules 1 and 2, as compared to all other allowed occupational disease claims, are shown for the 2012 to 2025 registration years. While other occupational disease claims increased between 2014 and 2022 and then decreased starting in 2023, NIHL claims have generally continued to increase since 2014. Ontario, WSIB, *Health and Safety Statistics: Provincial statistics: Occupational disease - Schedule 1 and 2, Allowed occupational disease claims, Noise induced hearing loss* (data maturity date 31 December 2025)

https://safetycheck.onlineservices.wsib.on.ca/safetycheck/explore/provincial/SH_12/od?lang=en (accessed 27 January 2026).

WSIB Noise-Induced Hearing Loss Policy
Consultation

**Submissions of the
Office of the Worker Adviser**

January 30, 2026

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Submissions of the Office of the Worker Adviser

I. Introduction

This submission is the Office of the Worker Adviser's response to the Workplace Safety and Insurance Board's (WSIB) request for feedback on its proposed draft of Operational Policy 16-01-04, Noise-Induced Hearing Loss (NIHL). We appreciate the invitation to provide our comments and input.

The Office of the Worker Adviser (OWA) is an operational service agency of the Ministry of Labour, Immigration, Training and Skills Development (MLITSD). The OWA's statutory mandate is to "educate, advise and represent workers who are not members of a trade union and their survivors."¹ Since its inception in 1985, the OWA has and continues to represent more injured workers and survivors in their WSIB claims than any other organization in the province.

Our submission includes two main sections. The first section includes overall comments about the draft NIHL policy document. The second section provides more specific feedback and recommendations.

In our view, the draft NIHL policy is significantly flawed and should not be implemented in its current form.

We encourage the WSIB to take time to incorporate the feedback provided in this consultation, and to conduct a second round of policy consultations. This is necessary to ensure implementation of a clear, appropriate, scientifically sound and legally correct NIHL policy document.

II. Overall comments

Welcome changes in the draft NIHL policy document

The OWA appreciates the work the WSIB has done to review and update policy 16-01-04.

We agree with the WSIB's decision to update the policy due to the advanced age of the existing NIHL policy and the dated scientific information underlying the current policy.

We agree with the decision to continue to recognize NIHL as an occupational disease and that there are gaps in the current policy that benefit from clarification.

¹*Workplace Safety and Insurance Act, 1997*, SO 1997, c 16, Sch A, s 176(1) [*WSIA* or "*the Act*"].

We also strongly agree with the decision to remove the presbycusis (aging) deduction factor from the NIHL policy. This decision is consistent with the WSIB's obligations under s. 161(3) of the *Act* and current scientific literature. The presbycusis factor unfairly prejudices older workers and does not reflect the complex interaction between hearing loss caused by noise and observed with age.

The following updates are also welcomed:

- Explicit language regarding the standard of proof, including text about the balance of probabilities, the benefit of the doubt principle and the need to apply these principles to each issue under consideration.
- Clear language regarding the appropriate legal test, including the significant contributing factor test and its associated principles. This includes text stating that the occupational exposure does not need to be the sole, primary or predominant cause, as well as language confirming that entitlement should be granted when the legal test is met, even if there is a history of non-occupational noise exposure or non-work-related contributing factors.
- Recognition that an air-bone-gap of 15 dB or less is considered normal and is consistent with NIHL.
- Inclusion of language recognizing that NIHL can be asymmetrical where there is evidence of exposure to asymmetrical occupational noise.
- Clear direction that Hearing Protection Device (HPD) use should not be factored into the assessment of whether occupational noise exposure with an employer has met the noise exposure threshold (NET).
- Updated language around the permanent impairment rating for tinnitus confirming that a standard impairment of rating of 2% is generally used but that rating is not the maximum or "high water mark". In rare cases where a worker suffers from severe tinnitus, the permanent impairment rating can be increased further.

Overall concerns with draft operational policy 16-01-04

a. AMA Guide must only be used for NEL ratings

The draft policy on NIHL incorrectly applies the AMA Guide to the adjudication of legal issues that are separate and distinct from the determination of Non-Economic Loss (NEL) benefits.

The draft NIHL policy improperly uses an interpretation of the AMA Guide as the required standard for adjudicating whether a worker has hearing loss due to occupational noise, and as a required pre-condition for adjudicating whether a worker is entitled to health care benefits for

their occupational hearing loss and whether a worker's tinnitus condition is linked to their occupational noise exposures.

Section 47(2) of the *WSIA* and section 18(1) of *Regulation 175/98* direct use of the "American Medical Association Guides to the Evaluation of Permanent Impairment (third edition revised) as it read on January 14, 1991" (the "AMA Guide") when evaluating a worker's permanent impairment for a NEL award.

Regulation 175/98 is clear that the AMA Guide is the prescribed rating schedule for the determination of NEL benefits under the *WSIA*. Specifically, section 18(1) states that the AMA Guide is the prescribed rating schedule "**for the purposes of subsection 47(2) of the Act**".²

Section 46 and 47 of the *WSIA*, which describe how permanent impairments are rated and NEL benefits are determined, are set out in PART VI of the *Act* (entitled "INSURED PAYMENTS"). This part of the *Act* sets out the legislative authority for compensation payment amounts.

In contrast, the sections of the *WSIA* that govern determinations regarding initial entitlement and health care benefits are set out in different parts of the *Act*.

Section 15 (2) states that workers who suffer from a work-related occupational disease should be treated "as if [it] were a personal injury by accident and as if the impairment were the happening of the accident."³ Section 15 is included in PART III of the *WSIA* (entitled "INSURANCE PLAN"). This Part of the *WSIA* focusses on topics related to initial entitlement and the determination of whether an injury is covered under the legislation.

Section 33(1) of the *WSIA* states that a worker who sustains an injury is "entitled to such health care as may be necessary, appropriate and sufficient as a result of the injury".⁴ The *WSIA* is clear that the test for entitlement is whether the health care is "necessary, appropriate and sufficient as a result of the injury". Section 33 is included in Part IV of the *WSIA* (entitled "HEALTH CARE").

² **Rating Schedule**

18. (1) The American Medical Association Guides to the Evaluation of Permanent Impairment (third edition revised) as it read on January 14, 1991 is prescribed as the rating schedule for the purposes of subsection 47 (2) of the Act. O. Reg. 175/98, s. 18 (1).

³ **Occupational diseases**

15 (1) This section applies if a worker suffers from and is impaired by an occupational disease that occurs due to the nature of one or more employments in which the worker was engaged.

Entitlement to benefits

(2) The worker is entitled to benefits under the insurance plan as if the disease were a personal injury by accident and as if the impairment were the happening of the accident.

⁴ **Entitlement to health care**

33 (1) A worker who sustains an injury is entitled to such health care as may be necessary, appropriate and sufficient as a result of the injury and is entitled to make the initial choice of health professional for the purposes of this section.

When the above-cited sections of the *WSIA* and *Regulation 175/98* are reviewed using the modern principle of statutory interpretation⁵ (including a consideration of the grouping of provisions under headings⁶), the resulting statutory analysis does not support an application of the AMA Guide to the adjudication of initial entitlement or to the adjudication of entitlement to health care benefits.

This is because neither section 15(2) nor Part III of the *WSIA* mention the AMA Guide or direct consideration of the AMA Guide when adjudicating entitlement under that Part of the *Act*. In addition, neither section 33 nor Part IV of the *WSIA* include a reference to the AMA Guide or require consideration of the AMA Guide when adjudicating health care benefits.

Similarly, there is no requirement in the language of either of those parts (or sections) of the *WSIA* that a workplace injury must cause a “permanent impairment” or a “rateable permanent impairment” under the AMA Guide for a worker to be entitled to benefits or health care under the *WSIA*.

It is the OWA’s view that the draft NIHL policy applies an incorrect legal standard to the adjudication of initial entitlement. There is no legal authorization in the *WSIA* or in *WSIAT* case law to use the AMA Guide as the standard for adjudication of whether a worker has hearing loss due to occupational noise, or as a precondition for the adjudication of whether a worker is entitled to health care benefits for their occupational hearing loss or whether a worker’s tinnitus condition is linked to their occupational noise exposures.

By requiring evidence of disabling hearing loss to the level of a rateable permanent impairment under the AMA Guide, the draft policy sets a higher bar for entitlement than is required by the legislation.

Based on the above analysis, the draft policy includes a standard for initial entitlement that is inconsistent with, and not authorized by, the *WSIA*. If this standard is included in the final approved version of the updated NIHL policy, it is likely to be subject to successful section 126 arguments and challenges.

⁵ The *WSIAT* has consistently followed the courts in adopting the modern principle of statutory interpretation. (See, for example, *Decision No. 1736/21*, 2023 *ONWSIAT* 1422 at paras. 26 to 29, or *Decision No. 1362/06I*, 2006 *ONWSIAT* 2253, which adopted the modern principle of interpretation, with reference to *Rizzo & Rizzo Shoes Ltd. (Re)*, 1998 CanLII 837 (SCC), [1998] 1 SCR 27. See also *Decision No. 240/22I*.) This principle requires that the words of an Act be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme and object of the Act, and the intention of Parliament or the Legislature. Ruth Sullivan, *Sullivan on the Construction of Statutes*, 7th ed, Chapter 2. (Markham: LexisNexus, June 2022)

⁶ In the 7th edition of “*Sullivan on the Construction of Statutes*”, Ruth Sullivan specifically discussed the components and structure of statutes in Chapter 14. (*Sullivan on Construction of Statutes*, CHAPTER 14 The Components of Legislation). At § 14.05 Headings, [3] **Grouping of provisions under headings**: She notes that there is a presumption that provisions are related to each other if they are grouped together under a heading.⁶ In particular, she writes that there is often a shared subject or object or a common feature to the provisions. In contrast, if provisions are placed under different headings, it suggests the absence of a relationship.

b. WSIB policy must reflect advances in science and the purposes of the *WSIA*

The WSIB has an obligation under section 161(3) of the *WSIA* to monitor developments and ensure “generally accepted advances in health sciences and related disciplines” are reflected in its policies in a way that is consistent with the purposes of the *Act*.

The WSIB also has an obligation, under section 161(2) of the *WSIA*, to ensure that the purposes of the *Act* are achieved when considering proposed changes in benefits, services, programs and policies.⁷

The WSIAT has consistently agreed that the *WSIA* is remedial legislation and should always be given such fair, large and liberal interpretation as best ensures the attainment of its objects.⁸ The *WSIA* should be given a broad liberal interpretation, which allows compensation to be provided to as many workers in as many circumstances as the legislative scheme will reasonably permit. This is consistent with the purpose of the *Act*, which is to provide workers with a broad range of compensation, including instances when tort law would leave them without a remedy.⁹

⁷ **Duties of the Board**

161 (1) The Board shall administer the insurance plan and shall perform such other duties as it is assigned under this Act and any other Act. 2011, c. 11, s. 24 (1).

Duty to evaluate proposed changes

(2) The Board shall evaluate the consequences of any proposed change in benefits, services, programs and policies to ensure that the purposes of this Act are achieved. 1997, c. 16, Sched. A, s. 161 (2).

Duty to monitor

161 (3) The Board shall monitor developments in the understanding of the relationship between workplace insurance and injury and occupational disease,

(a) so that generally accepted advances in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this Act; and

(b) in order to improve the efficiency and effectiveness of the insurance plan. 2011, c. 11, s. 24 (2).

⁸ WSIAT *Decision No. 83/19*, [2019] O.W.S.I.A.T.D. No. 1104, 2019 ONWSIAT 1156.

⁹ Butterworth’s Workers Compensation Service in Ontario (“Butterworth’s”) notes that “This has been stated in countless Tribunal decisions, but see for example WSIAT *Decision No. 240/22I*, [\[2023\] O.W.S.I.A.T.D. No. 34](#), [2023 ONWSIAT 34](#).”

Paragraph § 3.6.1 in Chapter 3 of Butterworth’s specifically states:

In WSIAT *Decision No. 83/19*, the Vice-Chair wrote:

The Tribunal also applies section 64 of the *Legislation Act, 2006*, which provides that an Act shall be interpreted as being remedial and shall be given such fair, large and liberal interpretation as best ensures the attainment of its objects. With regard to the large and liberal interpretation that applies to workers’ compensation legislation, I note the findings of the Alberta Court of Appeal in *Shuchuk v. Alberta (Workers’ Compensation Board)*, [2007 ABCA 213](#) (CanLII):

Generally, the Act is to be given a broad liberal interpretation, which allows compensation to be provided to as many workers in as many circumstances as the legislative scheme will reasonably permit. This is consistent with the purpose of the Act, which is to provide workers with a broad range of compensation, including instances when tort law would leave them without a remedy: *Buckley*, at para. 52. Absent clear legislative direction to the contrary, the workers’ compensation scheme should, at a minimum, provide compensation to those situations that

The proposal in the draft policy to expand the use of the AMA Guide to the determination of initial entitlement does not match the WSIB's statutory obligations to monitor and apply advances in science or to ensure that policy changes align with the purposes of the Act.

As it was printed in 1991, the AMA Guide, 3rd Ed revised, generally reflect scientific thinking and literature from 35 years ago or more. The requirements of the 1991 AMA Guide for a permanent impairment rating are not a substitute for, or a reflection of, the current medical knowledge or scientific literature.

Several sections¹⁰ of the draft policy propose to effectively codify the outdated scientific standards set in the 1991 AMA Guide into a 2026 policy. In our view, this approach is both legally and scientifically unsupportable.

In light of sections 161(2) and 161(3) of the WSIA, WSIB policy must accurately reflect current scientific knowledge and must implement widely accepted information that is available in the modern health science literature.

c. Legislative provisions and statutory purpose must prevail over administrative considerations

The consultation note provided with the draft NIHL policy indicates that factors beyond the legislative requirements and current scientific literature were considered in the recent policy review.

In particular, the consultation note indicates that the following were also considered:

- Increasing volume of NIHL claims, with significant growth occurring from 2020 onwards,
- Internal WSIB discussions about “operational and adjudicative challenges”
- The opportunity to “streamline decision making” to address “increasing claim volumes”, and
- Recognition of differences in “administrative practices” across Canadian jurisdictions

While these are existing conditions or pieces of information, the WSIB is required to ensure that the draft policy correctly applies the relevant legislative provisions, the appropriate legal tests and considers recent scientific developments within the correct legal framework.

Ease of adjudication and efficiency of claims processing are not appropriate considerations when determining the level of hearing loss to be recognized as an occupational disease under an updated policy. The increasing need for hearing loss health care and the increasing costs to the system must not be included in the assessment of the standard for claims for NIHL are adjudicated.

would result in compensation under traditional tort law. Any interpretation of the legislative and policy regime that does not give effect to this principle is unreasonable. [footnotes omitted]

¹⁰ Our specific concerns will be reviewed in detail in the next section below.

Decisions regarding entitlement to benefits are not “administrative practices”: they are the adjudication of substantive rights granted by statute. The legal standard for entitlement is not something that can be altered to align practices with other jurisdictions, to “streamline decision-making” or to respond to “increasing claim volumes”.

The draft policy must reflect the appropriate legal tests for initial entitlement. Efficiency and timeliness are not sufficient justifications to depart from the required standard.

III. Specific Feedback

Separate diagnostic criteria are required for initial entitlement and permanent impairment

As discussed above, the entitlement criteria for recognition of noise induced hearing loss (NIHL) and the entitlement criteria for a permanent impairment for NIHL require the application of different legal tests.

The legislative provisions which address those determinations are set out in different sections of the Act. There is no legal authority to “harmonize” the required average level of hearing loss for initial entitlement to the higher values required by the AMA Guide for a “rateable” permanent impairment. Indeed, the legislation requires that they be different.

Initial entitlement should be adjudicated by comparing a worker’s hearing loss to the standard hearing loss criteria available in current scientific literature. Decisions about initial entitlement must also be adjudicated using the significant contributing factor test and based on the merits and justice of the case.

The WSIB should remove the “harmonized” requirement in the draft policy that a worker have a hearing loss of 26.25dB in each ear (which is effectively a “rateable permanent impairment” under the AMA Guide) to meet the diagnostic requirement for initial entitlement. The hearing loss level required for initial entitlement should be set independently from the level required for a permanent impairment rating.

Once returned to the policy, the separate (and appropriate) diagnostic criteria for initial entitlement can then be used as a pre-condition an assessment of entitlement to health care under the terms of section 33.

Recommendations: Amend the draft policy to restore separate entitlement criteria for initial recognition of noise-induced hearing loss that align with scientific literature and the appropriate legal test.

The definition of “hearing loss” should include the hearing threshold level of 4 kHz (4000 Hz)

In accordance with sections 161(2) and 161(3) of the *WSIA*, an updated NIHL policy should establish criteria for initial entitlement based on accepted scientific literature regarding hearing loss and be aligned with the purposes of the *Act*.

Scientific literature confirms that hearing levels at 4,000 Hz are essential for understanding speech and that noise induced hearing loss affects the 4000 Hz and 6000 Hz frequencies first.

- Smoorenburg (1992)¹¹ studied the ability to understand speech when workers were exposed to noise in factories. The speech reception threshold (SRT) at which 50% of speech in noise could be understood was measured. The best predictor of the speech reception threshold was the average of the hearing threshold levels at 2000 Hz and 4000 Hz.
- Wilson (2011)¹² tested military veterans for word recognition with background noise. Speech recognition was significantly better by the average of the hearing threshold levels at 1000, 2000, and 4000 Hz than the average at 500, 1000, and 2000 Hz.
- Hong et al. (2013)¹³ showed that NIHL typically affects the 4000 and 6000 Hz frequency first, and the prevalence of hearing loss at these two noise-sensitive frequencies far exceeds hearing loss at lower frequencies. As higher frequency hearing loss progresses, hearing loss at lower frequencies follows.

Recent literature also confirms that the number of patients with noise induced hearing loss (NIHL) is underestimated when the hearing threshold level at 4 kHz is not used in the calculations of average hearing loss.

- Moore et al. (2022)¹⁴ made recommendations for the diagnosis and quantification of NIHL in a medicolegal setting. This study compared the average hearing loss using the values at 1000, 2000, and 3000 Hz, to the calculation of the average loss with the values at 1000, 2000, and 4000 Hz. This study found that by using 1000, 2000, and 3000 Hz, the number of individuals with NIHL was underestimated.

It is also notable that the World Health Organization (WHO) determines hearing loss by averaging the audiometric ISO values at 0.5, 1, 2, and **4 kHz**, while the draft NIHL policy determines hearing loss by averaging the levels at 0.5, 1, 2, and **3 kHz**.

¹¹ Smoorenburg G. Speech reception in quiet and in noisy conditions by individuals with noise-induced hearing loss in relation to their tone audiogram. *J. Acoust. Soc. Am.* 1992; 91: 421-437.

¹² Wilson R. Clinical experience with the words-in-noise test on 3430 veterans: Comparisons with pure-tone thresholds and word recognition in quiet.

¹³ Hong O, Kerr M, Poling G, Dhar S. Understanding and preventing noise-induced hearing loss. *Disease-a-Month* 2013; 59: 110-118.

¹⁴ Moore B, Lowe D, Cox G. Guidelines for Diagnosing and Quantifying Noise –Induced Hearing Loss. *Trends in Hearing* 2022; 26: 1-21.

As noted above, although the AMA Guide (3rd ed revised, 1991)¹⁵ requires that permanent impairment is determined based on hearing levels at (a) 500 Hz; (b) 1,000 Hz; (c) 2,000 Hz; and (d) 3,000 Hz, it is inappropriate to apply the AMA Guide criteria to the determination of whether a worker has “hearing loss” for the purpose of initial entitlement adjudication under section 15(1) of the *WSIA*.

Instead, the policy criteria for initial entitlement should be based on current scientific literature and should measure hearing loss based on the audiometric frequencies that allow patients to understand speech. Entitlement criteria must be established in a manner that ensures that the number of workers with occupational NIHL is not underestimated and that workers with difficulty understanding speech are properly captured and compensated.

Recommendation: For the purposes of determining initial entitlement under draft policy 16-01-04, the definition of hearing loss should include the hearing threshold level at 4000 Hz. The draft NIHL policy should parallel the WHO’s determination of hearing loss and average the audiometric ISO values at 500, 1000, 2000, and 4000Hz.

The hearing threshold for initial entitlement should be set at an average loss of 20 dB or 22.5dB

Hearing Loss (which includes NIHL) is frequently graded in the scientific literature beginning at the threshold of an average loss of 20-25 dB.

- Humes (2019)¹⁶ cited the WHO-proposed grades of hearing impairment at Table 1. The WHO-proposed grade system was developed by a 21-member Expert Group on Hearing Loss convened as a part of the WHO’s Global Burden of Disease project ([Stevens et al. 2013](#)). This proposal identified a category called mild hearing loss at 20-34 dB.
 - Table 1 (below) is taken from Humes L, The World Health Organization's hearing impairment grading system: an evaluation for unaided communication in age-related hearing loss. *International Journal of Audiology* 2019 Jan; page 24. This diagram also lists the symptoms of hearing loss at each grade.

¹⁵ AMA Guide, page 175 - 9.1b - Objective Techniques To Determine Hearing Impairment

¹⁶ Humes LE. The World Health Organization's hearing-impairment grading system: an evaluation for unaided communication in age-related hearing loss. *Int J Audiol*. 2019 Jan;58(1):12-20. doi: 10.1080/14992027.2018.1518598.

Table 1.

WHO-proposed grades of hearing-impairment and presumed functional consequences.

Grade and corresponding audiometric ISO value ^a	Performance in Quiet and Noise ^b
0-No impairment, better than 20 dB	No or very slight hearing problems.
1-Mild 20–34 dB	No problems in quiet but may have real difficulty following conversation in noise.
2-Moderate 35–49 dB	May have difficulty in quiet hearing a normal voice and has difficulty with conversation in noise.
3-Moderately severe 50–64 dB	Needs loud speech to hear in quiet and has great difficulty in noise.
4-Severe, 65–79 dB	In quiet, can hear loud speech directly in one's ear, and, in noise, has very great difficulty.
5-Profound impairment, 80–94 dB	Unable to hear and understand even a shouted voice whether in quiet or noise.

^aThe audiometric dB HL ISO values are averages of values at 500, 1000, 2000, 4000 Hz for the better ear.

^bFrom [Stevens et al. \(2013\)](#).

- A similar classification of hearing loss was cited by Themann and Masterson (2019)¹⁷. They identified hearing loss as "mild (20–34 dB), moderate (35–49 dB), moderately severe (50–64 dB), severe (65–79 dB), profound (80–94 dB) and complete (≥ 95 dB) levels of hearing impairment".
- Chen et al. (2020)¹⁸ listed the four grades of hearing impairment classified by the WHO as:
 - 1) slight (audiometric ISO value 20-40 dB),
 - 2) moderate (41-60 dB),
 - 3) severe (61-80 dB),
 - 4) profound (81 dB or greater).
- Squire et al. (2019)¹⁹ stated that air conduction and bone conduction thresholds that fall below 25 dB for adults are classed as some degree of hearing impairment. Slight hearing loss occurs between 15-25 dB.

A review of current scientific literature does not support an increase in the hearing level threshold for initial entitlement from the current average loss of 22.5 to the proposed average loss of 26.25 in each ear.

As noted earlier in this submission, the AMA Guide (3rd Ed revised) was printed in 1991 and reflected scientific thinking and literature from 35 or more years ago. The AMA Guide is only

¹⁷ Themann and Masterson (2019), under section "V. IMPACT OF WORKPLACE NOISE AND HEARING LOSS", "D. Quality of life", in the second last paragraph before Table IV. Themann, C. L. and E. A. Masterson (2019). ["Occupational noise exposure: A review of its effects, epidemiology, and impact with recommendations for reducing its burden."](#) J Acoust Soc Am 146(5): 3879.

¹⁸ Chen K, Su S, Chen K, et al. An overview of occupational noise-induced hearing loss among workers: epidemiology, pathogenesis, and preventive measures. Environmental Health and Preventive Medicine (2020) 25:65: <https://doi.org/10.1186/s12199-020-00906-0>

¹⁹ Squire L, Colombo B, McKinney S. Rapid Audiogram Interpretation. Published 2019 by Plural Publishing, Inc. San Diego, CA.

prescribed for the evaluation of permanent impairment for the calculation of a NEL award. It is not prescribed for, or authorized by the *Act*, as the standard for initial entitlement under section 15(2).

Natarajan et al. (2023)²⁰ notes that the WHO grades of hearing loss from the 1991 working group on prevention of deafness and hearing impairment classified slight hearing loss to begin at 26 dB of loss. The 1991 WHO grades of hearing loss explain the basis for the 1991 AMA Guide requirement of 26.25 dB loss.

Even at that time, however, comments were added by the 1991 working group that “20 dB also recommended. People with 15–20 dB levels may have hearing problems. People with unilateral hearing loss may have problems even if the better ear is normal.”

As the current WHO-proposed-grade system identifies mild hearing loss as starting at 20dB, there is no scientific justification for setting the definition of hearing loss in the draft policy at 26.25dB in both ears. In our view, the proposed policy change is especially unfair because it would raise the threshold for entitlement to a higher level of loss while continuing to exclude testing at the hearing threshold level of 4000Hz.

Recommendation: For the purpose of determining initial entitlement to NIHL under policy 16-01-05, the average hearing threshold level for entitlement should be set at an average loss of 20 dB or at least remain at an average loss of 22.5 dB.

Audiogram patterns do not consistently provide reliable evidence about the cause of hearing loss

On pages 4 to 5 of the draft policy, it states that the pattern of an audiogram “may be relevant” when determining whether a worker’s hearing loss is consistent with hearing loss due to noise exposure. The draft policy then discusses how the classic “notch” or “dip” pattern is consistent with NIHL while other patterns are “not consistent with NIHL”.

Current scientific literature indicates that an audiogram pattern without a notch is not reliable evidence that the hearing loss is primarily caused by something other than noise exposure. An audiogram pattern without a notch is also not reliable evidence that chronic noise exposure did not make a significant contribution to the worker’s hearing loss.

This is because chronic noise exposure can lead to flattening or absence of a notch. Other causes of hearing loss can also hide the notch.

Moreover, the evidence in the scientific literature indicates that there is a lack of a definition of what a notch is. Studies have indicated that specialists often do not agree on whether a notch

²⁰ Natarajan N, Batts S, Stankovic K. Noise-induced Hearing Loss. *Journal of Clinical Medicine* 2023, 2(6):2347. <https://doi.org/10.3390/jcm12062347>.

is present or not. In one study, as an example, the same specialist reading the same audiogram twice could not even accurately reproduce his/her decision on whether the notch was present.

For these reasons, current scientific literature does not support the language in the draft policy regarding a “notch”.

It is the OWA’s view that it would be inappropriate for decision-makers (who are not specialists) to determine on their own whether a worker’s hearing loss is consistent with NIHL based substantially on an audiogram pattern. This approach would also not meet the required legal test for causation.

Where a worker’s hearing loss meets the minimum average hearing loss set out in the literature and the worker’s occupational noise exposure meets the NET, the pattern of the audiogram does not provide reliable evidence that a worker’s hearing loss is inconsistent with occupational noise exposure.

Recommendation: Remove the language that can be interpreted as giving decision-makers the ability to deny entitlement to a worker solely based on an audiogram without a classic “notch” or “dip”.

The policy must recognize the harms of occupational noise at and above 85dB

One of the criteria for entitlement in the draft NIHL policy is a noise-exposure threshold (NET) of 90 dBA for 5 years (or its equivalent).

The draft policy indicates that occupational exposure to noise that meets or exceeds the NET will generally be “considered sufficient to have significantly contributed to the development of NIHL”.

Section 2 (4) of Ontario’s *Occupational Health and Safety Act*, Regulation 381/15: Noise²¹, requires employers to

“...ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, $L_{ex,8}$ ”.

This Ontario noise regulation already defines 85dB over 8 hours as hazardous noise.

Ontario’s 85 dBA standard is consistent with the thresholds for hazardous, long-term noise exposure established for other Canadian jurisdictions²² and by other scientific bodies, such as

²¹ [O. Reg. 381/15 NOISE | ontario.ca \(https://www.ontario.ca/laws/regulation/150381\)](https://www.ontario.ca/laws/regulation/150381)

²² [CCOHS: Noise - Occupational Exposure Limits in Canada \(https://www.ccohs.ca/oshanswers/phys_agents/noise/exposure_can.html\)](https://www.ccohs.ca/oshanswers/phys_agents/noise/exposure_can.html)

NIOSH²³ and OSHA²⁴. Workers who are exposed to noise at or above 85 dBA are at risk of developing significant hearing loss over their working lifetime

As the decibel (dB) scale is a logarithmic scale²⁵ (not linear scale) used to measure sound intensity, power, or voltage, occupational noise exposure at 90 dB is substantially louder and more harmful than occupational noise exposure at 85 dB.

In order to align with the Ontario noise regulation and to acknowledge the harms of exposure at 85 dB, the draft NIHL policy should be reframed so the NET is based on noise exposure at 85 dB or its equivalent.

Recommendation: The noise exposure threshold (NET) in the draft policy should be set based on noise exposure of 85 dBA or its equivalent.

Air conduction values should be used for noise-induced sensorineural hearing loss without a conductive component

The draft policy does not clearly state whether air or bone conduction values will be used when assessing noise induced sensorineural hearing loss.

The policy states at page 4 that only bone conduction values will be used to determine the sensorineural component of mixed hearing loss. This is clear in the text of the policy.

It can be inferred from the draft policy language that air conduction values would be used for sensorineural hearing loss, but this is not well-defined.

The use of air conduction values would match the WSIAT discussion papers regarding hearing loss and recent WSIAT case law discussing this issue. The Vice-Chair in [*WSIAT Decision No. 353/21*](#), as an example, confirmed that the use of air conduction values was supported by current scientific literature and WSIAT jurisprudence.

Recommendation: Amend the draft policy to clearly state that air conduction values are used to determine the level of hearing loss in NIHL claims that don't have a diagnosed conductive component.

²³ [Noise-Induced Hearing Loss | Noise and Hearing Loss | CDC](https://www.cdc.gov/niosh/noise/about/noise.html)
(<https://www.cdc.gov/niosh/noise/about/noise.html>)

²⁴ [Occupational Noise Exposure - Overview | Occupational Safety and Health Administration](https://www.osha.gov/noise)
(<https://www.osha.gov/noise>)

²⁵ [Decibel Scale - an overview | ScienceDirect Topics](https://www.sciencedirect.com/topics/engineering/decibel-scale) (<https://www.sciencedirect.com/topics/engineering/decibel-scale>)

Initial entitlement for NIHL should be based on exposure to harmful amounts of noise and not denied based solely on age

The draft policy includes a sub-section under “determining whether the NIHL is due to occupational noise exposure” about “considering non-work-related factors”.

The subsection indicates that decision-maker are required to consider if “age-related hearing loss” may have overwhelmed the occupational noise exposure.

This sub-section of the policy grants decision-makers broad discretion to deny entitlement to older workers, simply based on their age. It is likely to lead to the denial of a substantial number of claims from workers without any specific evidentiary or scientific basis.

Scientific literature indicates that previous noise exposure has significant, deleterious effects on the nature and progression of age-related hearing loss. Specifically, studies have shown that ears with noise-exposure histories age differently from those without early noise exposure.²⁶

The WSIB’s consultation note specifically references, Themann, C. L. and E. A. Masterson (2019). "Occupational noise exposure: A review of its effects, epidemiology, and impact with recommendations for reducing its burden." J Acoust Soc Am 146(5): 3879. In addition to the findings which support not using corrective factors for presbycusis, the authors noted studies that found that hearing loss accumulates most quickly in the first 10-15 years of exposure and that noise exposure early in life increases the risk of age-related hearing loss later in life. The authors concluded:

Allocating the relative contribution of noise and aging to an individual's hearing loss is not possible.

As it is currently written, this section of the draft policy appears to be applying an incorrect legal test to the determination of initial entitlement.

The appropriate causation test for initial entitlement in occupational disease claims under the WSIA is the “significant contributing factor” test. The workplace exposures need only to have made a significant contribution²⁷ to the development of the worker’s occupational disease, and do not need to be the sole or most significant contributing factor.²⁸

Instead of considering the significant contributing factor test and the “thin skull” principle, this aspect of the draft policy appears to authorize decision-makers to apply the “crumbling skull” doctrine without any clear or reliable evidence indicating that the worker would have suffered hearing loss absent their occupational exposure to hazardous levels of noise.

²⁶ See, for example, Acceleration of Age-Related Hearing Loss by Early Noise Exposure: Evidence of a Misspent Youth, Sharon G. Kujawa, M. Charles Liberman, Journal of Neuroscience 15 February 2006, 26 (7) 2115-2123; DOI: 10.1523/JNEUROSCI.4985-05.2006

²⁷ The contribution must be outside the *de minimis* range. It must not be “trifling” or “merely speculative”.

²⁸ See, for example, *Decision No. 1645/99R*, *Decision No. 228/02R* and *Decision No. 331/89*.

Moreover, this section on the draft policy (on page 6) does not match the WSIB's own consultation note, which indicates that a "fixed" approach to age "risks overstating the role of age and understating the potential contribution of occupational noise exposure".

In our view, it is not enough for the draft policy to cite the significant contribution test on page 2. It must also apply it in practice throughout.

Recommendation: Remove any consideration of "age-related hearing loss" for claims with occupational exposure to noise that meets or exceeds the NET as that level of hazardous noise is "considered sufficient to have significantly contributed to the development of NIHL".

WSIB hearing assessment form must not be set as a requirement for adjudication

Page 3 of the draft NIHL policy states that hearing assessments not submitted using the WSIB's standardized form "may be acceptable" if they contain the same required information.

Where a hearing assessment is provided which includes the required information and is completed in accordance with the applicable practice standards, the WSIB should always accept the assessment.

With the current wording, the use of the WSIB's standardized form is likely to become a fixed requirement as front-line decision makers can choose to turn away assessments simply because they are not recorded on a standard form. This will cause unnecessary administrative delays in decision making and place an unreasonable burden on workers and qualified health care professionals.

To ensure that hearing assessments are only deemed unacceptable when there are true gaps in the required information or an assessment that does not comply with practice standards, the current wording must be changed.

Recommendation: Amend the text on page 3 (last part of paragraph 3) from "may be acceptable" to "will be accepted."

Employer noise surveys are not inherently reliable

The draft policy currently directs WSIB decision-makers to treat employer noise surveys as "reliable and reflective of the worker's actual exposures" and "given greater weight".

In the last paragraph of page 6 of the draft policy, workplace-specific noise surveys conducted by the employer are deemed reliable and given the same status as a noise survey done by the provincial government.

It is the OWA's experience that workplace noise surveys conducted by the employer are not inherently reliable and are not equivalent to those done by an independent, expert entity like

the provincial government. Employers are interested parties and often lack the expertise to carry out accurate measurements.

Employers have an inherent interest in documenting lower noise exposure levels at their workplaces. Employers want to ensure recordings stay under *OHS*A hazardous noise levels and are not used to support WSIB claims. As such, they may place a noise recording device away from the loudest areas of a facility or may conduct monitoring under atypical conditions. Noise surveys are not usually done at the exact location where a worker was employed or near active parts in a workplace.

In other circumstances, employers are small entities who may not test for hazardous noise properly. They may not use an external microphone or a professional, properly calibrated noise dosimeter that meets professional standards.

In our experience, employers often submit noise monitoring to the WSIB that they indicate is equivalent but has been done at other locations or in completely different working conditions.

For these reasons, it is our view that it is inappropriate to prioritize employer evidence in this manner through policy, or to deem employer noise surveys to be inherently reliable evidence.

The current approach is especially unreasonable as the policy does not direct decision-makers to consider direct evidence from the worker about their work history and occupational noise exposure.

Recommendation: Remove the text of the draft NIHL policy that prioritizes employer noise evidence over a worker's direct testimony and deems employer noise surveys to be equivalent to surveys done by the provincial government.

Hearing loss can continue after noise exposure ends

Page 9 of the draft NIHL policy includes a firm statement that any change in hearing impairment following occupational noise exposure is to be considered not work-related. It specifically states:

For clarity, if a worker does not remain in or return to occupational noise exposure, any subsequent change in hearing impairment is not considered work-related and is not eligible for additional NEL entitlement.

A recent WSIAT decision reviewed the scientific basis underlying this type of approach.

In *WSIAT Decision No. 1896/19*²⁹, the worker's representative had provided a report from Dr. V. Lin, an otolaryngologist, who cited recent research which challenged the view that once a worker leaves a noisy environment, any deterioration in the worker's hearing is not due to the

²⁹ [2025 ONWSIAT 849 \(CanLII\) | Decision No. 1896/19 | CanLII](https://www.canlii.org/en/on/onwsiat/doc/2025/2025onwsiat849/2025onwsiat849.html)
(<https://www.canlii.org/en/on/onwsiat/doc/2025/2025onwsiat849/2025onwsiat849.html>)

worker's NIHL. In light of this report, the Vice-Chair referred this appeal to a WSIAT medical assessor, Dr. Joseph M. Chen. Dr. Chen's report discusses "hidden hearing loss" attributable to damage to the inner ear pathology.

Dr. Chen did not agree with the propositions that hair cell loss and NIHL "stabilize" when exposure to noise ends. He indicated that: "There is emerging evidence countering the idea that noise-induced hearing loss (NIHL) will not progress once the noise exposure stops. Stabilization may be true in the context of temporary threshold shift (TTS) from short duration exposure or intermittent exposure. There is data to show that at-risk subjects and significant acoustic injuries may have a continuous and delayed effects on the inner ear."

In addition, the Leroux and Pinsonnault-Skvarenina paper cited in the WSIB's consultation note also states that,

It is therefore conceivable that ending exposure to noise does not guarantee that the underlying physiopathologic processes in the progression of hearing loss (as observed among retired workers) will cease.

Recommendation: As there is growing scientific evidence that challenges the above statement from page 9 of the draft policy, the WSIB should substitute that statement with one that is less definitive, that reflects the evidence that hearing loss can continue to deteriorate after noise exposure ends, and that leaves room for an individual assessment of this issue based on the available evidence and the merits and justice of each case.

The hearing threshold for a permanent impairment should remain at the threshold set out in the current NIHL policy

The current NIHL policy confirms that workers who have hearing loss that is sufficient to result in a permanent impairment benefit as recognized by the AMA Guide (at or above 26.25/26.25dB or 25/32.5dB in the better/worse ear, respectively) are referred for a Non-Economic Loss (NEL) determination.

The AMA Guide (3rd edition revised) has not changed since the development of the 1992 NIHL policy. As such, workers with hearing loss at or above 26.25dB in both ears or 25dB in the better ear and 32.5dB in the worse ear continue to have a loss that is sufficient to be awarded a NEL benefit under the terms of the AMA Guide. These values correspond to the minimum level of binaural impairment that will result in a 1% NEL award.³⁰

³⁰ AMA Guide, 3rd ed revised, page 175, Table 2 rates a DSHL of 105 to be 1.9% monaural hearing impairment. The DSHL of 105 divided by the 4 frequencies which are tested results in an average loss of 26.25. If you have both ears at DSHL of table 3 provides a binaural impairment of 1.9%. Using table 4, the 1.9% binaural impairment is converted to a 1% whole person rating. Similarly, using tables 2 and 3, a DSHL of 130 (worse ear) and a DSHL of 100 (better ear) convert to a 1.9% binaural impairment that also converts to a 1% whole person rating. A DSHL of 130 corresponds to 32.5 dB loss in the worse ear and DSHL of 100 corresponds to 25 dB loss in the better ear.

As there hasn't been a change in the AMA Guide and section 18(1) of *Regulation 175/98* directs the use of the AMA Guide for the evaluation of the degree of a permanent impairment, there is no legal justification for the removal of this alternative entitlement criteria for a permanent impairment award for NIHL. Moreover, as noted above (see Legislative provisions and statutory purpose must prevail over administrative considerations), it is inappropriate to remove this other entitlement benchmark for policy reasons such as administrative efficiency or streamlining decision-making.

Recommendation: The hearing threshold for a Non-Economic Loss award should remain at the two levels of hearing loss set out in the current NIHL policy (at or above 26.25/26.25dB or 25/32.5dB in the better/worse ear, respectively).

Non-covered employment must be considered under the thin skull principle

Page 7 of the draft NIHL policy directs WSIB staff to “exclude” non-covered employment periods when determining whether a worker’s employment exposure was sufficient to have significantly contributed to the development of NIHL.

It is our view that this direction is incomplete and does not correctly reflect the thin skull principle.

The WSIAT applies the “Thin Skull Doctrine,” which is a common law principle, to the determination of the compensability of the consequences of a work injury.

Decision No. 322/17I states this doctrine as follows:

The essence of the "Thin Skull Doctrine", applied to the field of worker's compensation, is that entitlement to benefits is not reduced due to a pre-existing condition which made the worker more vulnerable to injury, where the work accident has made a significant contribution to the resulting injury.

See *Athey v. Leonati* 1996 CanLII 183 (SCC), [1996] 3 S.C.R. 458. See also *Decision Nos. 865/92R* and *915 (1987)*, 1991 CanLII 4815 (ON WSIAT), 7 W.C.A.T.R. at 136.

WSIAT decisions have generally held that exposures outside of Ontario (or non-covered exposures) may render a worker more vulnerable to the development of an occupational disease and, therefore, the thin skull doctrine may apply. Tribunal decisions have applied the thin skull doctrine in these circumstances when there is also evidence of significant exposure in Ontario. (See, for example *Decision Nos. 2973/18, 600/04 and 400/08*)

To assess a claim based on the “thin skull” principle, the draft policy must permit decision-makers to consider, in appropriate circumstances, if non-covered noise exposure made the worker more susceptible to developing occupational NIHL based on the noise exposures in the

covered employment in Ontario. The current language on page 7 of the policy does not permit a decision-maker to assess this factor or determine this issue based on the available evidence.

Recommendation: The language of the section on “Exposure in non-covered employment” should be amended to allow consideration of the “thin skull doctrine” and the merits and justice policy where a worker’s non-covered employment made them more susceptible to the impacts of noise at their covered employment in Ontario.

Apportionment of permanent impairment rating for NIHL is not authorized by the Act

The draft NIHL policy directs WSIB staff to apportion a worker’s permanent impairment rating to remove the contribution of non-covered noise exposure and to “reflect” only the permanent impairment attributable to the occupational exposure to noise in covered employment.

This section of the policy, at page 8, applies **after** the WSIB has determined that the worker’s covered employment has met the legal test for entitlement and the noise exposure from the covered employment has significantly contributed to the development of the worker’s noise-induced hearing loss.

Apportionment of a permanent impairment rating in this circumstance is not legally authorized by the WSIA and should be removed from the draft policy.

Damage to a worker’s ear from non-covered occupational noise exposure is not medically distinguishable from damage caused by covered occupational exposure to hazardous noise. Unless the WSIB is in possession of an audiogram done in between each of the different hazardous noise exposures, there is no way to separate the impact of the different periods of noise exposures on a worker’s hearing. The hazardous noise combines to cause noise-induced hearing loss, which is rated as one indivisible injury.

The WSIAT has already considered and rejected the apportionment of permanent impairment rating. WSIAT case law on chronic obstructive pulmonary disease (COPD) determined that apportionment of a permanent impairment rating is not legally appropriate or authorized by the WSIA. In the case of COPD apportionment, the WSIAT concluded that COPD is not a divisible injury and therefore workers are entitled to their full NEL benefits without reduction (or apportionment). With more than 40 decisions, WSIAT case law stated that the issue was “settled”³¹ and the WSIB’s apportionment of benefits was not permitted.

As hearing loss is also an “indivisible injury”, this section of the draft policy is not authorized by the Act and should be removed.

Recommendation: Remove the entire section called “Exclusion of non-covered exposure in determining permanent impairment” from the draft policy.

³¹ See, for example, WSIAT Decision 911/18 at para. 17.

Entitlement for tinnitus should be recognized in policy after 6 months of symptoms

To meet the obligations under section 161(3) of the *WSIA*, the updated NIHL policy should establish criteria for initial entitlement for tinnitus based on accepted scientific literature and knowledge.

The vast majority of scientific literature, as well as the American and European clinical practice guidelines, state that chronic tinnitus is tinnitus that persists for 6 months or greater.

Some examples include:

- Cima R, Mazurak B, Haider H, et al. A multidisciplinary European guideline for tinnitus: diagnostics, assessment, and treatment. *HNO*. 2019; 67:10-42.
- Dalrymple S, Lewis S, Philman S. Tinnitus: Diagnosis and Management. *Am Fam Physician*. 2021; 103(11):663-671.
- Henry, J. "Measurement" of Tinnitus. *Otol Neurotol*. 2016; 37: e276-e285.;
- Olderog M, Langenbach M, Michel O, et al. Predictors and mechanisms of tinnitus distress- a longitudinal analysis. *Laryngo-Rhino-Otologie*. 2004; 83(1):5-13.
- Tunkel D, Bauer C, Sun G, et al. *Otolaryngology-Head and Neck Surgery*. 2014; 151(2S): S1-S40.
- Vielsmeier V, Stiel R, Kwok P, et al. *Frontiers in Neurology*. 2020; 11:997.
- Wallhausser-Franke E, D'Amelio R, Glauner A, et al. Transition from Acute to Chronic Tinnitus: Predictors for the Development of Chronic Distressing Tinnitus. *Frontiers in Neurology*. 2017; 8:605.

In light of section 161(3) of the *WSIA*, the NIHL policy should align its criteria for entitlement to tinnitus to the generally accepted minimum duration of 6 months set out in the scientific literature and clinical practice guidelines. There is no basis in the scientific literature or the applicable legal test to enforce a minimum duration of 2 years of symptoms for initial entitlement.

Recommendation: Amend the draft policy so the minimum duration of symptoms for entitlement to benefits for tinnitus is 6 months.

Merits and justice should be explicitly referenced in the draft policy

The *WSIA* requires the *WSIB* to make its decisions based on the merits and justice of each case. Section 119(1) of the *WSIA* states:

Principle of decisions

119 (1) The Board shall make its decision based upon the merits and justice of a case and it is not bound by legal precedent.

Although the draft NIHL policy references other important legal concepts and their relevant policies (such as Benefit of the Doubt (11-01-13)), the current draft does not refer to section 119 of the *WSIA* or the Merits and Justice policy (11-01-03).

While the policy gives the impression that there are situations where the WSIB will review the specific merits of a claim, it does not explicitly state that the Merits and Justice policy will apply.

As the WSIB is required to adjudicate each claim that does not meet the NIHL policy criteria based on its individual merits and justice, the draft policy should clearly reference that obligation.

Recommendation: Add a requirement to consider section 119 of the *WSIA* and the Merits and Justice policy (11-01-03).

Cross-references to other relevant policies should be included

The updated policy should also include explicit cross references to other WSIB policies that may apply when a worker has a claim for hearing loss and/or tinnitus.

It is our experience that some WSIB staff do not understand that the current NIHL policy is only relevant to claims stemming from longer term noise exposure. They are not aware that the traumatic hearing loss policy is applicable to hearing loss caused by shorter-term significant noise exposure or other situations (such as a traumatic injury to the ear, trauma to the head, or exposure to an ototoxic drug or chemical).

Similarly, it is our experience that some WSIB staff do not understand that the current tinnitus policy is only applicable when the worker has longer-term noise exposure. When the tinnitus is linked to other causes of hearing loss or other work-related conditions, WSIB staff should be considering the secondary conditions policies.

Recommendation: Update draft policy 16-01-04 to include a clear description of the scope of the policy and to include cross references to the WSIB's Traumatic hearing loss policy (15-04-01) and the Secondary Conditions policies (Resulting from Work-Related Disability/Impairment (15-05-01) and Accidents Resulting from Treatment (15-05-02)).

IV. Conclusion

In our view, the draft NIHL policy is significantly flawed and should not be implemented in its current form.

Our submissions raise a number of concerns with the content of the draft NIHL policy. We have recommended amendments and clarifications to address our concerns.

We encourage the WSIB to take sufficient time to incorporate the feedback provided in this consultation, and to conduct a second round of policy consultations. This will ensure a smooth roll out of a clear, appropriate, scientifically sound and legally correct NIHL policy document.

Thank you for considering our comments and recommendations.

Submitted on behalf of the
OFFICE OF THE WORKER ADVISER,

Prepared by: Laura Vurma, Central Client Services Unit

Cc: Kevin Brown, General Counsel
Umer Sheraz, Director



Ontario Association of Professional Audiology Clinics
Your Hearing Deserves An Audiologist

January 28, 2026

Workplace Safety and Insurance Board (WSIB)

Operational Policy Branch

Attn: Consultation Secretariat

WSIB Place

300 Tartan Drive

London, Ontario N5V 4M9

emailed to: Consultation_Secretariat@wsib.on.ca

Subject: OAPAC Submission regarding Draft Policy: Noise-Induced Hearing Loss (NIHL)

Executive Summary:

The **Ontario Association of Professional Audiology Clinics (OAPAC)** represents the owners of independent audiology clinics across the province. As employers and regulated health professionals, we share the WSIB's commitment to a compensation system that is timely, consistent, and built on the highest standards of evidence.

OAPAC welcomes the review of the Noise-Induced Hearing Loss (NIHL) policy, particularly the modernization of adjudication criteria. However, to ensure the integrity of the NIHL Program and the protection of workers, the policy must clearly distinguish between who may perform **diagnostic data collection**, and who may provide an audiological opinion regarding the **medical-legal determination of entitlement** (i.e. determining hearing loss and consistency with NIHL). We wish to provide an overview why this distinction is essential for the draft policy to fit within the current legal framework which governs healthcare in Ontario and our recommendations for how the WSIB may achieve this clarity in the draft policy.

Our Core Position: The Opinion of a Regulated Health Professional is Required to Provide Evidence of Entitlement:

The draft policy states that the initial entitlement assessment performed by the WSIB requires three pieces of evidence:

1. the worker has hearing loss;
2. the hearing loss is consistent with NIHL; and
3. the NIHL is due to occupational noise exposure.

The draft policy further states that the preferred means of receiving this information is through completion of the Hearing Assessment Form.



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Items 1 and 2 require a complex medical-legal analysis which falls within the exclusive scopes of practice of regulated health professionals, specifically, Audiologists (and Physicians). However, the draft policy does not provide this clarity, which could lead to confusion regarding who should provide the required evidence.

While the draft policy correctly states that a hearing assessment can only be conducted by a “*qualified regulated health professional*”, it does not explicitly state that determining that a hearing assessment fulfills points 1 and 2 above must be the exclusive domain of a regulated Audiologist (or Physician). This distinction is necessary to align the proposed draft policy with the WSIB’s defined terms, the legal requirements of the *Regulated Health Professions Act, 1991* (RHPA), and to ensure adjudicators have legally defensible clinical evidence to support their decisions with respect to entitlement.

For example, the current Hearing Assessment Form¹ itself suggests that a Hearing Instrument Practitioner (HIP) can “sign off” on or provide these critical two pieces of evidence when they are expressly excluded from these definitions.

The potential confusion is further compounded by the draft policy using the terms “*applicable regulatory college*” and “*recognized professional association*” interchangeably to refer to the standards which apply to a hearing assessment, without acknowledging the fundamental legal and functional differences between these entities (which are described in detail below). A regulatory college is a statutory body mandated to protect the public, regulate clinical competence, establish and enforce standards of practice, and provide accountability within a restricted scope of practice. In contrast, a professional association represents the professional interests of its members, is voluntary to join and cannot authorize its members to perform legally restricted acts.

Membership in an association cannot, and should not, be interpreted as equivalent to regulation by a college. This lack of clarity in the language used in the draft policy creates a serious risk that the hearing assessment, audiological analysis, or complex medical-legal analysis required to provide evidence of entitlement may be conflated with non-diagnostic hearing test results (such as an audiogram), thereby undermining the clinical rigor, public protection, and legal defensibility that regulated health professionals bring to the NIHL program.

We also wish to note that using these terms interchangeably appears to be contrary to the WSIB’s own established definitions. For example, the *Workplace Safety and Insurance Act* defines “*health care practitioner*” as a health professional or a social worker, where “*health professional*” means a member of the College of a health profession as defined in the RHPA.² This is further reflected in WSIB’s policy, stated on its website under the section titled “*Becoming a WSIB health care provider*” where it makes clear “**Health care providers must deliver health care services and must be a member of one of Ontario’s health regulatory colleges, as defined in the Regulated Health Professions Act, 1991 (RHPA).**”³

¹ WSIB Hearing Assessment Form online: https://www.wsib.ca/sites/default/files/2025-04/3275a_hearingassessment_02_25_web.pdf

² Workplace Safety and Insurance Act, 1997, S.O. 1997, c. 16, Sched. A

³ Workplace Safety and Insurance Board, “Becoming a WSIB health care provider,” online: <https://www.wsib.ca/en/becoming-wsib-health-care-provider>



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By specifying regulated health professionals in these definitions, the WSIA makes it clear that the standards which ought to apply to a hearing assessment for all purposes of the WSIB, including the draft policy, are those which apply to Audiologists and Physicians. As we explain in detail in the following section, Hearing Instrument Practitioners (HIPs) are not regulated health professionals, and while they have a role in providing hearing health services (such as audiometric testing) they are not able to meet this standard.

The scope of practice of Audiologists is defined in law. The Audiology and Speech-Language Pathology Act, 1991 (ASLPA) clearly states:

*“The practice of audiology is the **assessment of auditory function** and the treatment and prevention of auditory dysfunction to develop, maintain, rehabilitate or augment auditory and communicative functions.”*

These are not just words on a website or a job description; they carry the weight of accountability from a regulatory college to adhere to a strict standard of practice. The College of Audiologists and Speech Language Pathologists of Ontario (CASLPO) establishes the professional standard for a “hearing assessment”, also referred to as an “audiological assessment”. CASLPO’s “Practice Standards for Audiological Assessment: *“...articulates the **minimum expectations** for Ontario audiologists when conducting an audiological assessment of any patient in all practice environments.”*⁴ The cost of non-adherence could result in disciplinary actions that range from practice restrictions to outright loss of licence.

For these reasons, OAPAC believes the WSIB must safeguard the integrity of the NIHL entitlement assessment by clearly reflecting and respecting the distinct scopes of practice of Audiologists and HIPs in its operational policy.

Audiologist and Physician Role:

Audiologists and Physicians are regulated health professionals governed by the College of Audiologists and Speech-Language Pathologists (CASLPO) and the College of Physicians and Surgeons of Ontario (CPSO) respectively. Audiologists and Physicians are the only health professionals authorized to determine whether a worker has hearing loss and whether that hearing loss is consistent with NIHL for the purposes of the WSIB. They are also authorized to prescribe a hearing aid, which many workers will need in connection with NIHL. This comprehensive hearing assessment requires the application of advanced clinical judgment and medical-legal analysis, including differential identification of potential pathology, and interpretation of complex WSIB criteria (e.g., age-related hearing loss considerations, asymmetry analysis).

Audiologists (and Physicians with appropriate training, in accordance with CPSO standards) are authorized to perform comprehensive auditory evaluations, which include audiometric testing as one component. Audiologists can perform audiometric testing themselves, and although unregulated people with appropriate training can also perform some audiometric testing, the higher value of tests performed by

⁴ https://caslpo.com/sites/default/uploads/files/PS_EN_Practice_Standards_for_Audiological_Assessment.pdf



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Audiologists was substantiated in an authoritative discussion paper prepared for the Workplace Safety and Insurance Appeals Tribunal. Dr. John Rutka, Otolaryngologist and a leading and influential NIHL expert stated that:

The formal recording of an individual's hearing forms the basis of the audiogram. For the purposes of compensation, the most reliable audiograms will likely be performed by an audiologist who typically has a masters' degree or doctorate in audiology.⁵

Hearing Instrument Practitioner (HIP) Role:

HIPs are not regulated health professionals under the RHPA. However, HIPs are valued partners in hearing health care and provide audiometric testing for the purpose of dispensing and fitting hearing aids. Still, dispensing a hearing aid requires a prescription issued by an Audiologist (or Physician).

We wish to note that Audiologists also dispense and fit for hearing aids.

Comparative Overview of Scopes:

Feature	Regulated Audiologist	Hearing Instrument Practitioner (HIP)
Primary Role	Audiological assessment including differential diagnostics, prescription, dispensing, rehabilitation	Audiometric testing, dispensing a prescribed hearing aid, technical fitting, follow-up
Prescription Authority	YES (Controlled Act under RHPA)	NO (Must only dispense with a prescription from a regulated health professional)
Regulation	Regulated College (CASLPO) - Statutory Accountability, Mandatory Membership	Professional Association (AHIP) - Voluntary Membership
Education	Minimum master's level degrees (including some with Doctorate degrees), with a requirement to first complete an undergraduate university degree	Hold a college diploma with no requirement to first complete an undergraduate university degree
NIHL Program Role	Assessor & Prescriber	N/A

⁵ John Rutka, *Hearing Loss and Tinnitus*, Medical Discussion Paper prepared for the Workplace Safety and Insurance Appeals Tribunal (February 2003, revised July 2013), Online: <https://wsiat.on.ca/en/MedicalDiscussionPapers/hearingloss.pdf>.



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Recommendations:

The Distinction Between "Hearing Testing" and "Audiological Assessment"

Recommendation 1:

The Hearing Assessment Form must be completed and signed by an Audiologist or Physician.

Rationale: Regulatory Accountability and Scope of Practice

Our recommendation is based on the legal framework governing healthcare in Ontario. The WSIB NIHL entitlement process requires two specific actions that fall outside the scope of a HIP:

A. Determining "Consistency with NIHL"

The draft policy requires a determination that the hearing loss is "consistent with NIHL." As was mentioned above, hearing loss is not a simple calculation; it is a differential diagnostic opinion that requires ruling out other medical causes (e.g., retrocochlear pathology, mixed losses). The determination that hearing loss is consistent with NIHL must be completed exclusively by an Audiologist or Physician, given the complexity, regulatory accountability, and legal significance of the determination and their audiological opinions.

B. The Controlled Act of Prescription

Once the WSIB determines that a worker is entitled to care for NIHL, the most likely intervention will be the provision of a hearing aid. A hearing aid can only be prescribed following a comprehensive audiological assessment by an Audiologist or Physician. Under the RHPA, the prescription of a hearing aid is a controlled act. HIPs are not authorized to perform this controlled act.

HIPs are unregulated technical practitioners who can provide audiograms for the fitting of hearing aids but only based on a prescription provided by an Audiologist or Physician. HIPs do not have the regulatory authority or scope of practice to perform an audiological assessment or provide differential diagnostic opinions for medical-legal purposes and therefore HIPs do not have the expertise to assess for NIHL.



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Adjudication and Clinical Evidence

Recommendation 2:

Amend the policy to clarify that WSIB decision-makers will rely on the clinical findings provided by the regulated health professional (Audiologist or Physician) regarding the nature and degree of hearing loss, provided the report is complete.

Rationale: The quality of clinical findings by Audiologists are the purview of the College

OAPAC is concerned by language in the draft policy stating that the decision-maker will “assess every hearing assessment and audiogram submitted to determine whether the quality of the information is sufficient.” While we respect that the WSIB Adjudicator is the final decision-maker on fulfilling entitlement criteria, they are not clinical experts able to provide an audiological opinion, having not personally assessed regarding whether a worker is experiencing hearing loss or whether that hearing loss is consistent with NIHL.

If a regulated Audiologist submits an assessment that meets the Practice Standards of CASLPO, it should be accepted as valid clinical evidence. We believe WSIB did not intend to suggest that an assessment that meets the Standards of Practice of CASLPO might not meet the standards of WSIB decision makers, but that an assessment that does not meet CASLPO’s standards would be sent back as incomplete information. We suggest this section be rewritten and we suggest revised wording provided below.

Streamline the Hearing Assessment Form for Clarity and Efficiency

Recommendation 3:

Develop a new Audiological Assessment Form in consultation with Audiologists (and Physicians) that can be used by the WSIB for NIHL entitlement applications (or for other hearing related entitlements), which only an Audiologist or Physician can sign.

Rationale: The current Hearing Assessment Form is confusing

The current Hearing Assessment Form⁶ is confusing because it allows HIPs to “sign off” on the contents of the form, which exceed the scope of practice of a HIP. It conflates many types of assessments into one form and gives the impression that HIPs are able to perform an audiological assessment of a worker for the NIHL program, which as we have explained above, they may not.

As described earlier, only an Audiologist (or Physician) has the training and legal authority to assess for NIHL to help the WSIB determine entitlement and therefore, only an Audiologist or Physician should be signing the Hearing Assessment Form for the purposes of determining noise induced hearing loss in the WSIB entitlement process. By giving the impression that others, including unregulated HIPs are allowed to sign Hearing Assessment Forms to determine hearing loss, WSIB may inadvertently cause a HIP to contravene the ASLPA, the *Medicine Act*, and the RHPA by holding himself or herself out as a person who

⁶ WSIB Hearing Assessment Form online: https://www.wsib.ca/sites/default/files/2025-04/3275a_hearingassessment_02_25_web.pdf



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is qualified to practice in Ontario as an Audiologist or a Physician.⁷ A new Audiological Assessment Form specifically for the initial entitlement process would clarify the intent of the new policy and would ensure providers are adhering to their scope of practice.

OAPAC is happy to work with WSIB on the composition of the form, which requires only minor changes to bring it into alignment with the WSIA, the RHPA and profession specific legislation.

Efficiency and Physician Resources for Tinnitus

Recommendation 4:

Clarify the policy by stating that only an Audiologist (or Physician) is authorized by law to provide a tinnitus assessment for the WSIB.

Rationale: The current wording is unclear

The current system often places an unnecessary burden on family physicians and Otolaryngologists (ENTs) to sign-off on straightforward NIHL tinnitus claims. OAPAC supports the proposed changes to improve the efficiency of tinnitus care.

The draft policy reduces wait times, lowers costs for the health-care system, and speeds up adjudication for injured workers by clarifying that Audiologists can provide this initial assessment as tinnitus is within their scope of practice. However, we believe that the wording could be made clearer by stating that only an Audiologist (or Physician) is authorized by law to provide a tinnitus assessment.

Proposed Text Amendments

To operationalize these recommendations, OAPAC proposes the following specific amendments to the draft policy text. These changes clarify roles without removing any Provider from the system. Furthermore, defining a "regulated professional" must be accurate and be precise as it is crucial for **public protection, legal clarity**, and ensuring **accountability** and **fairness** within a regulatory framework.

Section	Current Draft Language	Recommended Amendment (OAPAC)	Rationale
Definitions: <i>Hearing Assessment</i>	"...conducted by a qualified regulated health professional... in accordance with practice standards of the applicable regulatory college or	"...conducted by a Regulated Audiologist or Physician ... in accordance with practice standards of the applicable regulatory college (CASLPO or CPSO)."	Ensures the <i>assessment used for entitlement</i> is performed by the professional legally authorized to assess/prescribe.

⁷ Section 8(2) of ASLPHA, available online at: <https://www.ontario.ca/laws/statute/91a19>; Section 9(3) of the Medicine Act, available online at: <https://www.ontario.ca/laws/statute/91m30#BK9>.



Ontario Association of Professional Audiology Clinics
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Section	Current Draft Language	Recommended Amendment (OAPAC)	Rationale
	recognized professional association."		
Definitions: <i>Audiologist</i>	"...whose scope of practice includes assessing hearing function and prescribing and fitting hearing aids..."	"...whose scope of practice includes assessing hearing function, prescribing hearing aids, and determining consistency with the WSIB's NIHL criteria. Audiologist is a protected title that may only be used by registrants of CASLPO. "	Clarifies that the Audiologist is the primary expert for the WSIB NIHL consistency determination.
Overview for Initial entitlement: <i>Hearing assessment requirements for initial entitlement</i>	"The decision-maker will assess every hearing assessment... to determine whether the quality of the information is sufficient."	"The decision-maker will rely on the clinical findings of the Audiologist (or Physician) provided the assessment is complete and meets the standards of the respective Regulatory College. "	Prevents non-clinical adjudicators from overruling regulated clinical findings; maintains system integrity.
Overview for Initial entitlement: <i>Hearing assessment requirements for initial entitlement</i>	Hearing assessments should be reported using the WSIBs Hearing assessment, which includes hearing test results. Hearing assessments not submitted using the WSIB's standardized form may be acceptable if they contain the same required information.	Audiological assessments should be reported using the (new) WSIBs Audiological Assessment Form for initial entitlement , which includes hearing test results. Hearing assessments not submitted using the WSIB's standardized form may be acceptable if they contain the same required information.	Includes reference to a new standardized form which only Audiologists (or Physicians) can sign.
Guidelines: <i>Tinnitus</i>	"The history and extent of the condition must be documented by an audiologist or another	"The history and extent of the condition must be documented by an Audiologist (or Physician) "	The Audiologist (or Physician) are the appropriate professionals trained to assess tinnitus severity in the context of



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Section	Current Draft Language	Recommended Amendment (OAPAC)	Rationale
	qualified, regulated health professional."		hearing loss. Our proposed wording reduces ambiguity.

Conclusion:

Ontario Association of Professional Audiology Clinics (OAPAC) supports the WSIB's goal of a modern, consistent NIHL policy. We believe this is best achieved by recognizing the distinct, regulated expertise of Audiologists (and Physicians) as the primary sources of evidence of entitlement, while maintaining a collaborative system that utilizes the skills of all hearing health-care providers where appropriate.

We thank the WSIB for the opportunity to provide this feedback and look forward to further collaboration.

Sincerely,

Lorraine Vosu

Au.D., CCC-A, F-AAA, F-NY AS, AUD (C)
Co-Chair
OAPAC Government Relations Committee

Hish Husein

MCISc., Au.D., FAAA., AUD(C)
Co-Chair
OAPAC Government Relations Committee

Ian Cunningham, Chair

Karen Hou, Vice-Chair

Dave Wells, Treasurer

**Maria Marchese,
Secretary/Secretariat**

Association of Canadian
Search, Employment and
Staffing Services

Business Council on
Occupational Health and
Safety

Canadian Fuels Association

Canadian Manufacturers &
Exporters

Canadian Vehicle
Manufacturers' Association

Council of Ontario
Construction
Associations

Schedule 2 Employers'
Group (S2Eg)

OBC Secretariat

Phone: 416-707-3165

Email: maria.marchese@live.com

ONTARIO BUSINESS COALITION (OBC)

Vision: An Ontario workplace compensation system that is sustainable, that serves the needs of the employers that participate in the system and their workers, and that contributes to the Province's competitiveness.

Mandate: To advocate on behalf of employers with regard to issues of importance concerning the Workplace Safety and Insurance Board and workplace injury and sickness prevention.

OBC Priorities:

- **OBC Relationship Building- communication/consultation with WSIB President, Chair, Minister of Labour, Prevention Division and MLITSD Senior Management Level**
- **WSIB Surplus Funding Distribution Model**
- **WSIA Legislative Reform: LOE Adequacy Level; 72 month lock-in elimination**
- **OBC Membership Expansion / Alignment of Efforts with Other Associations**
- **Occupational Disease Policy Adequacy**

February 15, 2026

Workplace Safety & Insurance Board
Consultation Secretariat

Sent Via E-mail: consultation_secretariat@wsib.on.ca

Re: Noise Induced Hearing Loss Consultation

The Ontario Business Coalition (OBC) is a coalition of employer associations mandated to focus on matters relating to the province's workplace safety and insurance system, including the Workplace Safety & Insurance Board (WSIB) and the "Workplace Safety and Insurance Act, 1997" (WSIA). The individuals who sit around the table at OBC meetings include experts in workplace compensation policy, actuarial science, the law, and claims management. The OBC convenes monthly to discuss ongoing and emerging issues and to develop consensus recommendations to the WSIB's senior leadership and/or the Minister of Labour Immigration Training and Skills Development. The OBC is also engaged in regular quarterly meetings with senior leadership of the WSIB (formerly the Chair's Advisory Committee, now the Chiefs Advisory Committee) to share ideas and serve as a two-way conduit to the province's employers.

We are writing at this time regarding the WSIB's invitation regarding its consultation on proposed revisions to Operational Policy Manual Document No. 16-01-04, Noise-Induced Hearing Loss (NIHL).

OBC wishes to express its support for the submission made by the Office of the Employer Adviser dated January 30, 2026 regarding the WSIB's proposed revisions, and attached to this letter.

Best regards,

Karen Hou
Vice Chair
Ontario Business Coalition

WSIB Noise-Induced Hearing Loss Consultation

Submission of the Office of the Employer Adviser
January 30, 2026

A. Introduction and OEA Perspective

The Office of the Employer Adviser (OEA) provides expert legal advice, representation and education to Ontario employers on matters arising under the *Workplace Safety and Insurance Act, 1997* (WSIA) and unlawful reprisal matters under section 50 of the *Occupational Health and Safety Act* (OHSA).

The OEA appreciates the opportunity to provide submissions on the Workplace Safety and Insurance Board's (WSIB) proposed revisions to Operational Policy Manual Document No. 16-01-04, *Noise-Induced Hearing Loss* (NIHL). This consultation represents the first comprehensive update to the NIHL policy since its introduction. The OEA recognizes the WSIB's efforts to update the policy with the goals of strengthening consistency, timeliness, transparency and quality in NIHL entitlement decisions.¹

The OEA has identified aspects of the draft NIHL policy that would benefit from further consideration. In general, the OEA suggests that Administrative Practice Documents (or other publicly available guidelines) could accompany the revised policy to provide examples and additional clarity for workers and employers around how these decisions will be made. Where additional comments may be helpful, the information is outlined below.

B. Context and Background

According to the WSIB, total NIHL claims have generally increased year over year since 2009, with significant growth occurring from 2020 onwards.² For example, in 2014 there were 3,675 combined Schedule 1 and Schedule 2 NIHL claims. By 2025, this number had risen to 7,186, an increase of 95.54%.³ A bar graph showing the rise in NIHL claims by registration year is included in Appendix A, Figure 1. A comparison of allowed NIHL claims to all other occupational disease claims is included as Figure 2.

¹ Ontario, Workplace Safety and Insurance Board (WSIB), *Consultation note for draft Operational Policy Manual (OPM) document 16-01-04 Noise-Induced Hearing Loss (NIHL)* (10 November 2025), <https://www.wsib.ca/en/nihlconsultation> [WSIB NIHL Consultation Note].

² WSIB NIHL Consultation Note.

³ Ontario, WSIB, *Health and Safety Statistics: Additional resources: Occupational disease - Schedule 1 and 2 Occupational Disease Claim, Registration Year, Noise Induced Hearing Loss* (data maturity date 31 December 2025) <https://safetycheck.onlineservices.wsib.on.ca/safetycheck/explore/additional/provincialDownloads?lang=en> (accessed 27 January 2026).

From the employer perspective, this growth is notable for several reasons. NIHL is a gradual and cumulative condition rather than a discrete workplace event. It is often claimed years after exposure and claims are highly dependent on historical exposure evidence that may not have been documented or that may no longer be available. In addition, NIHL can be influenced by non-occupational factors, including aging, recreational noise exposure, medications and medical conditions.

C. OEA Policy Recommendations

1. Removal of the Presbycusis Deduction

The draft NIHL policy removes the past policy approach of a presbycusis deduction of 0.5 dB per year over age 60 and replaces it with an individualized assessment of whether non-work-related factors, such as age-related hearing loss, have overwhelmed occupational exposure.

The WSIB NIHL Consultation Note explains that scientific understanding of hearing loss has evolved, and that aging and noise exposure can interact in complex ways. Hearing loss observed with age also reflects cumulative and synergistic effects of both extrinsic and intrinsic factors. For these reasons, some Canadian workers' compensation boards have moved away from automatic age deductions.

OEA Recommendation:

We suggest it would be helpful to have Administrative Practice Documents (or other publicly available guidelines) accompany the revised policy to provide examples and additional clarity for workers and employers around how these decisions will be made. This could also help to promote the consistency of decisions where both age-related and occupational factors may be present.

2. Noise Exposure Threshold and Equivalent Exposure Reconstruction

A defined NET provides an objective reference point that supports consistency and transparency in entitlement determinations, particularly for a condition that often develops long after exposure.

The proposed policy language around exposures that fall below the NET, and the complex interaction between occupational and age-related hearing loss, would benefit from additional clarification regarding how the threshold will function when considering other factors.⁴

⁴ According to the draft NIHL policy other factors include individual susceptibility, exposure to ototoxic substances, or the nature of noise exposure such as continuous noise accompanied by intermittent, abrupt or explosive sounds.

Guidance in situations of multiple employments and changing job duties would assist in ensuring that exposure assessments are based on evidence reflective of employment circumstances and applied with consistency across claims.

OEA Recommendation:

The OEA suggests that Administrative Practice Documents (or other publicly available guidelines) would be helpful to accompany the revised policy and provide examples and additional clarity for workers and employers around how these decisions will be made.

3. Clarification of the 90 dBA Threshold in WSIB Policy vs 85 dBA in the OHSA

The OEA notes that Ontario's occupational health and safety framework and the WSIB's NIHL policy rely on different noise exposure thresholds, reflecting the different purposes of the two regimes. The OHSA threshold is described as a preventive standard designed to trigger protective measures before injury occurs, and the WSIB threshold functions as a causation benchmark intended to identify exposure levels generally sufficient to result in compensable noise-induced hearing loss.

The different thresholds within related systems may not be readily understood by workplace parties and would benefit from clarification.

OEA Recommendation:

If a different standard is maintained in the two regimes, we suggest that the NIHL policy, or a related Administrative Practice Document (or other publicly available guidelines), provide an explanation as to the distinctions in the related systems to support user understanding.

4. Claim Cost Reporting and WISR Impacts

NIHL claims appear on the WSIB Workplace Injury Summary Report (WISR), although those NIHL claims have limited individual cost consequences for an employer.⁵ Certain employers are required to provide their WISR report to project owners as part of procurement and pre-qualification processes. The appearance of a WSIB claim on the report may result in an employer being screened out of a competition, regardless of the nature of the claim.

⁵ The reference to employers here is primarily to Schedule 1 employers in the collective liability system, in contrast to Schedule 2 employers that remain individually liable for the full cost of claims filed by their workers. However, in some cases, Schedule 2 employers may apportion occupational disease claim costs amongst other Schedule 2 employers. See s. 94(4) and Workplace Safety and Insurance Appeals Tribunal *Decision No. 3113/18*, 2019 ONWSIAT 825 (CanLII) at para 28.

OEA submission:

We suggest the WSIB consider, and consult with employers on, measures to mitigate the unintended impacts associated with NIHL claims appearing on the WISR. Options could include allowing NIHL claims to be filtered out of the WISR, presenting them in a separate category with an explanatory note, or otherwise clearly distinguishing non-costed occupational disease claims from other claims.

5. Tinnitus Entitlement Framework

The draft NIHL policy incorporates tinnitus into the NIHL framework and provides for permanent impairment awards of 2% for documented ongoing tinnitus, with the possibility of higher ratings (3-5%) in rare, severe cases. The addition of tinnitus to the NIHL policy supports clarity for system users, given that entitlement requires an accepted occupational hearing loss claim.

OEA Recommendation:

The NIHL policy would benefit from criteria or examples to assist decision-makers and clarify expectations around documentation during the two-year period, and for rare severe cases. This would support consistent evidentiary standards across claims.

6. Audiogram Standards and Assessment Quality

The draft NIHL policy proposes that all hearing assessments conducted after the policy's implementation include both air and bone conduction testing. The WSIB has also developed a comprehensive hearing assessment form and standardized audiogram template in collaboration with the College of Audiologists and Speech-Language Pathologists of Ontario and the Association of Hearing Instrument Practitioners.

OEA Recommendation:

The WSIB could provide guidance on how older audiograms will be assessed relative to the policy's updated testing requirements and/or a transition period.

7. Standard of Proof and Long-Latency Claims

The draft NIHL policy reiterates the balance of probabilities standard of proof and the benefit of doubt principle on an issue-by-issue basis. These principles are foundational to the workers' compensation system.

The unique characteristics of long-latency NIHL claims warrant consideration of how these principles interact with the proposed draft policy. NIHL claims are often filed well after the relevant exposure. In these cases, evidence is frequently incomplete or degraded by time. Employers may no longer be in business, employment records may

have been destroyed in accordance with retention policies, and witnesses may be unavailable.

In this context, the interaction of the balance of probabilities standard, the benefit of doubt principle, and the discretion contemplated by the draft policy highlights the importance of objective criteria to support consistent outcomes.

OEA Recommendation:

The WSIB could consider how evidentiary gaps inherent in long-latency claims are addressed through the benefit of doubt principle to promote transparency and consistency in these cases.

8. Transition, Retroactivity and Implementation

The draft NIHL policy does not currently address how the revised criteria will apply to pending or legacy claims.

We suggest the WSIB plan for post-implementation monitoring and reporting on the final policy changes. For instance, key outcome metrics including acceptance rates, NEL award distributions, claim volumes, and average time from exposure to claim filing. This transparency would assist an assessment of whether the revised policy is achieving its objectives and may be used to inform prevention practices.

OEA Recommendation:

The OEA suggests the development of transition provisions for the revised NIHL policy. In addition, the WSIB could consider post-implementation monitoring and reporting on key outcome metrics.

D. Conclusion

The OEA appreciates the opportunity to share comments about the WSIB's proposed updates to the NIHL policy. NIHL, and occupational disease claims in general, present unique challenges. They involve cumulative conditions that may span decades and involve exposure from multiple employers.

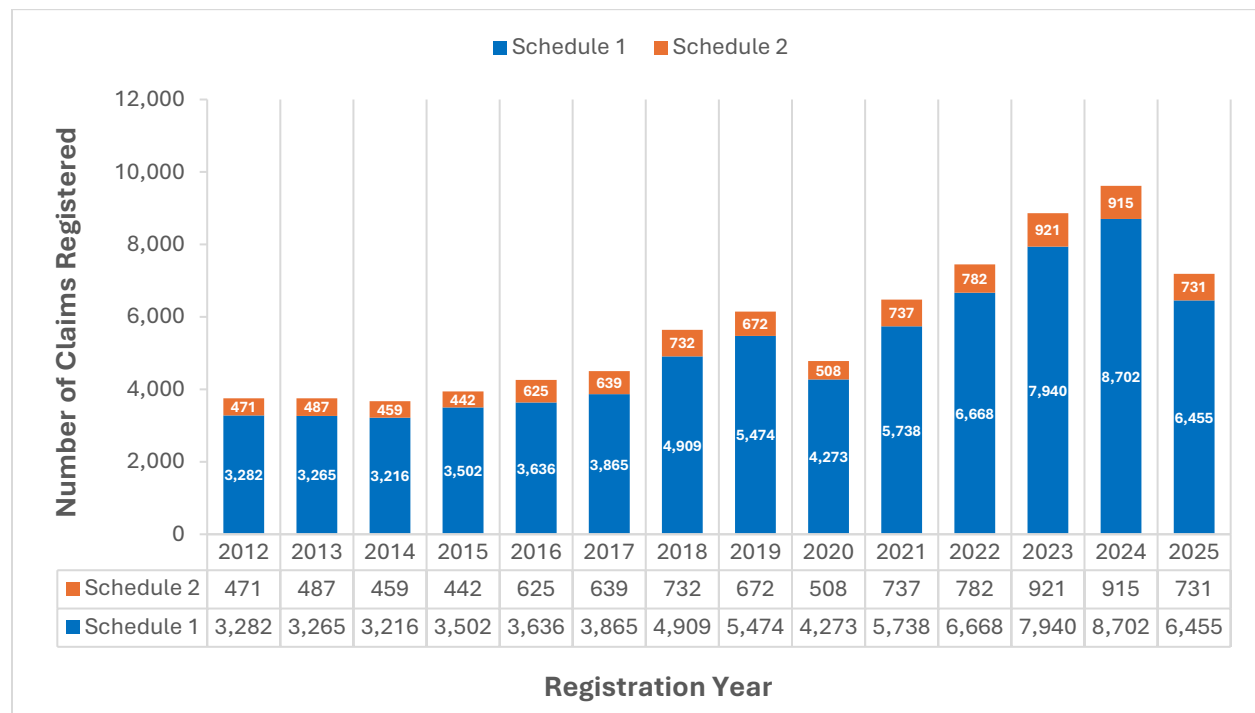
The use of Adjudicative Practice Documents (or other publicly available guidelines) that provide examples and further clarification to support consistent decision making, could enable employers and workers to better engage with the system in these claims.

Appendix A

WSIB NIHL Claim Statistics

Figure 1

NIHL Claim Counts for Schedule 1 and Schedule 2

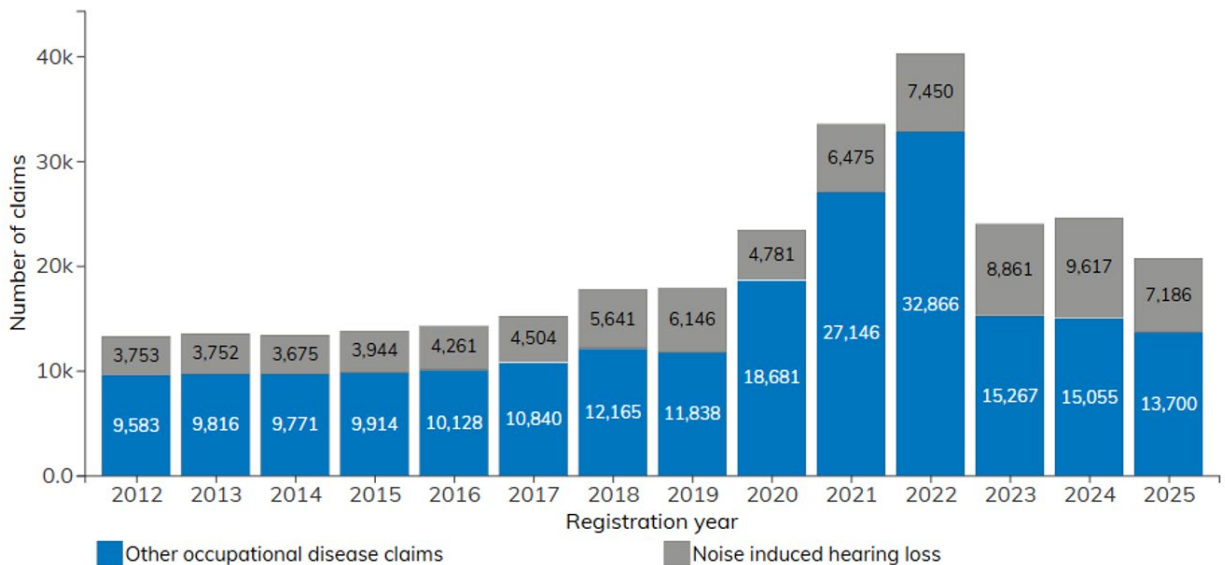


Note. NIHL claim counts for Schedules 1 and 2 are shown for the 2012 to 2025 registration years. Total NIHL claims have generally increased year over year since 2014. Ontario, WSIB, *Health and Safety Statistics: Additional resources: Occupational disease - Schedule 1 and 2 Occupational Disease Claim, Registration Year, Noise Induced Hearing Loss* (data maturity date 31 December 2025)

<https://safetycheck.onlineservices.wsib.on.ca/safetycheck/explore/additional/provincialDownloads?lang=en> (accessed 27 January 2026).

Figure 2

Allowed Schedule 1 and Schedule 2 NIHL Claims as Compared to all other Occupational Disease Claims



Note. Allowed NIHL claims for Schedules 1 and 2, as compared to all other allowed occupational disease claims, are shown for the 2012 to 2025 registration years. While other occupational disease claims increased between 2014 and 2022 and then decreased starting in 2023, NIHL claims have generally continued to increase since 2014. Ontario, WSIB, *Health and Safety Statistics: Provincial statistics: Occupational disease - Schedule 1 and 2, Allowed occupational disease claims, Noise induced hearing loss* (data maturity date 31 December 2025)

https://safetycheck.onlineservices.wsib.on.ca/safetycheck/explore/provincial/SH_12/od?lang=en (accessed 27 January 2026).

From: [Ostrovskiy, Daniel](#)
To: [Consultation Secretariat](#)
Cc: [Artur Gevorgyan](#); [Poopalapillai, Christine](#)
Subject: RE: Request for Extension – Noise-Induced Hearing Loss Consultation (OPM 16-01-04)
Date: Monday, February 9, 2026 10:21:54 AM

CAUTION: This email originated from outside the organization. Do not click any links or open any attachments, unless you recognize the sender and know that the content is safe. If you are unsure or believe that you were the target of a phishing attempt please contact IT Security as soon as possible.

Dear Consultation Secretariat,

Thank you again for granting additional time for the Otolaryngology Section executive to review this initiative. This has now been reviewed internally and discussed with the Section Executive, including an academic otologist.

No major concerns were identified.

Thank you,

Daniel Ostrovskiy

Senior Lead, Sections

Physician Leader Engagement & Health System Integration

Ontario Medical Association



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January 30, 2026

Consultation Secretariat
Workplace Safety and Insurance Board
200 Front Street West
Toronto, ON M5V 3J1

Via email: consultation_secretariat@wsib.on.ca

Dear Consultation Secretariat:

**Submission with respect to WSIB draft Operational Policy Manual (OPM):
Document No. 16-01-04: Noise Induced Hearing Loss (NIHL)**

Attachments: WSIAT medical paper;

We are pleased to present the following submission on behalf of our members in response to the Workplace Safety and Insurance Board's (WSIB) consultation document and proposed policy for Noise Induced Hearing Loss (NIHL).

The Ontario Mining Association (OMA) has developed submissions to the WSIB on several subjects in recent years. We have found the policy consultation process of the WSIB to be effective, well managed and transparent. Materials are posted publicly well in advance, presentations are offered and WSIB representatives make themselves available to answer the questions of our members who have the experience of working with the policies each day. The OMA appreciates the professionalism of this interaction which undoubtedly leads to engaged stakeholders and better policy.

NIHL is recognized as an occupational disease under the *Workplace Safety and Insurance Act, 1997* (WSIA), as a permanent but preventable condition, this is also noted in the consultation paper, by the Ministry of Labour, Immigration, Training and Skills Development (MLTSD) and other reference material. There is a beneficial effect of early detection and treatment, as non-diagnosis and non-treatment have a negative effect on a person's safety, quality of life, mental cognition and health.

Noise can be a hazard at the workplace and elsewhere, our members continue to invest in hearing protection and noise reduction to eliminate or lessen the exposure to hazardous noise.

Policy development should consider and distinguish between the extent to which an individual's hearing loss is related to lifestyle (external contributors), age, or health

versus workplace-related factors. Science supports that Personal Protective Equipment (PPE), specifically Hearing Protection Devices (HPD) reduces exposure to noise, and the positive impact of PPE should be included in WSIB policy as a preventative measure.

Comments and recommendations of our committee members:

Timeframe to establish a claim after retirement/leave employment

In the draft policy, there is no timeframe noted in which the employee needs to establish a NIHL claim. NIHL is not progressive and claims should be submitted within an established timeframe from retirement or departure from the workplace.

A WSIAT medical paper which has been used in Tribunal decisions in the past indicates that once the exposure to noise is discontinued, there is no substantial further worsening of hearing as a result of noise unless other causes occur, and previous NIHL does not make the ear more sensitive to future noise exposure. Additionally, the paper states that the amount of hearing loss produced from a given noise exposure varies from person to person and daily noise exposure (8hrs) > 90 dB for over 5 years (or equivalent) causes varying degrees of hearing loss in susceptible individuals. By not encouraging or requiring workers to have their hearing tested upon departure from a workplace, an individual could be suffering from the effects of hearing loss without knowledge or treatment.

As noted in the Consultation documentation, “Many Ontario workers who file NIHL claims do not have their hearing assessed until well after they have retired.” This is not beneficial to the employee or employer.

Allowing the submission and approval of NIHL claims many years after a worker has left a workplace is not a fair policy nor one that can be defended on its technical merit. The addition of a time requirement would encourage more testing and likely lead to individuals obtaining hearing aids from the moment they are needed. Once the worker has departed from the workplace, any deterioration in hearing levels would be the result of other factors, such as health, aging, or off-the-job activities and situations. Introducing a time requirement would contribute to early identification of a hearing loss condition and cause. Early detection of any damage caused by noise exposure in the workplace could allow a worker to enjoy their retirement.

With the proposed change to remove the presbycusis (aging) deduction factor, consideration in ensuring audiometric testing is completed in a timely manner once a worker leaves the workplace becomes even more important. The consultation paper notes (pg 3) that

“Advances in scientific understanding now show that hearing loss observed with age is complex, For this reason, most compensation boards have moved away from the automatic age deductions”

The WSIB NIHL policy should develop a requirement that NIHL claims be submitted and established within two to five years of departure from the workplace so as to ensure that the claim is related to workplace conditions and not related to age, health, or post-employment activities. With such a change, employers would be treated fairly, and individuals would receive testing and any treatment for hearing loss very soon after departure from the workplace. It would also align with other Canadian jurisdictions supportive of using a timeframe:

- **Nova Scotia:** follows a strict filing deadline for NIHL claims. According to the Workers' Compensation Board of Nova Scotia (WCB NS), where workers must: Notify the employer as soon as possible after learning they may have work-related hearing loss; File a WCB claim within 12 months of being informed by a medical professional that their hearing loss may be work-related. Extensions: WCB NS may extend the filing period, but never beyond 5 years from: the date of injury/exposure or the date the worker learned their hearing loss may be work-related. [WCB Nova Scotia Policy](#)
- **Saskatchewan:** policy regarding NIHL claims based on the fact that hearing loss does no progress once exposure is discontinued, and consideration that other sources of exposure may include non-occupational activities, and the policy states that the claims must be within 5 years of leaving employment / exposure. [WCB Saskatchewan Policy](#)
- **New Brunswick:** policy includes a date of disablement (accident) is the earlier of a date of audiogram which shows evidence of NIHL or the last exposure to noise at a level and duration significant enough to cause NIHL. Those no longer working in a noise-exposed workplace, the date is the last date they worked. [WorkSafeNB Policy Workers' Compensation Act](#)
- **Alberta:** policy does not have a strict timeline for submitting hearing loss claims after employment ends, but claims filed more than 12 months after leaving the job may require more evidence, as it may be harder to prove that it is work-related. [WCB Alberta Policy](#)
- **British Columbia:** Jurisdictional comparison and advancements: More testing is of benefit to workers and employers. It is our understanding that, in British Columbia, in industries where workers may be subject to hazardous noise, workers are required to take an annual hearing test which allows for early detection and treatment. [Work Safe BC Policy](#)

In conclusion, identifying a timeline in the policy would encourage workers to seek an assessment early and provide them with the opportunity if required to obtain hearing aids. Also [evidence](#) has shown that the earlier hearing aids are obtained the easier it is for the user to adapt to them.

Use of Personal Protection Equipment (PPE) and Hearing Protection devices (HPD)

While the consultation paper (pg 4) notes that “wearing HPD on its own is not sufficient to outweigh the evidence that a worker was exposed to hazardous noise in the workplace....” The scientific evidence doesn’t align with this position.

Under the WSIA (Act) it notes under purpose

“1. The purpose of this Act is to accomplish the following in a financially responsible and accountable manner:

1. To promote health and safety in the workplaces and to prevent and reduce the occurrence of workplace injuries and occupational diseases....”

However, the current draft policy does nothing to promote the use of PPE to reduce the risk of developing NIHL.

The draft policy states that “HPD use should not factor into the assessment of whether a specific period(s) of occupational noise exposure with a particular employer has met the NET or an equivalent noise exposure, as HPDs do not alter the underlying noise hazard in the workplace.” And includes a definition of HPD to reference “ear plugs, earmuffs or both worn by a person to help protect against noise.”

Science supports that PPE reduces exposure to noise, and we strongly recommend that the WSIB consider the positive impact of PPE in the draft policy for NIHL. The WSIAT medical paper states that “there are numerous studies and outcome analyses that demonstrate the effectiveness of hearing conservation programs in industry. Hearing protection (i.e. ear muffs, ear plugs etc.) however needs to be worn properly and consistently to prevent noise induced hearing loss.”

The WSIAT paper continues to state that “most ear plugs will provide between 20-25 dB of sound attenuation. Combinations of muffs and plugs might provide upwards of 25-35 dB of sound attenuation. Despite wearing hearing protection some workers could theoretically experience noise induced hearing loss if the exposure levels were consistently greater than 110dB and the hearing protection worn did not provide adequate sound attenuation.”

The Ministry of Labour, Immigration, Training and Skills Development (MLITSD) fines employers for not providing PPE (including HPDs) to workers, because it is known that PPE is required to protect and prevent workers from injury.

OMA members believe in ensuring employees are healthy and safe in all aspects of their work, including hearing protection. Mining employers continue to invest in programs and personal protective equipment and have established controls to reduce workplace noise. HPDs typically offer a Noise Reduction Rating (NRR) of 15–33 dB. Common earplugs (e.g., 3M, Moldex), and [protection can increase with a combination](#)

of earplugs and ear muffs. Since fit is important to adequate hearing protection, there are devices used to fit-test workers for proper fitting HPD, such as the [uvex xact-fit test](#). Another protection monitoring system used is the [3M E-A-Rfit Dual-Ear Validation System](#), which helps determine whether workers are receiving adequate hearing protection from the HPD provided, measuring across 7 standard frequencies and providing a detailed report. These monitoring systems ensure that HPDs are working to protect the worker from noise exposure and should be considered towards the prevention of NIHL.

We recommend that the draft policy accept the noise reduction level associated with PPE and the ability to submit the NET “with the reduction of noise level due to the hearing protection provided by the employer” usually around 30%. PPE is put in place to protect the worker, and the exclusion of the preventative measures of PPE from the draft NIHL policy does not incentivize the worker to wear proper equipment, or the employer to fund the best-in-class available products.

Accepting PPE as part of the policy will encourage employers to continue to invest in programs that reduce the risk of employees developing NIHL. It will also encourage workers to ensure they are using PPE in and out of the workplace.

Tinnitus

Finally, the policy addresses the issue of tinnitus and is now considering allowing the degree of permanent impairment to be beyond 2%. WSIAT medical paper notes
“The problem with tinnitus however is that it is difficult to quantify objectivity and to fully appreciate how it affects an individual’s well”

Currently the draft policy is absent of what criteria would need to be met to increase the award from 2% to 3-5%. We would recommend that the policy identify factors which would lead to consideration for an increase including objective documentation as to what treatment was taken to address the issue before considering an award beyond the standard 2%. This will ensure transparency of requirements. It will also assist with reducing the number of appeals generated as it relates to NEL Quantum for tinnitus.

In conclusion, the OMA wishes to thank the WSIB for this opportunity to provide comments on behalf of our members in response to the WSIB’s consultation document and proposed policy for Noise Induced Hearing Loss (NIHL). We would be interested in discussing this further and are available to answer any questions regarding this submission.

Sincerely,



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Workplace Safety and Insurance
Appeals Tribunal

Tribunal d'appel de la sécurité professionnelle
et de l'assurance contre les accidents du travail

Hearing Loss and Tinnitus

Discussion paper prepared for

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This medical discussion paper will be useful to those seeking general information about the medical issue involved. It is intended to provide a broad and general overview of a medical topic that is frequently considered in Tribunal appeals.

Each medical discussion paper is written by a recognized expert in the field, who has been recommended by the Tribunal's medical counsellors. Each author is asked to present a balanced view of the current medical knowledge on the topic. Discussion papers are not peer reviewed. They are written to be understood by lay individuals.

Discussion papers do not necessarily represent the views of the Tribunal. A vice-chair or panel may consider and rely on the medical information provided in the discussion paper, but the Tribunal is not bound by an opinion expressed in a discussion paper in any particular case. Every Tribunal decision must be based on the facts of the particular appeal. Tribunal adjudicators recognize that it is always open to the parties to an appeal to rely on or to distinguish a medical discussion paper, and to challenge it with alternative evidence: see *Kamara v. Ontario (Workplace Safety and Insurance Appeals Tribunal)* [2009] O.J. No. 2080 (Ont Div Court).

HEARING LOSS AND TINNITUS

Types of Hearing Loss

Hearing loss in any individual at any given time is a combination of the following factors:

- a. Congenital (what they were born with)
- b. Acquired (what they developed as the result of pathologic exposures or processes during their lifetime)

Conceptually three types of hearing loss exist:

1. Sensorineural
2. Conductive
3. Mixed (a combination of sensorineural and conductive hearing loss)

A sensorineural hearing loss exists with injury to the cochlea or cochlear nerve. This is the type of hearing loss that is found in routine unprotected daily exposure to loud noise potentially injurious to hearing in the occupational work force.

A conductive hearing loss occurs when there is some interference of sound transmission or vibration due to pathology involving the external and/or middle ears. This type of loss might be found in an individual, for example, with a large tympanic membrane (TM) perforation where mechanical vibrations along the ossicular chain are dampened.

A mixed hearing loss occurs when both a sensorineural and conductive hearing loss are present at the same time. For example an individual with a large TM perforation who received topical antibiotic ear drops for the treatment of a middle ear infection that caused inadvertent toxicity to the inner ear in addition (i.e. topical ototoxicity).

Common Causes for Hearing Loss

Conductive Hearing Loss	Sensorineural Hearing Loss
1. External otitis (acute and chronic)	1. Occupational or Noise Induced Hearing Loss (NIHL)
2. Wax	2. Presbycusis
3. Exostoses/osteomas	3. Meniere's Disease
4. Acute Otitis Media	4. Ototoxicity (Systemic and Topical)
5. Otitis Media with Effusion	5. Cochlear Otosclerosis
6. TM perforations	6. Trauma
7. Chronic Suppurative Otitis Media (CSOM) a. Safe or mucosal CSOM b. Cholesteatoma	7. Acoustic neuromas (vestibular schwannomas)
8. Otosclerosis	8. Sudden Sensorineural Loss

Common Causes for Sensorineural Hearing Loss

1. Noise Induced Hearing Loss

According to the 1990 Noise and Hearing Loss Consensus Conference, "Noise Induced Hearing Loss (NIHL) results from damage to the ear from sounds of sufficient intensity and duration that a temporary or permanent sensorineural hearing loss is produced. The hearing loss may range from mild to profound, may result in tinnitus (unwanted head noise) and is cumulative over a lifetime". Occupational NIHL and presbycusis (degenerative hearing from aging change) represent the two most common causes of sensorineural hearing loss in society today.

Two types of noise exposure are associated with NIHL: transient and continuous.

Impact (i.e. the collision of two solid objects as might occur in a forge plant) or impulse (i.e. the sudden noise of an explosion) noise are examples of transient noise where there is a rapid rise in sound pressure levels and a very quick decline over 0.2 sec. Constant or steady state noise by comparison remains relatively constant and lasts longer although fluctuations in sound intensity may occur. Although short lived, most impact/impulse noise typically has peak intensity levels much higher than found in steady state noise exposure. All things being equal most noise in industry however is a combination of primary continuous and superimposed impact type noise.

When susceptible, unprotected ears are exposed to loud noise potentially injurious to hearing, the inner ear seems to react in one of three ways: by adapting to the noise (i.e. the inner ear seems to "toughen" in some individuals), by developing a transient threshold shift (TTS), or a permanent threshold shift (PTS).

TTS refers to a transient sensorineural hearing loss lasting hours to a few days. Hearing thresholds are depressed until the metabolic activity in the cochlea recovers. For this reason workers ideally should be out of noise for at least 24 hours if not 48 hours prior to audiometric testing to avoid the effects of TTS on hearing.

PTS refers to a permanent loss of sensorineural hearing which is the direct result of irreparable injury to the organ of Corti. Noise induced deafness generally affects hearing between 3000-6000 Hz with maximal injury centering around 4000 Hz initially, an important point to remember.

a. The 4000 Hz Audiometric Dip

The 4000 Hz “notch” or “dip” in sensorineural hearing has been a classic finding in NIHL over the years. Some noise sources however such as gunfire may maximally affect hearing at 6000 Hz. Noise exposure from chipping machines and jackhammers characteristically damage the higher frequencies severely before affecting the lower frequencies.

Why the 4000 Hz frequency appears more affected than other frequencies continues to generate some controversy. There is good pathologic evidence however that demonstrates maximal cochlear hair cell loss in the tonal areas where the 4000 Hz hair cells normally reside in both animals and humans.

b. Individual Susceptibility to Noise

Individuals vary in their susceptibility to noise and the damage it may cause to the cochlea.

To date, susceptibility has not been shown to be dependent on gender (males vs. females), skin colour, any known diseases, mental attitude towards the noise, chemical exposure, pre-exposure hearing loss or smoking.

Of interest, one universal finding is that on average hearing threshold levels (HTLs) in the right ear are better than the left ear by about 1dB. This however is of no practical importance clinically.

c. Asymmetry of Sensorineural Hearing Loss from Noise

In general terms NIHL usually demonstrates a 4000 Hz dip. It should also be symmetric bilaterally.

Whether one ear is more resilient to noise in the same individual (the so- called “tough vs. tender” ear argument) while of academic curiosity is not based on any known pathologic basis to date. Nevertheless some individuals exposed to noise not infrequently demonstrate some asymmetry to their hearing loss. This is however usually related to the fact that one ear receives a greater exposure to the noise

than another. For example, truck drivers in North America not infrequently have a greater degree of hearing loss in their left ear (when the window is rolled down the left ear would be exposed to more sound from the engine). Those who fire guns often demonstrate a greater degree of hearing loss in the ear closest to the barrel (the left ear in a right-handed shooter) because that ear would be closest to the explosion and the other ear would be protected by a “head shadow”.

Please remember that when an asymmetric sensorineural hearing loss exists steps often need to be taken to exclude pathologic causes (i.e. tumours, other inner ear disorders, etc.)

d. Basic Facts Concerning Noise Induced Hearing Loss (NIHL)

The following statements tend to reflect what is agreed upon by the majority of scientists and physicians who deal with NIHL.

1. Noise exposure can produce a permanent hearing loss that may affect speech communication.
2. Noise induced hearing loss (NIHL) may produce a temporary threshold shift (TTS), permanent threshold shift (PTS) or a combination of both.
3. A PTS is caused by destruction of certain inner ear structures that cannot be replaced or repaired.
4. The amount of hearing loss produced from a given noise exposure varies from person to person.
5. NIHL initially affects higher frequency hearing (3-6 kHz range, for nearly all occupational exposures) than those frequencies essential for communication (i.e. 500, 1000 and 2000 Hz).
6. Four major factors determine the effects of exposure to noise overall:

Overall noise levels.

Spectral composition of noise.

Duration and distribution of exposure during a typical workday.

Cumulative noise exposure over days, weeks and years.

7. Exposure to noise:
 - a. Daily noise exposure (8hrs) > 90 dB for over 5 years (or equivalent) causes varying degrees of hearing loss in susceptible individuals.

- b. Amount of NIHL is related to the exposure level (i.e. the intensity of the sound) i.e. the 3 dB doubling rule (increase sound levels by 3 dB and you decrease by 1/2 the safe unprotected exposure time to noise).

i.e. 90 dB for 8 hours without wearing hearing protection 94 dB for 4 hours without wearing hearing protection 97 dB for 2 hours without wearing hearing protection, etc.
 - c. NIHL is a decelerating process; the largest changes occur in the early years with progressively smaller changes in the later years (so-called Corso's theorem). See section on Presbycusis.
 - d. NIHL first affects hearing in the 3-6 kHz range, for nearly all occupational exposures; the lower frequencies are less affected.
 - e. Once the exposure to noise is discontinued, there is no substantial further worsening of hearing as a result of noise unless other causes occur.
 - f. Previous NIHL does not make the ear more sensitive to future noise exposure.
 - g. Continuous noise exposure over the years is more damaging than interrupted exposure to noise which permits the ear to have a rest period.
8. Where the worker is exposed to sound level of 90dB or greater over an eight-hour work day, a number of controls may be implemented to minimize noise exposure, including
- engineering controls (required where feasible);
 - administrative controls (limiting employee exposure duration to the above mentioned time schedule); and
 - personal protective hearing devices (ear plugs, ear muffs, etc.).

2. Presbycusis

Progressive age related sensorineural hearing loss is often called presbycusis. In susceptible individuals the early effects of presbycusis are occasionally seen around age 40. Around age 55-60, an individual's hearing starts to worsen at a faster rate. For this reason a correction factor for presbycusis is applied in occupational hearing loss claims depending on the jurisdiction (in the Province of Ontario, for example, a correction factor of 0.5 dB/ year of age > 60 years) is typically applied for presbycusis.

The pathologic basis for presbycusis appears to be one of gradual devascularization of the cochlea and loss of functioning hair cells. Secondary to hair cell loss one can often see progressive neuronal dropout along the cochlear nerve. The majority of changes histopathologically are noted in the basal turn of the cochlea where the high frequency hair cells and their corresponding cochlear nerve neurons are found. Nevertheless the

changes seen in presbycusis are typically non-specific and can also be seen in a vast number of pathologies including the effects of noise upon the inner ear.

Clinically hearing loss from presbycusis appears to be an accelerating process unlike hearing loss in NIHL. In this regard the effects of aging in the absence of other factors cause a loss of hearing at all frequencies whose rate of growth becomes more rapid as age increased (especially after 60 years): an important point to remember in this context.

Unfortunately, there is no specific treatment available that will prevent age related hearing loss at present. To a large degree hearing loss with age is genetically primed; in other words the hearing your parents had as they aged is often passed on to you.

a. Controversies between presbycusis and NIHL

In the adjudication process of an occupational NIHL claim it is often difficult to separate the total amount of hearing loss from noise and age related change.

For example, not everyone as they age will experience age-related presbycotic change (changes from presbycusis are variable with some individuals experiencing greater degrees of age related change than others).

Moreover, exposure to high level noise early on may produce hearing loss more rapidly than aging such that the aging process has a negligible effect (i.e. the more that has been lost early on, the less there is to lose later on).

b. Dobie's and Corso's Theorems

The effects of noise exposure and aging on hearing when not combined are reasonably well-understood. When the two processes are combined the resultant pathology and its effects upon hearing are not as well understood.

Although it seems logical to “subtract” the age-related effects from the total hearing loss in order to quantitate the amount of hearing loss due to noise, this is really quite simplistic when one considers that aging effects and noise exposure effects can at times be practically indistinguishable for the most part audiometrically.

Because compensation claims have required some consideration of presbycusis and its role in the total hearing loss of an individual various correction factors have been applied.

Dobie's theorem states that the total hearing loss from noise and age are essentially additive (this is the theory put into practice when a standard correction factor for age after 60 years is applied in the Province of Ontario).

Corso's theorem on the other hand states that any correction for age should be based on a variable ratio (as individuals age the assumption is that the effects of presbycusis

variably accelerate by decade). This certainly generates a more complicated mathematical model but probably more closely approaches what is happening physiologically.

Nevertheless the quantification of hearing loss attributable to age when occupational NIHL is present is really quite a complex phenomenon.

3. Menière's Disease

This is an inner ear disorder characterized by episodes of vertigo (an illusion of movement) lasting minutes to hours, fluctuating hearing loss and tinnitus (unwanted head noise). Frequently there is a sense of pressure or fullness in the ear during attacks.

Usually one ear is involved initially although over time the other ear becomes affected in nearly 50% of cases. The hearing loss is typically a low-frequency sensorineural loss that fluctuates initially often reverting close to normal between attacks in the early stages. Over time the severity of the hearing loss progresses. Occasionally both a low-frequency and a high-frequency loss occurs but not usually the type of high frequency loss seen following noise exposure.

Pathologically there is distension of the inner ear membranes by excess fluid. It is not known if this results from excess production or inadequate drainage of fluid. When the distended membranes rupture the resulting admixture of inner (endolymph) and outer (perilymph) fluids causes electrolyte disturbances (i.e. the so-called Na⁺ - K⁺ intoxication theory) leading to dizziness. After its collapse the membrane heals and the cycle recommences. However the natural history is enigmatic with unpredictable periods of exacerbation and remission.

Treatment is medical in most cases involving a low salt diet and diuretics and vestibular sedatives. Currently there is research into the application of intermittent pressure / pulses to the inner ear via the eardrum (i.e. the Meniett Device). When vertigo is incapacitating the balance function of the inner ear may be attenuated or ablated by the trans-tympanic instillation of gentamicin with relative preservation of hearing. In the last resort the whole inner ear can be destroyed surgically by a procedure called a labyrinthectomy. Unfortunately hearing cannot be preserved in this procedure.

4. Cochlear Otosclerosis

Otosclerosis usually results in a conductive hearing loss from stapes footplate fixation due to new bone growth in this area. (See Appendix B, Middle Ear) Nevertheless the otosclerotic foci can involve any part of the hard bone (otic capsule) surrounding the

inner ear. When the foci primarily affect the cochlea the patient may present with a chronic progressive sensorineural hearing loss in one or both ears. If the footplate as well as the cochlea is involved then a mixed (conductive and sensorineural) loss might result.

The diagnosis of cochlear otosclerosis is usually made when a family history of otosclerosis exists and other rare causes for a chronic progressive loss can be excluded. The presence of a pink-flamingo hue to the middle ear on otoscopy (so-called Schwartz's sign), absent stapedial reflexes on audiometry and bone density changes involving the surrounding bone of the inner ear best appreciated on high-resolution CT scanning also helps in the diagnosis. As otosclerosis is a lifelong condition, the sensorineural hearing loss from cochlear otosclerosis is often superimposed on hearing loss from advancing age (i.e. presbycusis). The sensorineural hearing loss from otosclerosis progresses at an average rate of 5.5 dB/decade, higher than that seen in presbycusis.

Although no medical treatment can ever reverse the sensorineural hearing loss, treatment with oral sodium fluoride may minimize and possibly stabilize an individual's hearing.

5. Trauma

Physical injury to the ear is usually the result of blunt trauma in the circumstances of a significant head injury. Most patients suffering deafness by this mechanism will have had at least transient unconsciousness and have been admitted to hospital.

When physical trauma is severe enough to cause a temporal bone fracture (the temporal bone is the larger part of the skull bone that houses all the structures of the ear), two types of fractures occur; longitudinal and transverse.

In general terms longitudinal fractures are much more common and tend to result in a fracture line through the roof of the middle ear and ear canal. Bleeding from the ear is not unusual. The hearing loss noted is usually conductive and usually arises from discontinuity of the ossicular chain although any combination of conductive and sensorineural hearing loss can occur. The pathognomic sign of a longitudinal temporal bone fracture is the so-called "step deformity" in the deep ear canal. Exploration of the middle ear surgically with correction of the ossicular chain or insertion of a prosthesis is called an ossiculoplasty.

Transverse fractures of the temporal bone occur when the fracture lines run directly through the hard bone of the otic capsule. A fracture through this bone (which is the hardest bone in the body) implies the force of the injury was severe and often incompatible with survival. If the individual survives there is usually complete loss of hearing and vestibular function on the involved side. Facial paralysis from an injury to the facial nerve (a nerve that runs in close approximation to the inner ear) typically

occurs. On examination blood is usually seen in the middle ear behind the ear drum (a hemotympanum).

Trauma however can also be penetrating (i.e. a Q-tip through the ear drum), thermal (i.e. a welder's spark down the ear canal), electrical (accidental electrocution), explosive and even implosive (i.e. professional bell and scuba divers who try to "pop" their ears too vigorously). The resultant hearing loss depending on the mechanism can be conductive, sensorineural or a combination thereof.

When a column of air is forced down the ear canal in an explosive fashion (i.e. a slap to the ear, a bomb blast, etc.) the TM often ruptures in its central portion and the loss is usually conductive until the drum repairs itself. Persistence of a conductive loss after the TM has healed would suggest continued problems with the ossicular chain.

6. Ototoxicity

Ototoxicity is defined as the tendency of certain substances to cause functional impairment and cellular damage to the tissues of the inner ear, especially to the cochlea and the vestibular apparatus. Toxic substances can be delivered systemically either via the blood stream or topically through perforations/ventilation tubes in the ear drum.

Aminoglycoside antibiotics are powerful weapons in the treatment of certain bacterial infections. Unfortunately these antibiotics can cause varying degrees of cochlear, vestibular and renal toxicity. Careful and regular monitoring of auditory function (especially in the ultra high frequencies > 8000 Hz) and serum antibiotic levels may help the physician predict when ototoxic effects are occurring. The prolonged use of topical aminoglycoside antibiotics to treat middle ear pathology in the presence of a TM perforation is not without some risk which should always be kept in mind.

Antimalarial drugs such as quinine and chloroquin unfortunately have ototoxicity as a side effect if taken in excess. Reversibility however is relatively common once the medications have been discontinued. Platinum- based chemotherapeutic drugs (i.e. cisplatin) for the treatment of malignancy (cancer of the breast, lung, etc.) have been especially well documented to cause cochleotoxicity. Of interest the first course of cisplatin often demonstrates which patients are vulnerable to cochlear damage and what may happen in future if continued treatment courses are required.

7. Acoustic Neuroma (AN)

This is a pathologic misnomer since this tumour is strictly a schwannoma of the vestibular nerve. (See Appendix A, Medical Terminology) It arises in the internal auditory canal where nerves run between the inner ear and the brain. Pressure

on or devascularization of the acoustic nerve or inner ear causes hearing loss, usually a high-frequency loss with reduced speech discrimination. Usually the loss is progressive but occasionally may be sudden. ANs are overwhelmingly unilateral, but in association with a rare genetic disorder, neurofibromatosis type 2, they may be bilateral.

Although benign this tumour has serious health implications for the patient and is sought for by otolaryngologists when there is an undiagnosed asymmetry in the hearing. The Auditory Brainstem Response (ABR) is used as a screening test while a gadolinium enhanced Magnetic Resonance Imaging (MRI) study is the gold standard investigation.

8. Sudden Sensorineural Hearing Loss

This diagnosis is given to the individual who experiences a sudden hearing loss in one ear. The extent of the loss varies from a partial loss at one frequency right up to a profound loss at all frequencies with a profound discrimination loss. Patients can sometimes identify the moment of occurrence or wake with it or appreciate it only when they go to use the phone.

These sudden losses are considered by the profession to be most likely viral in origin. Many recover spontaneously and do so within six months. Severe losses and those associated with vertigo have a worse prognosis. Patients if seen early enough i.e. within 2 - 3 weeks are usually treated with a tapering schedule of Prednisone (a potent steroids). The addition of oral anti-viral therapy, intratympanic (IT) steroid injections and/or hyperbaric O₂ treatments also have their proponents.

Audiology

The formal recording of an individual's hearing forms the basis of the audiogram. For the purposes of compensation, the most reliable audiograms will likely be performed by an audiologist who typically has a masters' degree or doctorate in audiology.

Sound intensity is measured in what is called a decibel (dB). The audiometer used to test hearing has been especially calibrated so that each frequency of sound tested for hearing has been normalized where 0 dB represents the lowest intensity of sound that the majority of people with normal hearing can hear from large population studies. It is important to recognize that 0 dB does not mean an absence of sound. In fact some people with "superhuman" hearing can even hear sound intensities less than this relative value of sound pressure. Another concept to appreciate is that the dB scale is a logarithmic (an exponentially increasing) rather than arithmetic (linear increasing) scale which makes it difficult to apply a percentage hearing loss to any individual. For example the difference between 10 and 40 dB in sound pressure intensities is not a

4x's increase but actually an increase by a factor of 1,000 or 103 in sound pressure intensities!

The following audiometric tests form the foundation for most assessments of hearing. These include what is called conventional audiometry and impedance (immittance) testing with tympanometry:

Conventional Audiometry

a. Pure Tone Audiogram (PTA)

An individual's threshold hearing to pure tones at different frequencies (250 - 8000 Hz) is performed.

Air conduction (AC) thresholds are delivered via headphones and the individual is asked to respond to the sound of the lowest intensity (in dB) they hear at the frequency being tested. When a conductive hearing loss is suspected the ear canal and inner ear mechanisms for transmission of sound energy to the inner ear are bypassed by placing a bone vibrator over the mastoid which directly stimulates the inner ear. Bone conduction (BC) thresholds are obtained in this fashion. In complex situations (mixed hearing losses) it may also be necessary to "mask" the ear not being tested (to prevent crossover of sound to the other ear).

In a pure sensorineural hearing loss, AC thresholds should be the same as BC thresholds. In a pure conductive hearing loss BC thresholds will be better than AC thresholds. In a mixed hearing loss, elements of both sensorineural and conductive hearing loss are present. When AC thresholds are better than BC thresholds in a tested ear this usually implies an exaggerated hearing loss is present.

The pure tone audiogram forms the basis for assessing if an individual qualifies for Workplace Safety and Insurance Board (WSIB) benefits in the Province of Ontario. A weighted pure tone average from frequencies at 500, 1000, 2000 and 3000 Hz is required for this determination from AC thresholds if a pure sensorineural hearing loss is present or from BC thresholds if any conductive element to hearing loss is present. (See Appendix C, Question 1 for an explanation why the 4,000 Hz frequency is not used in occupational hearing loss claims).

b. Speech Reception Threshold (SRT)

Complex words with equal emphasis on both syllables (so called spondaic words such as "hotdog", "uptown", "baseball" etc.) are given an individual at the lowest intensity they can hear. As a general rule the SRT value should roughly equal the pure tone average in the speech frequencies at 500, 1000 and 2000 Hz. If there is a significant discrepancy this could imply an exaggerated hearing loss is present as well.

c. Speech Discrimination Scores (SDS)

A list of phonetically balanced single syllable words (these are words commonly found in the English language in everyday speech such as “fat”, “as”, “door” etc.) are presented to an individual at 40 dB above their speech reception threshold (SRT) in the ear being tested. Most individuals with normal sensorineural hearing should get over 80% of the words correct at this level. When speech discrimination scores are especially poor this implies that there may be a lesion involving the cochlear nerve (i.e. acoustic neuroma) and that further investigation may be necessary.

Impedance Testing with Tympanometry

In this test a probe is placed into the ear canal that both emits a sound and can vary pressure within the canal which causes the ear drum to move.

a. Middle ear pressure measurements (acoustic immittance)

This tells whether the pressure in the middle ear is within normal limits and provides some indirect measurement of Eustachian tube function. Pressures between -100 to +100 are considered to be normal. In general terms if the Eustachian tube is functioning normally pressure on both sides of the ear drum should be similar (i.e. a “0” reading).

b. Stapedial reflex testing

Stiffening of the ear drum from loud noise occurs when the stapedius muscle contracts in the middle ear. Most individuals with normal sensorineural hearing will exhibit a reflex at 70-80 dB above their hearing threshold level at the frequency being tested.

Absent stapedial reflexes are usually seen in middle ear pathology such as otitis media with effusion or otosclerosis. When reflexes occur at less than a difference than 70-80 dB above hearing threshold at the frequency tested this is indirect evidence of a phenomenon called recruitment which is usually seen in cochlear pathology (i.e. Meniere’s disease).

c. Tympanometry and Types of Curves

If one measures how the ear drum moves when pressure is changed in the external ear canal from negative to positive a series of curves can be attained. Clinical correlation has demonstrated that the following curves usually are seen in these pathologies (Figure 1):

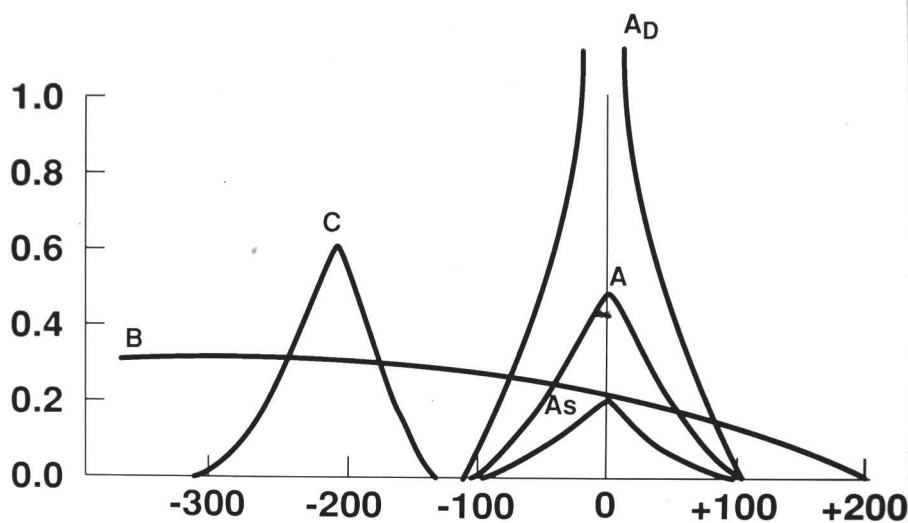


Figure 1 - Schematic representation of tympanometry curves

A - Normal

As- Otosclerosis or ossicular fixation

AD- Ossicular discontinuity

C- Eustachian tube dysfunction

B- Middle ear atelectasis (the TM is rigidly fixed to the middle ear) or otitis media with effusion (glue ear)

If a TM perforation is present it is impossible to obtain a “seal” of the middle ear or a tympanogram.

Evoked Response Audiometry

The ability to measure minute electrical potentials following sound stimulation of the cochlea (i.e. evoked response) provides us with information concerning the cochlea (i.e. electrocochleography), the cochlear nerve and brainstem (i.e. auditory brainstem response or ABR) and higher cortical auditory pathways (i.e. threshold evoked potentials, cortical evoked response audiometry). An experienced tester, typically an audiologist, is required to perform these technically demanding tests.

The indications and relative importance of these tests are described below.

1. Electrocochleography (ECoG) - This test measures electrical activity in the cochlea during the first 2 msec of cochlear stimulation. ECoG's chief value lies in its ability to demonstrate wave 1 of the auditory brainstem response (ABR) and whether waveform morphology is suggestive of changes thought to occur in endolymphatic hydrops, the pathophysiologic substrate of Menière's disease.

2. Auditory Brainstem Response (ABR) - This term is synonymous with the term brainstem evoked potential (BEP) or the brainstem evoked response audiogram (BERA). This test measures electrical waveforms obtained in the first 10 msec from cochlear stimulation. Waveform morphology is thought to arise from the cochlear nerve and the various relay stations in the brainstem the electrical response has to travel through. Changes in waveform morphology and latency of the ABR can be quite helpful in the assessment of an individual with an asymmetric sensorineural hearing loss if an acoustic neuroma is suspected.
3. Threshold Evoked Potentials (TEP) - These electrical waveforms are usually identified between 50 - 200 msec following cochlear stimulation and are thought to represent cortical pathways of electrical activity. One advantage of TEP testing is that the electrical waves can provide us with information concerning the actual threshold at a certain frequency an individual hears and as such gives us some objective measurement of an individual's hearing that is not dependent on a voluntary response. The test is often indicated in an individual if there are concerns regarding an exaggerated hearing loss.

A Quick Primer for Understanding Audiograms

General Principles

- Air conduction (AC) determines the severity of hearing loss.
- Bone conduction (BC) determines the inner ear portion of hearing.
- AC and BC should be the same in a sensorineural hearing loss.
- If AC thresholds are greater than BC thresholds this usually implies there is a conductive component to hearing loss from pathology involving the external or middle ear.
- If BC thresholds are greater than AC thresholds this would typically suggest an exaggerated hearing loss or malingering.

Hearing Loss Classification Based Upon dB level

- 26-40 dB = mild
- 41-55 dB = moderate
- 56-70 dB = moderate-severe

- 71-90 dB = severe
- 91+ dB = profound

Audiogram Nomenclature*

Ear	Right	Left
Air Conduction	O	X
Masked Air Conduction	Δ	Δ
Bone Conduction	<	>
Masked Bone Conduction	[	]

* When reviewing an audiogram it is always important to carefully check each audiogram legend before interpretation as variations in the symbols used might exist in different testing facilities.

Common Audiometric Configurations in Certain Disease Pathologies

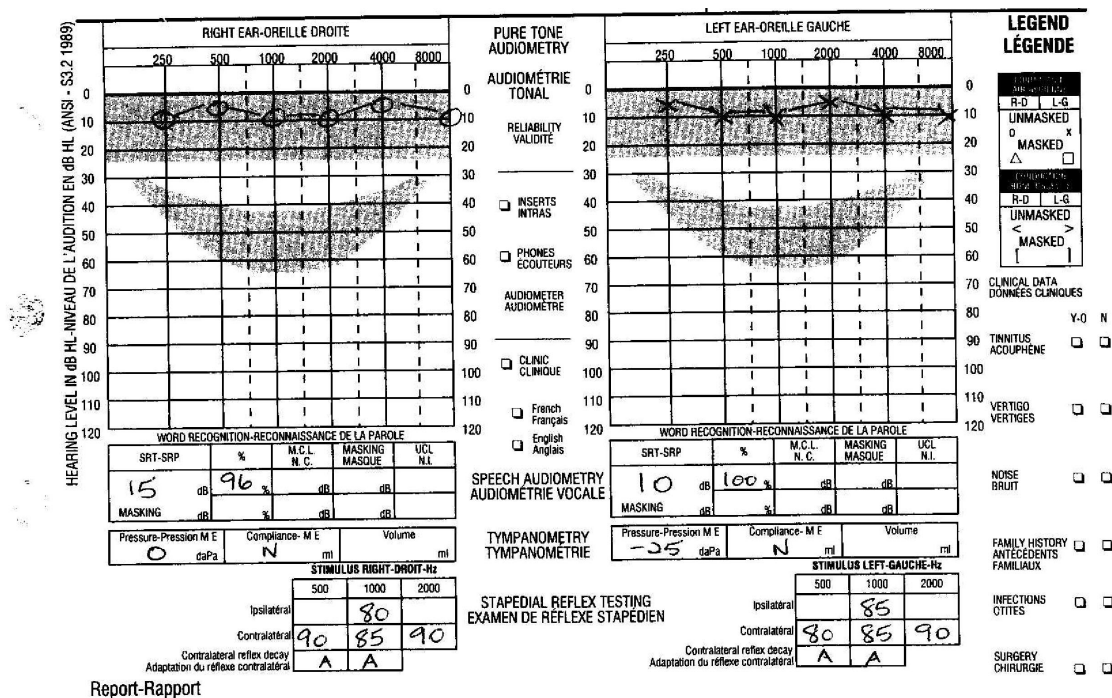


Figure 2 - Normal audiogram

1. Noise Induced Hearing Loss

In its classic presentation a notched sensorineural hearing loss is noted at 4000 Hz that should be relatively symmetric. Middle ear pressures should be normal, stapedia reflexes present and a normal tympanogram noted.

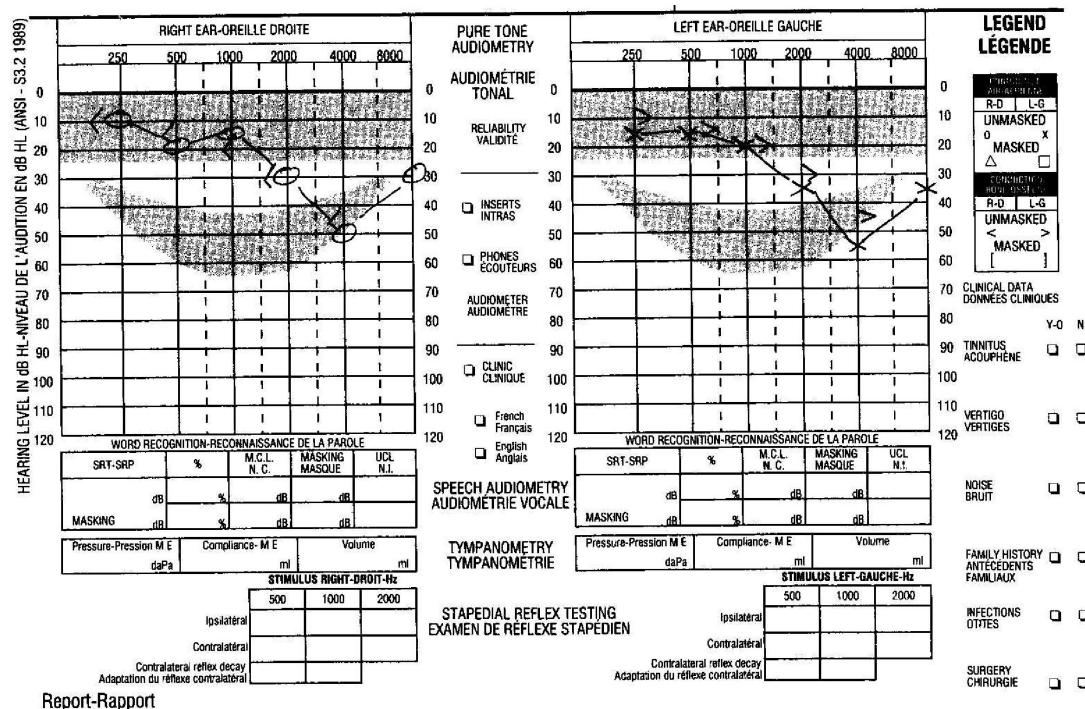


Figure 3 - Audiogram in NIHL case

2. Presbycusis

Age related hearing loss typically presents with a bilateral symmetrical high frequency sensorineural hearing loss.

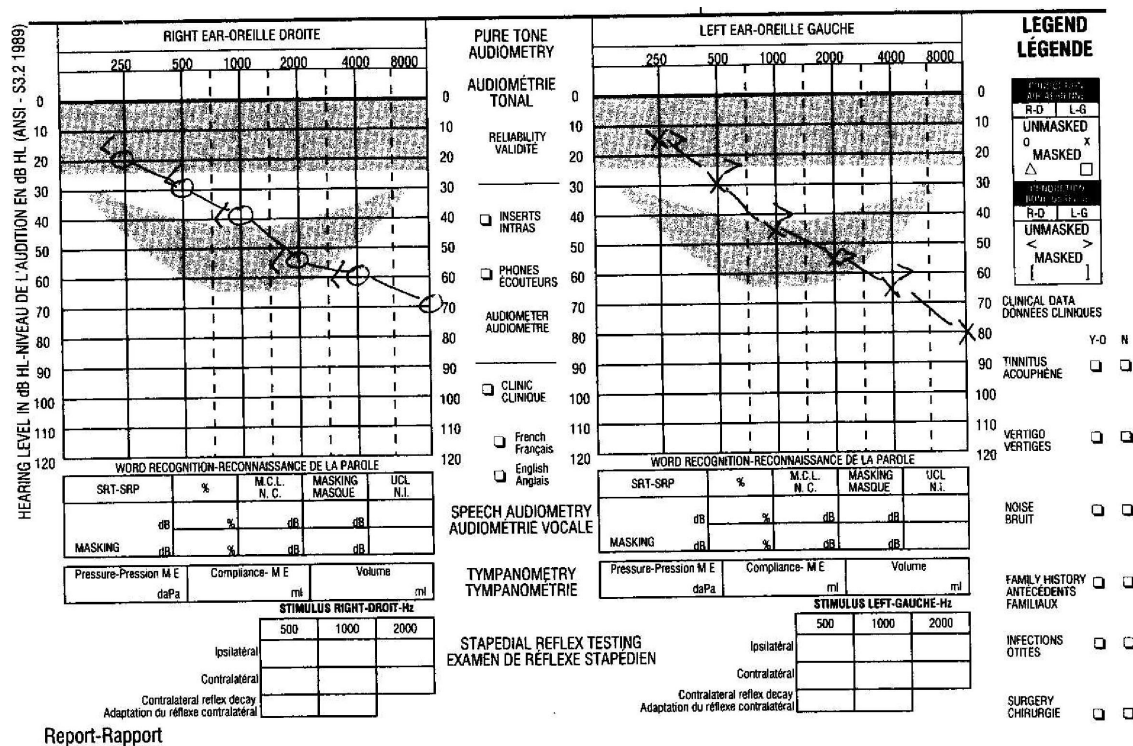


Figure 4 - Audiogram in presbycusis case

3. Menière's Disease

A low frequency sensorineural hearing loss is pathognomonic for this condition. Fluctuation in hearing is often noted on sequential audiometry.

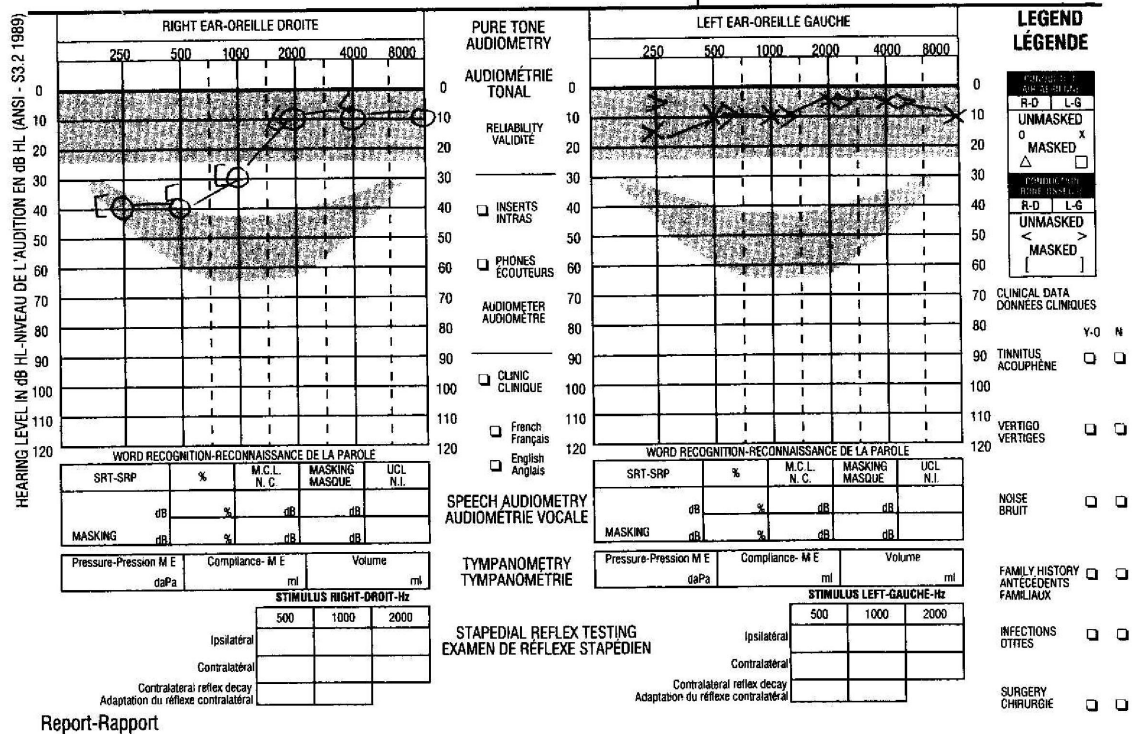


Figure 5 - Audiogram in Menière's Disease (Right side affected)

4. Congenital Hearing Loss

Individuals usually present with hearing loss early in life. A mid-frequency hearing loss is sometimes noted. This is often called a "cookie-bite" audiogram.

5. Exaggerated Hearing Loss

There are often numerous discrepancies noted such as the presence of acoustic reflexes at levels below volunteered pure tone thresholds, discrepancies between volunteered pure tone average and speech reception thresholds etc. Repeat testing and evoked response audiometry is often helpful.

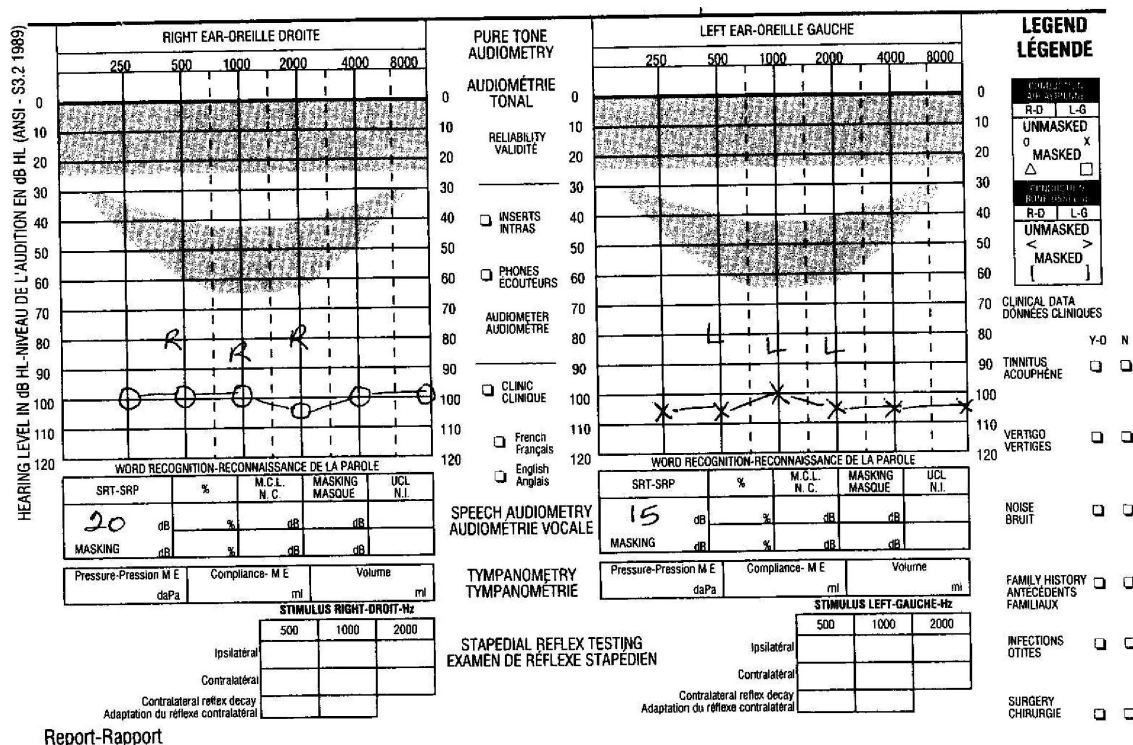


Figure 6- Audiogram in exaggerated hearing loss case

Tinnitus

Tinnitus (from the Latin, "to ring a bell") by definition is unwanted head noise. It is a common problem that affects an estimated 20% of the population at any given time. Tinnitus can be either subjective or objective.

Subjective tinnitus can only be appreciated by the affected individual, is usually associated with a sensorineural hearing loss of some type and is the most common type noted. It is usually described as a constant sound (i.e. ring, buzz, hum, etc.) that is worse in the absence of competing background noise (i.e. at night).

Objective tinnitus, on the other hand, is quite rare but by definition is a noise that can be appreciated by an observer. Usually the tinnitus here is described as being pulsatile or clicking. Causes for objective tinnitus include the presence of vascular middle ear

tumours (i.e. glomus tumours), aneurysms near the inner ear / skull base or from the repetitive contractions of the middle ear muscles (so-called middle ear myoclonus).

Regardless of cause tinnitus can be quite disturbing for many individuals and can certainly affect their well-being.

Treatment for tinnitus includes the use of more pleasurable competing background noise (i.e. keeping the radio on at night, wearing a Sony Walkman, etc.), aids to improve hearing or masking devices that dampen the unwanted head noise. Tinnitus maskers are noise generators worn like a hearing aid that produces a sound of similar frequency to an individual's tinnitus. When tinnitus is severe enough to affect an individual's well-being a trial of pharmacological treatment is generally recommended. Certain anti-depressants (especially the tricyclic or SSRI classes) and anti-convulsants (medications used for seizure control) have been effective for some individuals. New therapies involving tinnitus retraining strategies are currently under investigation.

a. Tinnitus in NIHL Claims

In the context of a NIHL claim, tinnitus not infrequently is noted. Compensation is available for a non-economic loss (NEL). The problem with tinnitus however is that it is difficult to quantify objectivity and to fully appreciate how it affects an individual's well-being. In general terms when a claim for tinnitus exists the medical assessor ideally would like to have the following criteria (as suggested by the Veteran's Administration [VA] in the United States) present before a NEL award is made:

1. The claim for tinnitus should be unsolicited.
2. The tinnitus must accompany a compensable level of hearing loss (i.e. a tinnitus match audiometrically).
3. The tinnitus should be present for at least 2 years.
4. The individual affected has undergone treatments to try to alleviate their perceived unwanted head noise (i.e. medication trials, prosthetic devices, psychiatric intervention, etc.).
5. Evidence to support a personality change or a sleep disorder as a result of the tinnitus.
6. No history of substance abuse.
7. A history of tinnitus supported by statements from the family.

Hyperacusis

Hyperacusis is a curious phenomenon where an individual describes an uncomfortable, sometimes painful hypersensitivity to sounds that would be normally well tolerated in daily life. In some instances it can be quite disabling for the affected individual who tends to withdraw from any exposure to uncomfortable noise. Many individuals affected often have normal hearing. The term “phonophobia” has been used interchangeably but erroneously implies that it is more of a psychological disorder which is certainly not the case.

Why hyperacusis arises is poorly understood. It has been documented at times to follow an incident of acute acoustic trauma. Sometimes it arises without a cause being identified. Investigations such as a magnetic resonance imaging (MRI) are generally required to exclude the remote possibility of central nervous system pathology. Mean comfort levels (MCL's) and uncomfortable loudness levels (ULL's) during audiometry provide some information concerning the threshold intensity of sound an individual can tolerate.

Tinnitus and hyperacusis not infrequently co-exist in an affected individual.

Treatment usually requires the gradual introduction of increasing sound intensity that becomes better tolerated with time. Cognitive behavioural therapy (CBT) has also demonstrated promise in a recent randomized controlled study.

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Appendix A

Glossary

1. Definitions for Impairment/Handicap/Disability*

- ***Permanent Impairment of Hearing*** - When any anatomic or functional abnormality produces a permanent reduced hearing sensitivity.
- ***Permanent Handicap for Hearing*** - The disadvantage imposed by an impairment sufficient to affect the individual's efficiency in the activities of daily living (ADL).
- ***Permanent Disability*** - A person is permanently disabled or under permanent disability when the actual presumed ability to engage in gainful activity is reduced because of handicap and no appreciable improvement can be expected.

2. Medical Terminology

Acute Otitis Media (AOM) - Middle ear infection usually caused by pathogenic bacteria.

Acoustic Neuroma (Vestibular Schwannoma) - A benign brain tumour that arises on the vestibular nerve usually within the internal auditory canal (IAC). The tumor is derived from the schwann cells that produce the myelin covering for the nerve. A more pathologically correct term would be that of a vestibular schwannoma (VS). One general maxim in medicine is that "*an unexplained unilateral sensorineural hearing loss should be considered an acoustic neuroma until proven otherwise*".

Cholesteatoma - Invasion of the middle ear/mastoid by skin usually originating from TM retractions. The two major properties of cholesteatoma include chronic infection and bone erosion. Hearing loss is generally present. Because of the brain's proximity possible life-threatening complications can occur if left untreated (i.e. meningitis, brain abscess etc.).

* Adapted from the American Medical Association (AMA) *Guides to the Evaluation of Permanent Impairment-Third Edition 1990*.

Chronic Suppurative Otitis Media (CSOM) - A general term for any chronic persistent and recurrent bacterial infection of the middle ear/mastoid. It is typically painless until a complication arises. It is associated with hearing loss and an intermittent often malodorous discharge from an affected ear.

Meniere's Disease - A classic inner ear disorder associated fluctuant sensorineural hearing loss, tinnitus and episodic attacks of vertigo lasting minutes-hours. The pathology is thought to arise from excess fluid in the inner ear leading to membrane ruptures (so-called endolymphatic hydrops).

Otitis Media with Effusion - An encompassing term that describes the presence of fluid behind the TM. It can be watery (i.e. serous otitis media), glue-like (i.e. mucoid otitis media) or a combination of both.

Otosclerosis - Genetically inherited condition (approximately 1 in 20 people carry the otosclerosis gene) associated with the development of new, immature bone which primarily involves the stapes footplate leading to a progressive conductive hearing loss. When the otosclerotic foci affect the cochlea this can lead to progressive sensory neural hearing loss (so-called "cochlear otosclerosis") additionally.

Ototoxicity - Tendency of certain drugs/substances to cause functional and cellular damage to the inner ear, especially in the endorgans of hearing and balance. Certain antibiotics (especially the aminoglycoside class), antimalarials, chemotherapeutic agents and even excessive doses of ASA can be toxic to the inner ear.

Presbycusis - Hearing loss associated with age. Although changes may take place as early as age 40, hearing loss due to aging usually starts to accelerate around ages 55-60 yrs and continues with age.

Tinnitus - Unwanted head noise commonly described as a ringing, buzzing, humming noise. It is typically associated with some degree of sensorineural hearing loss.

Tympanosclerosis - Calcification of the middle layer of the eardrum that looks like a patch of white chalk. Infers that an individual has had previous ear infections. Usually of no clinical consequence to an individual's hearing unless the ossicular chain involved.

3. Surgical Terminology

Mastoidectomy - Procedure designed to exteriorize disease in the mastoid air cells and adjoining middle ear. Procedure usually performed for CSOM especially when due to cholesteatoma.

Ossiculoplasty - Procedure where the ossicular chain is repaired in order to try and improve hearing.

Stapedectomy/Stapedotomy - Surgical procedures for otosclerosis (an inherited disorder where the stapes footplate becomes fixed by new bone growth involving the otic capsule). In stapedectomy surgery the entire stapes is removed (including its footplate) and a prosthesis is inserted that is attached to the incus connecting to the inner ear. In stapedotomy a small hole is placed into the stapes footplate leaving the remaining portion of the footplate intact. The suprastructure is removed and a similar prosthesis is used for reconstruction.

Tympanoplasty - When used in its most simplistic context it means the repair of a previous TM perforation.

Ventilation (myringotomy) Tube - The placement of an open ended tube or “grommet” into the TM acts like an artificial Eustachian tube which helps ventilate the middle ear space. The incision to place the tube in TM is called a *myringotomy*. The procedure is usually done to resolve a conductive hearing loss from otitis media with effusion.

4. Audiological Terminology

Audiogram - This is the standard test to assess an individual's hearing. It can be recorded on a graph or a digital format. The pure tone audiogram measures the individual's hearing at certain frequencies at the minimal intensity of sound (in dB) necessary to hear.

Decibel (dB) - A decibel is an accepted measure of sound pressure level used to describe sound intensity. It is based on 1 Bel (B) being equal to an accepted sound pressure level of 0.0002 dynes/cm². Because of the large numbers involved in sound pressure measurement dB scales have been created for convenience (i.e., 100 Bel = 10² Bel = 0.02 dynes/cm² = $2_{(\log 10)}$ Bel or 20 dB; 10,000,000 Bel = 70dB). The greater the dB reading at any frequency, the worse an individual's hearing is.

Evoked Response Audiometry - Measures electrical responses within the inner ear, cochlear nerve and central nervous system that are generated by loud repetitive clicks. Types of evoked response audiometry include:

- a. **Auditory Brainstem Response (ABR)** - Synonymous with the term BERA (brainstem evoked response audiometry) or auditory BEP's (brainstem evoked potentials). This test measure electrical activity along the cochlear nerve and at the various relay stations in the brainstem between 1-10 msec of stimulation. This test is typically performed when an asymmetric sensorineural hearing loss is present when there is concern a retrocochlear lesion such as an acoustic neuroma or MS might be present.
- b. **Cortical Evoked Response Audiometry** - Synonymous with Threshold Evoked Potential (TEP) testing. This test looks at electrical waveforms in the cortical areas of the brain between 50-200 msec after cochlear stimulation. The presence of waveforms following stimulation with the lowest intensity sound an individual's cochlea hears

provides us with a reasonable estimation of an individual's hearing (usually within 5-10 dB of the anticipated threshold hearing at the frequency tested).

This test is typically performed as one of the tests to confirm or exclude whether an exaggerated hearing loss (malingering) is present.

- c. **Electrocochleography** - An evoked response test that primarily looks at the electrical activity generated within the cochlea and the cochlear nerve before it reaches the brainstem. This test is primarily performed to identify the presence of endolymphatic hydrops (the pathophysiologic correlate of Meniere's disease).

Frequency- Number of times one complete sound wave occurs in 1 second. The audiogram records this as cycles/sec or Hertz (Hz). As a general rule the higher the frequency, the higher the pitch.

Otoacoustic Emissions (OAEs) - Evoked test that measures minute responses to sound thought to arise from the contractile elements of the outer hair cells. Depending on the frequency of the sound certain parts of the cochlea will emit an "echo" in response.

- a. Transient OAEs are created from broadband noise stimulating the outer hair cells. It provides reasonable "pass/fail" results that help determine whether an individual's sensorineural hearing is better than 30dB. As a result it has become an ideal neonatal screening technique for deafness.
- b. Distortion product OAEs (DPOAEs) are currently being employed in more complete neonatal screening for hearing loss and have a potential role in screening for exaggerated hearing loss.

Impedance Testing - Part of the conventional audiometric test battery that helps measure middle ear pressures and whether ipsilateral and contralateral stapedial reflexes are present /absent.

Recruitment - Perceived abnormal progressive loudness of noise in an individual with a sensorineural hearing loss. Thought to be a hallmark of cochlear dysfunction. Not infrequently seen in Meniere's disease.

Speech Discrimination Score (SDS) - The percentage score an individual correctly identifies when presented with a list of phonetically balanced (PB) words usually tested at 40dB above their hearing threshold.

Speech Reception Threshold - The dB threshold level at which an individual is first able to hear speech and recognize spondaic words (i.e. words like hotdog, baseball, uptown, downtown, ice cream etc.)

Stapedial Reflex Testing - Measures reflex contraction of the stapedius muscle. This occurs to a loud noise typically 70-80 dB above an individual's hearing level at the frequency tested which causes stiffness of the ossicular chain and tympanic

membrane Absent stapedial reflexes are usually seen in otosclerosis due to stapes footplate fixation for example. Sometimes the responses can be very large if there is an ossicular chain discontinuity.

Tympanometry - Formal tracing of how the TM moves when pressure is altered in the external auditory canal. Helpful in addition to impedance testing in determining if middle ear pathology is present.

5. Specific Noise Induced Hearing Loss Terminology

Acoustic Trauma - Damage to the ear caused by a single exposure to an impulse noise of high density.

Continuous Noise - A noise that remains relatively constant in sound level for at least 0.2 seconds.

dBA - Measurement of a sound level using the A scale of a sound-level meter; with the A filter, low and very high frequencies are attenuated, thus giving greater weight to those frequencies most likely to be damaging to the ear.

dB HL - Hearing level referenced to a pressure of 20 uPa; this reference level corresponds to the amount of acoustic energy that is just audible for those frequencies to which humans are most sensitive.

Dosimeter - An instrument that integrates a function of constant varying sound pressure over a specified time period in such a manner that it directly indicates a noise dose and estimates the hazard of an entire exposure period.

Impact Noise - A type of transient noise produced by the collision of two masses (i.e. pile driver) and consisting of a succession of positive and negative pressure peaks of slowly declining amplitude.

Impulse Noise - A type of transient noise produced by the sudden expansion of gasses (i.e. gunfire, explosion etc.) and characterized by single positive pressure peak then a rapid return to normal atmospheric pressure.

Permanent Threshold Shift (PTS) - The permanent depression in hearing sensitivity resulting from exposure to noise at damaging intensities and durations.

Temporary Threshold Shift (TTS) - The temporary (usually several hours) depression in hearing sensitivity resulting from exposure to noise at damaging intensities and durations.

Time Weighted Average (TWA) - The sound level or noise equivalent that, if constant over an eight hour day would result in the same exposure as the noise level in question (assuming a 5 dB doubling rule). Different jurisdictions apply different rules depending on whether a 3 or 5 dB criteria is used.

- a. **3 dB rule** - If risk to hearing is simply related to the total energy in noise exposure then doubling of sound energy would result in a 3 dB increase in noise level. This rule would require that exposure time to noise be halved for each 3 dB intensity increase in order to maintain the same risk to hearing.
- b. **5 dB rule** - The statement that risk to hearing is related to the total energy in a noise exposure *plus the physiologic processes* in the auditory system that may limit the deleterious effects of continuous or subsequent overstimulation by the noise; this rule defines equal hearing risk to noise exposure for which exposure duration has been halved for each 5 dB increase in intensity.

Appendix B

Anatomy and Physiology of the Ear

The ear is a complex organ that has dual responsibility for hearing and balance (vestibular) function. Conceptually it has three distinct anatomical components which include the external, middle and inner ear.

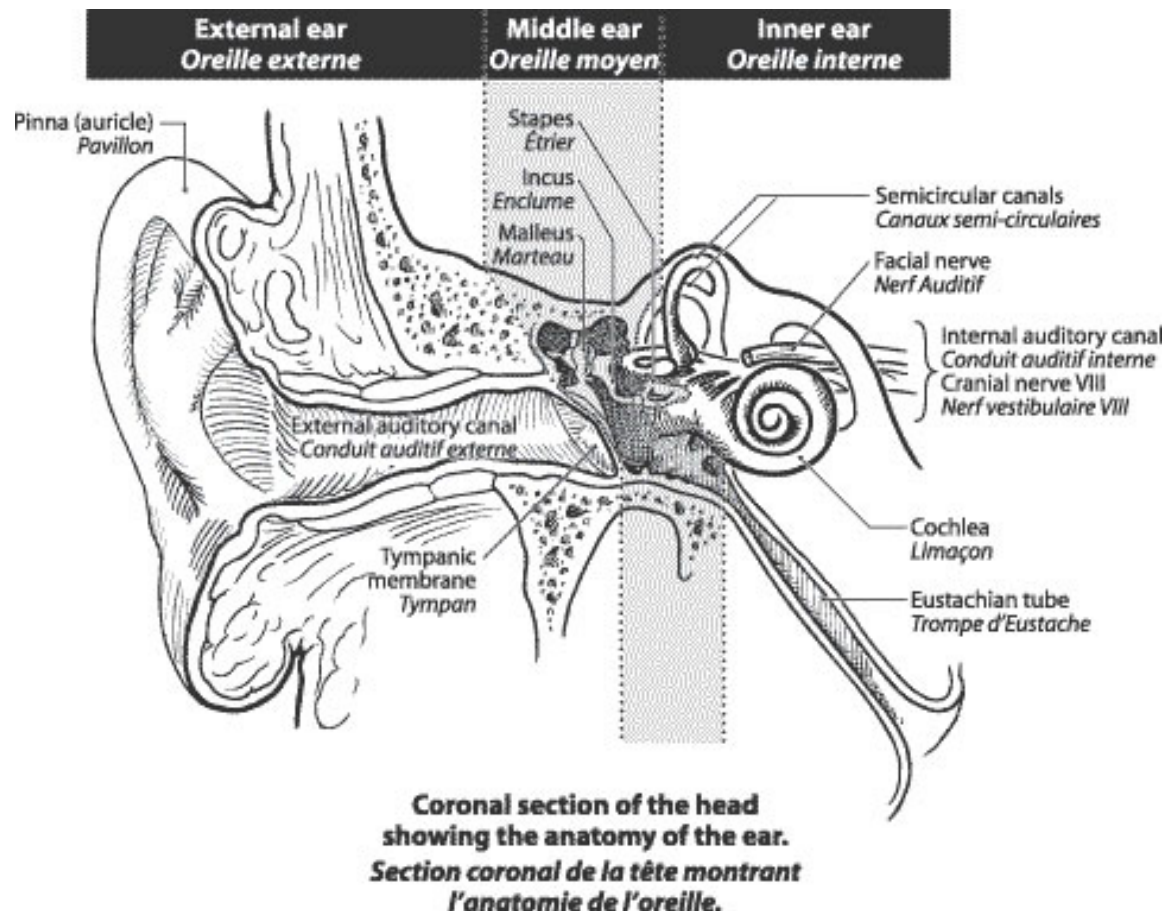


Figure B-1 - Anatomical drawing of the ear

a. The External Ear

The external ear consists of the auricle (pinna) and the ear canal. The auricle is a flattened, funnel shaped appendage that contains a cartilage framework covered by skin. In humans the auricle has rudimentary functions for gathering sounds and in sound localization which is much more important in animals. To some degree it helps to protect the ear canal from foreign bodies and insects.

The ear canal (external auditory canal) originates from the concha (so-called bowl) of the auricle and extends medially to the tympanic membrane. It is approximately 25-30mm in length and can be thought of as having a cylindrical shape. The first part of the ear canal is cartilaginous and is lined by thick, hair bearing skin that contains numerous sebaceous and ceruminous glands. The deeper part of the ear canal is bony, lacks skin appendages and is lined by thinner skin densely adherent to the periosteal lining of the bone.

The ear canal's primary function is to provide a conduit for airborne sound waves to reach the tympanic membrane. The anatomy favours the transmission of sound waves typically between 500-8,000 Hz which interestingly represents the common speech frequencies of most individuals. A secondary function is to protect the tympanic membrane from trauma. Somewhat unique is the ear canal's ability to self-cleanse. Continuous migration of epithelium from the deeper to the lateral portion of the ear canal tends to keep the ear clean. Wax and debris can collect in the ear canal when this migratory mechanism fails or is overloaded from infectious or inflammatory conditions.

b. The Middle Ear

The middle ear cleft is a more extensive designation of the middle ear that has three main components which include the middle ear cavity, mastoid air cell system and the Eustachian tube. Proper function of the Eustachian tube which connects the middle ear cavity to the back of the nose (nasopharynx) is important for the normal middle ear aeration and function. Malfunction of the Eustachian tube remains the leading cause for most middle ear disorders.

The mastoid air cell system consists of a series of small mucosal lined air cells interconnected with each other and the middle ear proper. Their actual role in humans remains unclear. The air cell system is typically underdeveloped or even absent (sclerotic) in individuals with a past history of recurrent ear disease. Their infection can sometimes lead to a mastoiditis with serious consequences.

Important structures of the middle ear include the tympanic membrane and the ossicular chain. The tympanic membrane or ear drum is an ovoid, pale gray, semi-transparent membrane positioned obliquely at the medial end of the ear canal. It is a three layered structure whose outer epithelial layer is contiguous with the skin of the external auditory canal, its middle layer is fibrous and its inner layer is composed of the

same mucosal lining found throughout the middle ear cleft. It is anatomically divided into 2 parts: the pars tensa and the pars flaccida (located in what is called the attic region of the tympanic membrane). The pars tensa or lower four-fifths of the ear drum is conically shaped and has a strong fibrous middle layer which provides strength. The pars flaccida or upper one-fifth is less distinct and has a poorly developed middle fibrous layer. This makes the pars flaccida especially susceptible to negative middle ear pressure and prone to retractions that can lead to the formation of retraction pockets. When retraction pockets fail to be self-cleansing they fill with debris and desquamated skin that can lead to secondary infection and bone erosion better known as cholesteatoma.

The ossicular chain consists of the three small interconnected mobile bones known as the malleus (hammer), incus (anvil) and stapes (stirrup). The tensor tympani and stapes muscles help stabilize the bones along with suspensory ligaments of connective tissue inside the middle ear. Clinically the malleus is attached by its handle to the tympanic membrane and is readily visible in most individuals on otoscopic examination. Medially the arch (crura) of the stapes attaches to the inner ear via its footplate (which is a thin, flat oval piece of bone approximately 7mm X 3mm in dimension). The blood supply to the incus can be tenuous compared to other structures of the middle ear. When pathology affects its blood supply it can lead to the erosion of its long process which is attached to the stapes. This in turn can result in an ossicular discontinuity.

c. The Inner Ear

The inner ear is the sensory end organ within the hardest bone of the body known as the petrous portion of the temporal bone. Covered by an otic capsule its membranous portion (or labyrinth) contains a delicate system of fluid-filled canals lined with sensory neuroepithelium necessary for hearing and balance perception. The separate but intimately related perilymphatic and endolymphatic compartments of the inner ear and their ionic constituents are efficiently controlled by the stria vascularis of the cochlea and the dark cells of the vestibular apparatus.

The cochlea specifically refers to the sensory portion of the inner ear responsible for hearing. It is a three chambered organ containing anatomical spaces known as the scala media, scala vestibuli and scala tympani. The sensory end organ for hearing is known as the organ of Corti. It contains a single row of inner hair cells (IHC's), three rows of outer hair cells (OHC's) and numerous supporting cells draped by the gelatinous tectorial (TM) membrane which lies on a basilar membrane. The basilar membrane (BM) separates the organ of Corti (OC) found in the scala media from the scala tympani. Another structure called Reissner's membrane (R) forms the roof of the scala media (M) which separates this from the scala vestibuli (V).

The scala media contains a potassium rich fluid known as endolymph. The scala vestibuli and scala tympani (T) by comparison contain fluid rich in sodium called perilymph. This ionic difference between these chambers forms the basis of the

endocochlear electrical potential which is necessary for the conversion of mechanical activity from fluid movement within the cochlea to electrical activity arising from the hair cells. Series of generation potentials culminate to form action potentials that transmit this electrical activity along the cochlear nerve fibres to the brainstem and onto the higher centers of auditory processing.

The vestibular portion of the inner ear consists of three fluid lined semicircular (superior, lateral and posterior) canals and the area called the vestibule which houses the otolithic macular endorgans. Within each semicircular canal is an area called the ampulla which contains hair cells sensitive to low frequency bidirectional fluid displacement that occurs with angular acceleration type movements of the head. The hair cells of the otolithic endorgans (utricle and saccule) are covered by otoliths (literally “little stones” or crystals of calcium carbonate). The hair cells of the vestibular macula respond primarily to gravity and linear accelerations. Abnormalities in vestibular end organ function often result in the patient experiencing the subjective complaint of vertigo.

Fig. B-2A Section through the Cochlea

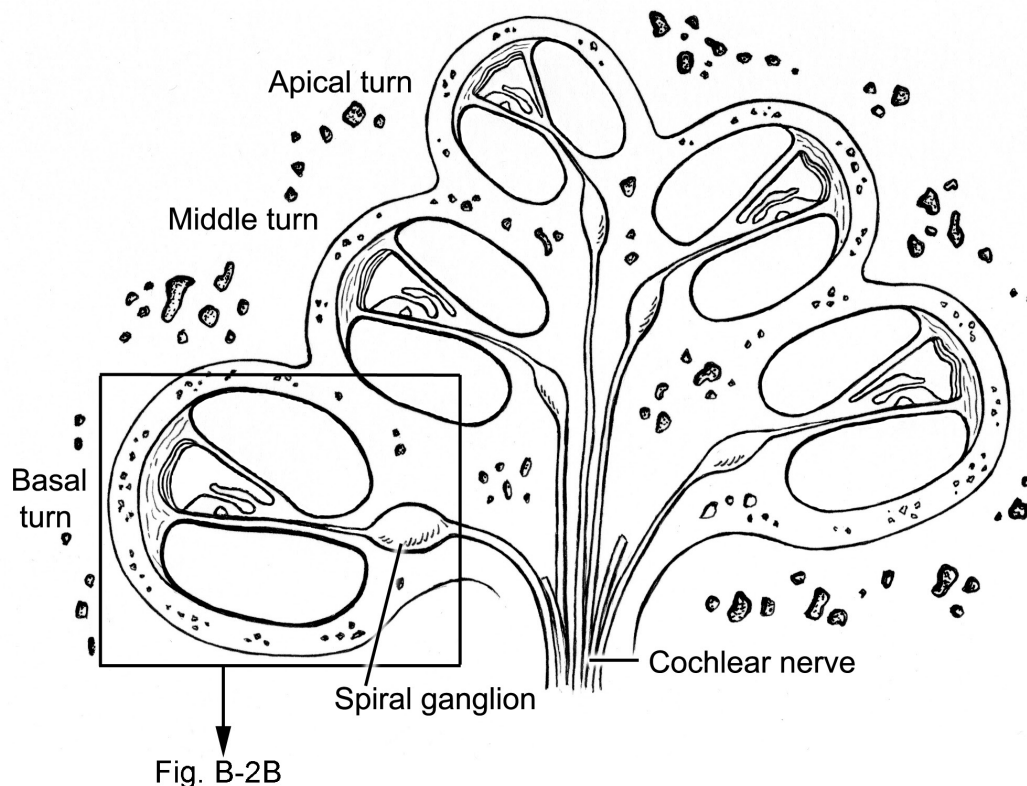


Figure B-2A - Section through the cochlea

Fig. B-2B Section through one turn of the Cochlea

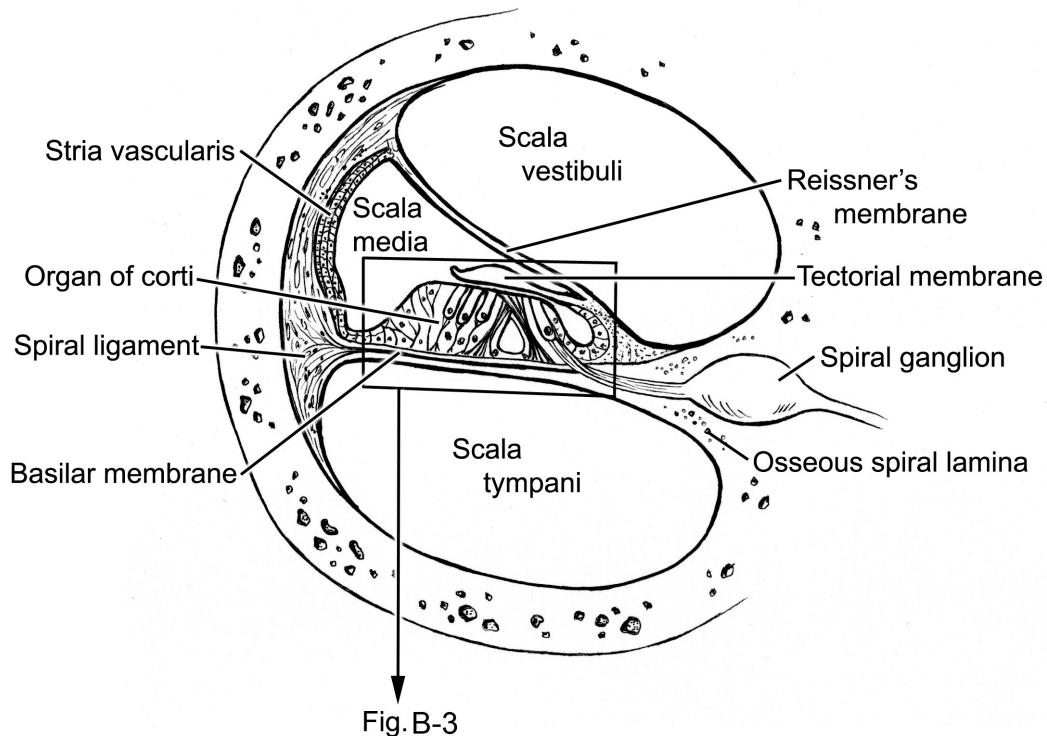


Figure B-2B - Section through one turn of the Cochlea

Physiology of Hearing

Sound vibrations are picked up by the pinna and transmitted down the external auditory canal where they strike the TM causing it to vibrate. The sound vibrations are then transmitted across the air-filled middle ear space by the 3 tiny linked bones of the ossicular chain: the malleus, incus and stapes. The mechanical vibrations are transmitted to the inner ear via the vibrations of the stapes footplate.

When the mechanical vibrations of the stapes footplate reach the inner ear they create traveling waves in the cochlea. The hair cells change these mechanical vibrations from the waves into electrochemical impulses that can be interpreted by the central nervous system (CNS). The tiny cilia (little hairs) on top of the hair cells (both inner and outer) are covered by a gelatinous membrane called the tectorial membrane. Fluid waves in the inner ear cause a deflection of both the tectorial and basilar membranes that surround the organ of Corti. The cilia move and generate a nerve impulse called a generation potential (GP). When enough generation potentials occur they result in what is called an action potential (AP). The transmission of electrical activity along the cochlear nerve will ultimately make its way through a series of nuclear relay stations

within the brainstem (this concept forms the basis of the electrophysiological test called the *auditory brainstem response* or *ABR*). Electrical signals are then forwarded to the auditory cortex in the temporal lobe for decoding. How we perceive what certain electrical signals represent in our auditory cortex forms the basis for the field of *psychoacoustics* (ie the perception of sound).

Although the vast majority of the cochlear nerve fibres are termed *afferent* (ie nerves that carry electrical activity from the inner ear to the brain), within the cochlear nerve itself we have a small number of nerve fibres designated as *efferent* (nerves that carry electrical activity from the brain to the inner ear). Most of the efferent fibres seem to land on the outer hair cells of the organ of Corti. This apparent internal “feedback loop” is thought to be responsible for “fine tuning” by inhibiting some unwanted electrical impulses and by changing the mechanical properties of the basilar and tectorial membranes. The presence of active non-muscular contractile elements within the outer hair cells and their effects on movement of the basilar membrane is used to explain the concept of *otoacoustic emission* (OAE) testing.

Of interest when the outer hair cells become injured or affected by pathology they also lose their ability to “fine tune” the electrical responses arising from the inner ear. The phenomenon of *recruitment* represents an abnormal sense of loudness. Distortion of certain sounds arises when enough hair cells are damaged such that the hearing threshold is reduced. When the sound gets loud enough the inability to “fine tune” sound becomes lost and more nearby hair cells are drawn into the firing needed to create an electrical signal; hence the distortion of a loud sound.

Although an individual may have apparently normal hearing it does not necessarily mean the cochlear nerve is undamaged. It is estimated that up to 75% of the auditory nerve supplying a certain section of the cochlea can be injured without causing an appreciable change in pure tone threshold hearing. This may be one reason why certain individuals with tumors arising on the nerves of balance and hearing better known as *acoustic neuromas* (vestibular schwannomas) often preserve their tonal perception of sound yet have problems with its discrimination (i.e. they know someone is talking on the telephone but can’t understand what is being said in the affected ear).

Fig. B-3 Schematic Diagram of the Organ of Corti

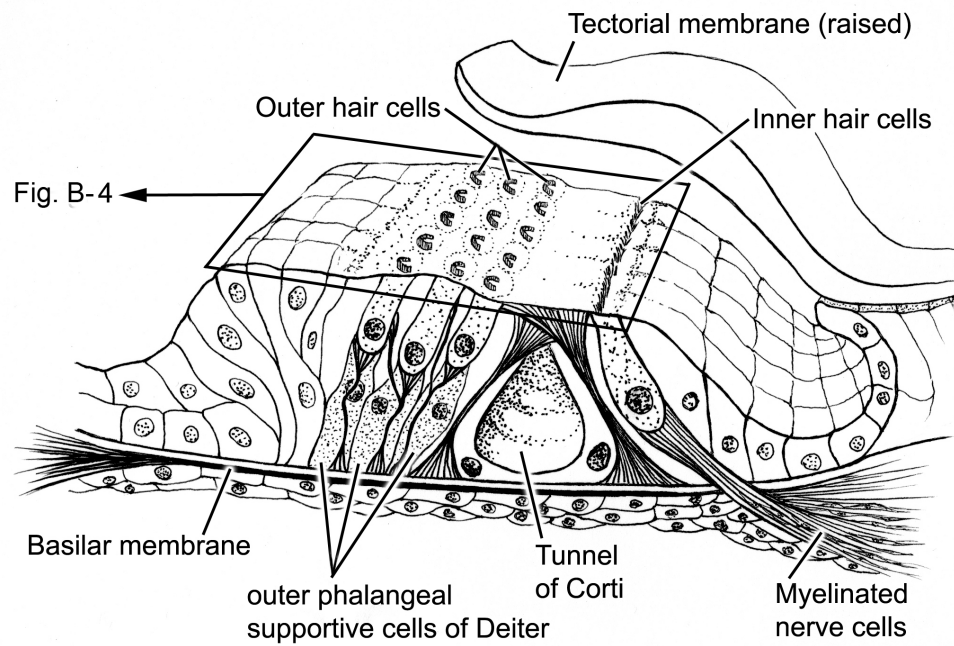


Figure B-3 - Schematic Diagram of the Organ of Corti

Fig. B-4 Electron Microscopy Schematic of Inner and Outer Hair Cells

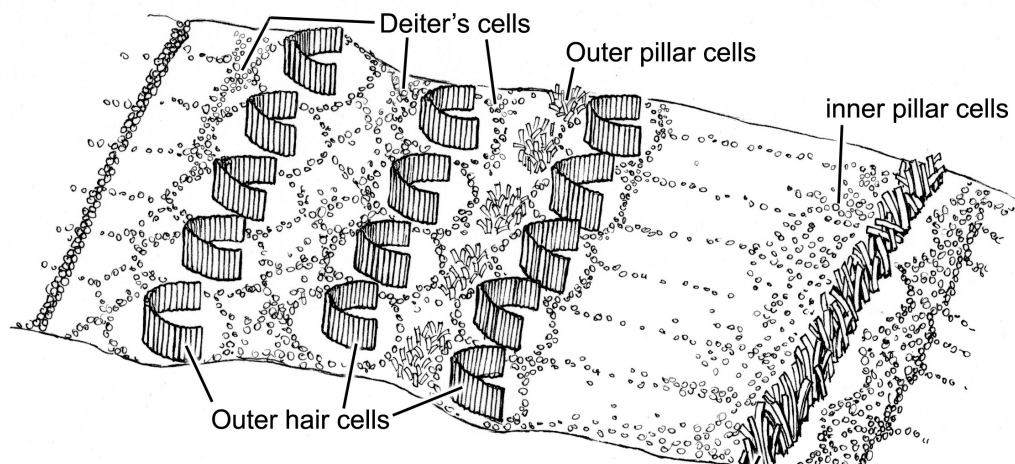


Figure B-4 - Electron Microscopy Demonstrating Inner and Outer Hair Cells

Some Physical Considerations of Sound

Sound is the propagation of pressure waves through a medium such as air and water for example. It can be a simple sound commonly known as a pure tone or it may be complex when we think of speech, music and noise. A cycle of a pure tone is represented by a sine wave appearance with an area of compression followed by rarefaction.

Pure tones have several important characteristics. Frequency represents the number of cycles per second or Hertz (Hz). Low sounds tend to have a long wavelength relative to higher pitched sounds which have shorter wavelengths by comparison. The physiologic correlate of frequency is pitch. In general terms the greater the frequency the higher the pitch of the sound and the greater the intensity the louder we hear it. The degree of intensity or loudness of a sound is measured in decibels (dB). In complex sounds the interaction of its pure tone components forms the basis of its complexity or its psychological counterpart known as timbre.

Appendix C

Questions and Controversies in NIHL (Occupational Hearing Loss)

1. Why are the frequencies of 0.5, 1, 2 and 3 kHz used for NIHL awards when hearing loss is often greater at 4, 6 and 8 kHz?

This is a very relevant question that is based on the definition of how hearing loss causes a handicap for the affected individual in their ability to identify spoken words or sentences under everyday conditions of normal living.

Although the higher frequencies are initially affected in NIHL an individual will really only begin to demonstrate a significant handicap to hearing to everyday speech in a quiet surrounding when the average of the hearing thresholds at 500, 1000, 2000 (± 3000) Hz is above 25 dB. The prediction of a handicap did not appear to be improved by the inclusion of other frequencies > 4000 Hz.

The inclusion of the 3000 Hz threshold value for NIHL awards is not always required depending on the jurisdiction. It should be appreciated that while a decrease in hearing sensitivity at 3000 Hz has little effect upon hearing speech in quiet, it produces a handicap in the presence of competing background noise (i.e. restaurants, family gatherings, church etc) or when speech is distorted. Most would not be expected to have problems with the telephone (most telephones rarely transmit sounds > 3000 Hz).

2. What do other jurisdictions consider to be disabling hearing loss (provincial, national and international)?

In the province of Ontario the Workplace Safety and Insurance Board (WSIB)'s Operational Policy Manual (OPM) Document No. 16-01-04, entitled "Noise Induced Hearing Loss, On/After January 2, 1990" states that workers with an occupational noise induced hearing loss sufficient to cause a hearing impairment may be entitled to benefits when there is a hearing loss of 22.5 dB in each ear when the four speech frequencies (500, 1000, 2000 and 3000 Hz) are averaged.

The WSIB accepts the following circumstances as persuasive evidence of work-related conditions in claims for sensorineural hearing loss:

- *Continuous exposure to 90dB (A) of noise for 8 hrs per day, for a minimum of 5 years, or the equivalent; and*
- *A pattern of hearing loss consistent with noise induced sensorineural hearing loss.*

A presbycusis (aging) correction factor of 0.5 dB is deducted from the measured hearing loss (averaged over the 500, 1000, 2000 and 3000 Hz frequencies) for every

year the worker is over the age of 60 at the time of the audiogram. The hearing loss that remains after the presbycusis adjustment is then used to determine entitlement to benefits. Entitlement to health care and rehabilitation benefits is available when the adjusted hearing loss is at least 22.5 dB in each ear.

It is important to also appreciate that decisions can also be made on an exceptional basis which the WSIB has recognized.

Exceptions

Since individual susceptibility to noise varies, if the evidence of noise exposure does not meet the above exposure criteria, claims will be adjudicated on the real merits and justice of the case, having regard to the nature of the occupation, the extent of the exposure, and any other factors peculiar to the individual case.

A list of Provincial and Territorial Comparisons for NIHL is provided below*

Province	Exposure Requirements	a. Entitlement Criteria b. Minimum hearing loss level for hearing aid benefits	Presbycusis correction factor (or other)	Tinnitus compensation a. In Claim b. In PI
British Columbia (BC)	85 dBA-8h/day over 2 years	a. Average at 500, 1000 and 2000 Hz b. Hearing loss > 30 dB/30dB bilaterally for hearing loss benefits	Use of <i>Robinson's Tables</i>	a. Yes b. NA
Alberta (AB)	85 dBA-8h/day over 2 years	a, b. Average at 500, 1000, 2000 and 3000 Hz >140dB to be considered for hearing aids and/or pension award	Use of <i>Robinson's Tables</i>	a. Yes b. NA
Saskatchewan (SK)	85 dBA-8h/day over 2 years	a. Average at 500, 1000, 2000 and 3000 Hz b. Hearing loss > 35 dB bilaterally	No deduction	a. Yes b. 2%
Manitoba (MB)	85 dBA-8h/day over 2 years	a. Average at 500, 1000, 2000 and 3000 Hz b. Hearing loss > 26.25 dB bilaterally for benefits	2 dB/year after age 60	a. Yes b. 2%
Ontario (ON)	90 dBA-8h/day over 5 years	a. Average at 500, 1000, 2000 and 3000 Hz b. Hearing loss > 22.5 dB for benefits	0.5 dB/year after age 60	a. Yes- medical opinion and tinnitus match required b. 2%

Province	Exposure Requirements	a. Entitlement Criteria b. Minimum hearing loss level for hearing aid benefits	Presbycusis correction factor (or other)	Tinnitus compensation a. In Claim b. In PI
Quebec (QB)	NA	a. NA b. Hearing loss > 30 dB for benefits	NA	a.b. NA
New Brunswick (NB)	NA	a. Average at 500, 1000, 2000 and 3000 Hz b. Hearing loss >25 dB for benefits	NA	a. Yes b. NA
Prince Edward Island (PEI)	85 dBA-8h/day over 2 years	a. Average at 500, 1000, 2000 and 3000 Hz b. Hearing loss >25 dB in one ear for benefits	0.5 dB/year after age 60	a. Yes b. 2%
Nova Scotia (NS)	NA	a.b. Average at 500, 1000, 2000 and 3000 Hz > 100 dB	2 dB/year after age 60	a. Yes b. NA
Newfoundland (NF)	85 dBA-8h/day over 2 years	a. NA b. Hearing loss >25 dB for benefits	0.5 dB/year after age 60	a. Yes b. NA
Yukon	85 dB-8h/day over 5 years (but must have worked for 2 years in the Yukon)	a. Average at 500, 1000, 2000 and 3000 Hz b. Hearing loss must be > 25 dB for benefits	None accounted for	a. Yes b. 2%
Northwest Territories and Nunavut	90 dBA-8h/day over 5 years	a.b. NA	NA	a.b. NA

NA-Not available, PI-permanent impairment

* as of 2006

The above list does demonstrate a lack of uniformity in NIHL claims and benefits within Canada. A comprehensive list of US comparisons for NIHL and benefits can be found in Table 35.1 pages 797-799 in the Chapter concerning State and Federal Formulae Differences in Occupational Hearing Loss, 3rd Edition. Sataloff and Sataloff. 2006

3. Does previous noise exposure make an ear more sensitive to future noise exposure?

Apparently it does not. It is generally thought that if an ear has suffered a permanent threshold shift from a noise induce etiology further noise exposure will cause less

damage than would occur in a normal ear to a similar exposure. This is based primarily on animal models which have demonstrated that at the frequency range of maximum damage the increase in a noise induced PTS from the second exposure was smaller for ears with greater pre-existing loss (the so-called, “you can’t further damage what has already been damaged” rule)

4. Does previous NIHL accelerate the onset of presbycusis?

This is question that continues to intrigue auditory research scientists. As previously noted the effects of noise exposure and aging on hearing when not combined are reasonably well understood. When the two processes are combined, the resultant pathology and its effects upon aging are not as well understood.

It is likely that the two effects are not additive (Corso’s theorem) but from a practical point of view this is how they are usually viewed with regards to compensation claims (Dobie’s theorem).

Some generally accepted principles (according to the American Academy of Otolaryngology (AAO)-Head and Neck Surgery 1994 Guidelines) with regards to age related change note that:

- a. At any given age for frequencies above 1000 Hz men will have more age related hearing loss than women.
- b. Age related hearing loss affects all frequencies although the higher frequencies are usually more affected.
- c. Age related hearing loss is an accelerating process where the rate of change increases with age.

5. Does permanent damage to the cochlear hair cells caused by noise exposure contribute to the eventual development of a hearing disability?

Yes it does. One however has to qualify this by saying that there is a significant amount of redundancy within the inner ear as it pertains to hearing. In other words many hair cells in a similar region of the cochlea will produce a certain frequency response to sound stimulation. Hair cell loss can continue until a certain critical point is breached with the individual unaware of a hearing deficit. Once the critical loss of hair cells occurs the individual will notice a hearing loss.

One can speculate that this might be one of the reasons an individual early on in their exposures may not be aware of a hearing loss, only to appreciate a hearing loss later in life when other factors such as presbycusis change occur.

6. At what age does presbycusis begin to make a material difference to hearing disability and at what age can its effects be seen on an audiogram?

When we are born we can hear frequencies up to 20,000 Hz. Over the years we hear less and less. Because we tend to make little use of frequencies > 8000 Hz we do not become aware of a hearing loss in general until the frequencies < 8000 Hz are affected.

Although we think of presbycusis as an age related event not all individuals will develop this condition. Moreover we really don't have a lot of good prospective longterm studies over 4-5 decades that can ultimately answer this question completely. Upon saying this however we can actually demonstrate that many individuals will start to show early changes in hearing as early as age 40 years (in subjects screened to rule out other ear disease and noise exposure).

With regards to the rate of hearing loss noted in presbycusis, recent evidence from longitudinal prospective studies from Denmark and the UK indicate that the actual rate of deterioration seems to be influenced by age; those over 55 years showed a higher rate of deterioration of up to 9 dB/decade against a deterioration of 3 dB/decade for those under 55 years.

Future genetic studies may provide us with further information concerning those at greater risk for progressive hearing loss from presbycusis in future.

7. Can moderate workplace noise exposure causing a TTS and repeated exposures later cause a PTS?

Yes. Repeated noise exposure that causes a temporal threshold shift (TTS) can ultimately lead to a permanent threshold shift (PTS) with repeated exposures. It is agreed that hearing loss and injury to the ear increases with the noise level, the duration of exposure, the number of exposures and the susceptibility of the individual.

A TTS is considered to represent a pathological metabolically induced fatigue of the hair cells or other structures within the Organ of Corti. Its development and recovery are proportional to the logarithm of exposure time. It reverses slowly over a period of hours. The practical "cutoff point" for a TTS is approximately 40dB. Below this threshold value recovery is relatively swift; above this it appears delayed.

In a PTS the destruction and eventual cochlear hair cell loss is thought to arise from direct mechanical destruction from high-intensity sound and from metabolic decompensation with subsequent degeneration of sensory elements.

While one would normally expect full recovery of hearing function after a TTS there is one important consideration that needs to be taken into account. Some of this is based on the redundancy principle within the inner ear: *not all hairs cells possibly recover following a TTS but enough do as to prevent hearing loss*. Continued exposure to excessive noise will therefore result in further hearing loss.

8. Following acute acoustic trauma what is the natural history of the subsequent hearing loss?

The position in the world literature continues to support that any progressive hearing loss from acute trauma ceases unless the individual is re-exposed to more acute acoustic trauma or some other factor (s) occurs (i.e. concomitant presbycusis, head injury etc).

The classic studies of acute acoustic trauma by Segal et al (1988) and Kellerhals (1991) are often used to support this position.

In the cohort study by Segal et al, 841 individuals from either the regular US army or military reserve sustained a permanent sensorineural hearing loss from acute acoustic trauma without subsequent re-exposure. Audiometric evaluations were performed on these individuals at 6 months, 1, 2 and 4 years after initial exposure. Hearing remained stable at 1 year in approximately 90-91.3%, improved in 7.7% and appeared to worsen in 2.2%. Follow-up beyond the 1 year mark did not reveal any further deterioration of hearing in any individual. Of interest, in a parallel series of control patients who were further exposed to repeated episodes of acute acoustic trauma during the same study period by the end of 4 years 30% of these individuals had demonstrated significant hearing deterioration.

The importance of the Segal study is that after 1 year one would not expect further worsening of hearing in subjects who ceased to have further noise exposure.

Kellerhals' study reviewed a much smaller series of individuals who were exposed to acute acoustic trauma but looked at them over a 20 year duration. In his study cohort only 1% of individuals following acute acoustic trauma demonstrated deterioration of hearing of more than 20 dB in at least 1 frequency. The findings also indicate that the late progression of hearing loss following a single episode of acute acoustic trauma did not exist.

9. Are certain individuals more predisposed to developing NIHL than others?

Large susceptibilities in NIHL occur in persons exposed to the same noise environment. A review of endogenous factors related to individual sensitivity by Ward did not find any effects other than those related to the acoustic energy reaching the cochlea or the oxygen supply to the cochlea.

While there has been concern that smoking and elevated serum cholesterol levels might play a role by affecting blood flow and hence oxygen delivery to the cochlea this has not been validated. Pigmentation differences in subjects grouped by eye color (on the basis that the pigmentation in the stria vascularis of the cochlea is similar) and race have been inconclusive as well.

Other studies have failed to show any effect on vulnerability caused by diabetes, silicosis or leprosy. There is some slight evidence that Meniere's disease might increase vulnerability. Whether deficiencies in vitamins render an individual more sensitive is also not certain.

The link between diabetes and hearing loss has been further identified in some recent studies. In the 2008 study from the National Health and Nutrition Examination Survey the prevalence of hearing loss was 15% for participants without diabetes and almost double for those with diabetes. The 2009 modelling study from the Veteran's Affairs (VA) National Center for Rehabilitation Auditory Research (NCRAR) identified those with diabetes were more likely to have greater hearing loss in the lower frequencies (<2000Hz) across all ages (from 26-71 years). Interestingly the greatest effect of diabetes on hearing appeared in those patients under age 50 years at frequencies > 8,000 Hz. Connective tissue disorders (i.e. rheumatoid arthritis, lupus, vasculitis with granulomatosis etc.) can also affect sensorineural hearing in some individuals. This is usually thought to be a result of an associated vasculitis affecting inner ear blood supply.

In summary while certain disease processes have been associated with hearing loss, increased susceptibility to noise has not been shown to be dependent on gender, race, any known diseases, mental attitude towards noise, exposure history, pre-exposure hearing loss and even a history of smoking.

10. What would be considered inadequate audiometric data to support or deny a NIHL claim?

An accurate audiogram requires:

- the tester to be technically proficient,
- to be performed in a facility that ideally adheres to the generally comparable American National Standards Institute (ANSI) or International Standards Organization (ISO) facility standards for hearing testing (i.e. topic areas include audiometer calibration, test room noise levels and sound level meters for confirmation) and,
- a compliant patient.

There is general consensus that the most reliable audiogram is best performed by a qualified audiologist who by education and training has specialized skills and expertise in both hearing testing and rehabilitation of hearing loss.

Some examples of how systematic and random errors in audiometry can affect hearing results include:

- audiometric calibration error or drift during testing

- excessive background noise levels in the test room
- interfering signals from the test equipment
- improper earphone placement
- tester bias and examination procedure bias
- improvement in performance due to familiarity with the test procedure
- a temporary threshold shift from recent noise exposure shortly before the time of the examination
- partial or complete obstruction of the ear canal (i.e. wax)
- the presence of tinnitus that competes with the audiometric pure tones that are presented

In the Province of Ontario a weighted pure tone average for the sensorineural hearing thresholds at 500, 1000, 2000 and 3000 Hz is required to determine eligibility for compensable benefits. Failure to measure bone conduction thresholds responses (where necessary) and hearing especially at the 3000 Hz tone represent major technical reasons why audiometry is often considered inadequate to support an OHL claim.

Inconsistency in audiometric testing where different checks are used to determine the accuracy of hearing suggests the hearing loss may be exaggerated or that the individual may be malingering.

11. From a medical assessor's perspective why are many NIHL claims contentious?

Most contentious claims arise for the following reasons that include:

- The absence of a proper pre-employment audiogram.
- The absence of a proper exit audiogram especially when a worker leaves their employment.
- Poor quality audiograms performed either by an individual not appropriately trained or in facilities not up to the ANSI or ISO recommended standards.
- The configuration of the audiogram is not typical for NIHL especially when the 4000 Hz loss is not present, there is a greater than expected loss of hearing in the lower frequencies and when significant asymmetries to hearing loss occur without a reasonable explanation.

- Differing opinions between the treating physician and the medical assessor. It is always important to remember that, “while all NIHL is sensorineural in nature, not all sensorineural hearing loss is occupational”.

12. What if hearing loss is below the WSIB threshold policy?

If the hearing loss is below WSIB threshold policy an affected individual may not qualify for compensation benefits. This does not take away from acknowledging that such an individual will experience some degree of hearing impairment. It does however serve notice that an individual must continue to wear hearing protection if exposed to noise levels injurious to hearing and that industry continues to have a role in making the workplace as safe as possible by the introduction and further refinement of hearing conservation programs.

The rules governing compensation awards for hearing loss from noise are well entrenched in the Province of Ontario. It is largely based on the amount of the loss according to well described criteria applied to each worker who submits an occupational hearing loss claim. In Ontario workers a correction factor for presbycusis of 0.5 dB/year after age 60 is also applied. Further information how a worker's hearing loss is calculated can be found in the answer to Question 2.

13. Does the type of noise, amount duration and frequency of noise exposure in the workplace predispose an individual to NIHL?

In general terms the following statements broadly apply to noise induced hearing loss:

- Impact/impulse noise is more likely than steady state noise to cause hearing loss

Impact noise (i.e. foundry work, jack hammers, pile drivers etc.) arises when two masses collide under force. Under the circumstances the ears are exposed to extremely loud noise levels that peaks then fatigues quickly. Impulse noise is similar but typically arises when there is a sudden expansion of gaseous pressure (i.e. rifle fire, explosion etc.) that quickly returns to normal atmospheric pressure. Under the circumstances the individual does not have time to protect their hearing nor can the inner ear respond by its built in reflexes to minimize noise induced trauma.

- The greater the exposure to noise levels potentially injurious to hearing the more likely a hearing loss will occur.

This statement forms the basis for all hearing conservation programs that require an individual to wear hearing protection to prevent hearing loss when exposed to noise levels injurious to hearing.

- An individual exposed to continuous noise levels will be more likely to experience a greater degree of hearing loss than one who is intermittently exposed to the same noise levels.

This is based on the identification that an ear with intermittent noise exposure will have time to recover in between events that will cause a temporary threshold shift and prevent permanent threshold shifts with continued exposure from occurring.

14. Does hearing deteriorate after removal from workplace noise exposure?

Workers not infrequently complain that their hearing has continued to deteriorate after they have stopped working. The general consensus however is that hearing loss following workplace noise exposure should stabilize when a worker leaves a noisy environment. Further hearing loss if it occurs is therefore thought to arise from other cause(s), the most common being presbycusis (from age related change).

It is also important to recognize that after age 55 hearing loss from presbycusis seems to accelerate. This is usually around the age when many individuals stop working. Loss of sensorineural hearing from prior noise exposure will be compounded by presbycotic change that not only affects the inner ear but also central auditory pathways in the brain as well.

Hearing would not be expected to improve following removal from workplace noise exposure. This is on the basis that the affected individual was not experiencing a temporary threshold shift (TTS) from noise exposure at the time of testing that improved on later testing.

15. Does the wearing of hearing protection prevent NIHL?

There are numerous studies and outcome analyses that demonstrate the effectiveness of hearing conservation programs in industry. Hearing protection (i.e. ear muffs, ear plugs etc.) however needs to be worn properly and consistently to prevent noise induced hearing loss.

Most ear plugs will provide between 20-25 dB of sound attenuation. Combinations of muffs and plugs might provide upwards of 25-35 dB of sound attenuation. Despite wearing hearing protection some workers could theoretically experience noise induced hearing loss if the exposure levels were consistently greater than 110dB and the hearing protection worn did not provide adequate sound attenuation.

January 14, 2026

Workplace Safety and Insurance Board (WSIB)

Ontario

Subject: Inclusion of Music Educators in Draft Policy on Noise-Induced Hearing Loss

Dear WSIB Representative,

On behalf of the Ontario Music Educators' Association, I am writing to express growing concerns regarding **Noise-Induced Hearing Loss (NIHL)** among music educators working in both elementary and secondary school environments and the exclusion of explicitly naming music educators in the new draft policy.

Over the past several years, our association has received numerous inquiries from educators who are frustrated by the lack of awareness and support surrounding hearing health in music education. Many were unaware of the importance of establishing an early-career hearing baseline, which is critical for monitoring changes over time.

Music educators often work in environments where sound levels consistently reach 90–100 decibels for sustained periods, far exceeding safe exposure limits. These conditions are compounded by factors such as:

- Working conditions with hard surfaces, low ceilings, and lack of sound-absorbing materials in music rooms.
- Large class sizes
- Students who are still developing control over their instruments, resulting in unpredictable and high-volume sound.

Unlike industrial settings, these spaces are not designed with hearing protection in mind, yet the risk to auditory health is equally significant.

While music is perceived as expressive and creative rather than “industrial noise,” the physiological impact on the ear is the same. Over the course of a 20–30 year career, repeated exposure to these sound levels can lead to irreversible hearing damage. Unfortunately, many educators are unaware of the importance of early-career baseline



hearing tests, making it difficult to establish work-related causation for NIHL claims under current WSIB guidelines.

We urge WSIB to ensure that the new policy:

1. **Specifically recognizes music educators in elementary and secondary school settings, as eligible for NIHL coverage**, similar to other professions exposed to hazardous noise levels.
2. **Supports preventive measures**, including baseline and periodic hearing assessments for educators.
3. **Acknowledges the unique challenges of music education environments**, where traditional hearing protection and acoustic controls are often impractical.

This policy would not only safeguard the health of dedicated educators but also align WSIB's commitment to equity and workplace safety across all sectors.

Thank you for considering this important addition. We welcome the opportunity to provide further input or collaborate on implementation strategies.

Sincerely,

Lynn Gracey BMus. BEd., OCT.
President (2024-2026)
Ontario Music Educators' Association

January 29, 2026

Via Email: Consultation_Secretariat@wsib.on.ca

**Power Workers' Union Submission on Noise Induced Hearing Loss (NIHL)
Draft Policy Consultation with the Workplace Safety and Insurance Board
(WSIB)**

The Power Workers' Union (PWU) represents more than 19,000 highly skilled workers across the electricity sector and has advocated on behalf of its members for nearly eight decades. Attached please find a list of PWU employers. The PWU is committed to advancing the highest standard of health and safety and to achieving accident-free workplaces. Through strong leadership, proactive advocacy, and ongoing collaboration with employers and regulators, the PWU promotes workplace cultures that prioritize worker health and safety and recognize the inherent risks. The PWU is pleased to provide a submission on Noise Induced Hearing Loss as part of the WSIB's draft policy consultation.

Electricity sector workers face unforgiving hazards in a multitude of diverse workplace environments, every working day. All workers involved must fully understand the hazards associated with the task at hand. Those hazards must be eliminated when possible and when they cannot, the hazards must otherwise be kept under constant control. Excessive noise is a hazard that many of our members face everyday in their workplaces. In the PWU there is nothing more important than workers' health and safety, it is always a top priority.

In response to the WSIB draft policy the PWU has serious concern with the draft Operational Policy Manual (OPM) document 16-01-02 Noise-Induced Hearing Loss (NIHL). It is established that the Occupational Safety and Health Regulations on Noise, O Reg 381/15, *Section 2 (4)*

(4) Without limiting the generality of subsections (1) and (2), every employer shall ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, $L_{ex,8}$.

The Workers Health and Safety Centre, an agency fully funded by the WSIB produced a paper Noise: a resounding problem Version 5.0. They note that "over a decade ending in 2015 the WSIB has accepted over 30,000 NIHL claims, making noise the leading cause of occupational disease in Ontario Workplaces." Within the publication they further state The Occupational Health Clinics for Ontario Workers (OHCOW) performed calculations based on the formula to determine "equivalent sound exposure level" in the Ontario Noise Regulation (O. Reg. 381/15), *Section 1(3)*."

Table

Column 1 SOUND LEVEL Decibels	Column 2 DURATION Hours of exposure per 24-hour day
80.25	24
81.5	18
82	16
83.25	12
84	10
85	8
86.25	6
88	4
89.25	3
91	2
92.25	1.5
94	1
97	30 mins
100	20 mins
101.8	10 mins
104.8	5 mins
111.8	1 min
114.8	30 seconds
115	No Exposure

The Canadian Centre of Occupational Health and Safety (CCOHS) discusses and outlines basic rules for working with decibel units and outline the following:

The use of dB unit makes it easy to deal with the workplace noise level data provided we use a set of simple rules as summarized in Table 3.

Table 3 Decibel (dB) basics	
Change in dB	Change in sound energy
3 dB increase	Sound energy doubled
3 dB decrease	Sound energy halved
10 dB increase	Sound energy increased by factor of 10
10 dB decrease	Sound energy decreased by factor of 10
20 dB increase	Sound energy increased by factor of 100
20 dB decrease	Sound energy decreased by factor of 100

When comparing the 85 dB threshold in O Reg 381/15 with the WSIB entitlement criterion of 90 dB, the 5 dB increase corresponds to an increase in sound intensity by a factor of approximately 3.16 times more intense. Accordingly, sound at 90 dB is approximately 3.16 times more intense than sound at 85 dB. At 90 dB, the ear is exposed to over three times the damaging energy compared to 85 dB, for the same duration.

The WSIB entitlement criterion of 90 dB is not aligned with the Occupational Health and Safety Act and does not reflect a safe level of exposure under O. Reg. 381/15. Workplace safety should prioritize prevention, and Ontario employers are legally and ethically obligated to take all reasonable precautions in the circumstance to reduce noise exposure.

Moreover, the current criterion of 8 hours per day over a 5-year period is unreasonable and unsafe, as individual susceptibility to NIHL loss varies significantly. WSIB Case Managers often apply the policy strictly, without considering individual susceptibility.

At a minimum, if the WSIB maintains the 90 dB threshold, it must adjust the exposure criteria to reflect safer limits, for example, by reducing allowable exposure to 2 hours per day over a 2-year period, consistent with the dose response relationship between sound intensity and hearing risk.

In further review the PWU notices the change to entitlement criteria from OPM 16-01-04 Noise-Induced Hearing Loss, On/After January 2, 1990. Entitlement under this policy stipulates with a hearing loss of 22.5 dB in each ear when the hearing loss in the four speech frequencies (500, 1000, 2000, and 3000 Hertz).

Under the draft policy, the evidentiary requirement for entitlement has been raised so that a worker must now have an average hearing loss of 26.25 dB or greater in each ear. This represents an additional 3.75 dB of hearing loss that a worker must sustain before qualifying for entitlement. Without addressing the underlying issue of the 90 dB threshold for 8 hours per day over a 5-year period, this change effectively and arbitrarily raises the bar for entitlement, further restricting access to benefits for workers exposed to hazardous noise.

In practice, the WSIB appears to have derived the 26.25 dB bilateral criterion directly from the American Medical Association (AMA) 3rd Edition Guidelines for assessing permanent impairments, rather than establishing a standard based on occupational safety or exposure risk. Simply adopting this value as a threshold for entitlement does not address the underlying hazard and does not ensure that injured workers are adequately compensated.

The WSIB has further restricted entitlement for asymmetrical hearing loss. Under the current policy, entitlement is based on thresholds of 25 dB in the better ear and 32.5 dB in the worse ear. Under the draft policy, the criteria have effectively doubled. For example, the draft policy states that a worker with 27 dB in the right ear and 42 dB in the left ear a difference of 15 dB between ears would be considered consistent with noise-induced hearing loss because each ear exceeds the 26.25 dB bilateral threshold and the asymmetry does not exceed 15 dB.

This approach limits and potentially disqualifies workers with bona fide hearing loss, particularly those with asymmetrical hearing loss that exceeds the arbitrary 15 dB asymmetry limit. By combining a higher bilateral threshold with a strict asymmetry criterion, the draft policy further narrows access to entitlement, despite legitimate occupational exposure and documented hearing impairment.

The NIHL Policy is looking to remove the presbycusis factor. Under the current NIHL Policy, this factor requires a deduction of 0.5 dB for every year the worker is over the age of 60 at the date of audiogram. This “age correction” approach was historically applied by the WSIB to separate age-related hearing loss from occupational NIHL. We would agree with this removal of the presbycusis factor as many workers are working longer and will be over age 60 when possibility getting assessed for hearing impairments. It is important to note that this would then be left to individual decision makers to assess if age related hearing changes are more likely to be the cause of hearing impairment, this should be evaluated closely and ensure it is not automatically related back to age versus the occupational exposure.

The WSIB should not seek to limit entitlement for workers with noise-induced hearing loss (NIHL). The draft policy effectively restricts entitlement to workers who suffer hearing loss “out of and in the course of employment.” The WSIB policy should align with sound health and safety principles, prioritizing the prevention of hearing loss and protection of workers, rather than imposing arbitrary limitations that reduce access to benefits for Ontario workers.

Respectfully Submitted

Power Workers' Union

List of PWU Employers

Alectra Utilities (formerly PowerStream)
Algoma Power
Aptum (formerly Cogeco Peer 1)
Atlantic Power Corporation - Calstock Power Plant
Atlantic Power Corporation - Kapuskasing Power Plant
Atlantic Power Corporation - Nipigon Power Plant
Atura - Brighton Beach Power
Atura – Halton Hills Generating Station
Atura – Napanee Generating Station
Atura - Portlands Energy
Bracebridge Generation
Brant County Municipality
Brookfield Power Wind Operations
Bruce Power Inc.
Canadian Nuclear Laboratories (AECL Chalk River)
Capital Power East Windsor
Capital Power Goreway
CC Nuclear (formerly Abraflex)
Centre Wellington Hydro
Compass Group (Bruce, Darlington, Pickering, PLC/Brock Rd.)
Cornwall Electric
Elexicon (formerly Whitby Hydro)
Enova (formerly Kitchener-Wilmot & Waterloo North)
Enwave Windsor
EPCOR Darlington Demineralized Water Plant
EPCOR Electricity Distribution Inc.
ERTH Power Corporation (formerly Erie Thames Powerlines)
ERTH Holdings Inc.
Electrical Safety Authority
eStructure
Ethos Energy Ltd.
Great Lakes Power (Generation)
Greater Sudbury Hydro
Greenfield South Power Corporation
Grimsby Power Incorporated
Halton Hills Hydro Inc.
Hydro One Inc.
Hydro One CSO (formerly Inergi)
Independent Electricity System Operator
InnPower (Innisfil Hydro Distribution Systems Limited)
Kinectrics Inc.
Lakeland Power Distribution
Laurentis Energy Partners
London Hydro Corporation
Milton Hydro Distribution Inc.
Mississagi Power Trust
NAES
Newmarket Tay Power Distribution
North Bay Hydro
Northern Ontario Wires
Nuclear Waste Management Organization
Ontario Power Generation Inc.
Orangeville Hydro
PUC Services
Quality Tree Service
Reworld Durham York Limited Partnership (Formerly Covanta Durham York Renewable Energy)

Rogers Communications (Kincardine Cable TV Ltd.)
Sioux Lookout Hydro Inc.
SouthWestern Energy
Synergy North (formerly Kenora Hydro Electric Corporation Ltd.)
The Town of Tillsonburg
Toronto Hydro
TransAlta Generation Partnership O.H.S.C.
Westario Power

From: [Rachel Dingle](#)
To: [Consultation Secretariat](#)
Subject: Feedback on draft Operational Policy Manual (OPM) document 16-01-04 Noise-Induced Hearing Loss
Date: Thursday, December 11, 2025 4:25:14 PM

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Dear WSIB Policy Team,

Thank you for seeking feedback on the proposed WSIB policy changes.

I applaud you for removing the age adjustment factor. This is in line with current research and will benefit many individuals with noise-induced hearing loss.

I have some concerns about the proposed adjustment of the hearing aid entitlement cut-off from 22.5 dB HL to 26.25 dB HL (PTA4) to align with the American Medical Association guides. I understand and appreciate the effort to harmonize thresholds, but I would like to suggest that this proposed change might inadvertently exclude workers who genuinely need support.

Historically, normal hearing has been defined as an average loss of 0 dB HL and has a standard deviation of about 4-7 dB. Recognizing natural variation, a cut-off of approximately 20-25 dB HL was considered to be within the "normal range" and then loss from ~20-40 dB was called "mild" rather arbitrarily and this has gone on to cause continued confusion about the actual functional impact of "mild" hearing loss. (Note that someone with normal hearing who is wearing properly inserted earplugs is often still hearing within the "normal" range, if at the edge of it. Most people wouldn't consider walking around wearing earplugs to be good hearing function). My understanding is that WSIB previously set its 22.5 dB PTA4 criteria to capture people with early levels of disability, which was laudable.

As you know, noise-induced hearing loss typically impacts higher frequencies prior to and to a greater degree than lower frequencies. Using a 4-frequency PTA can easily wash out the degree of impairment at high frequencies if low frequencies are still normal. Increasing the cut-off to 26.25 only compounds this problem. Indeed, a patient can have normal low frequencies sloping to a 40-50 dB loss at 2 and 3 kHz and still technically not meet the 26.25 cut-off despite a speech intelligibility index (SII) of less than 55%. The impact on an individual of less than 60% SII can be functionally enormous.

In pediatrics, we fit hearing aids if the SII is lower than 80% because of work out of Boystown showing that worse SII is associated with poor speech and language development. As adults have already developed language, they can get along with less intelligibility, but audiologists still regularly fit around 75% SII. Practically speaking, a 65% SII cut off would better capture adult patients who are experiencing significant functional difficulties than a 4-frequency PTA.

I recognize, however, that SII data may be difficult to collect or that inputting

thresholds into an SII calculator on your end may be time consuming and unweildy. I would propose instead that you might consider, if increasing the cut-off to 26.25 dB HL is really critical, using a 3-frequency average of 1000, 2000 and 3000 Hz to calculate it. This might better reflect the functional consequences of high frequency hearing loss without complicating administrative processes.

If you want to REALLY simplify the process, 2 kHz is an important frequency for speech understanding. Hearing loss greater than 25 dB HL at 2 kHz in a sloping or notched pattern would probably capture most individuals experiencing functional deficits.

In the spirit of Canadian values, we should maintain a supportive "low fence" for medical care, ensuring early intervention is accessible, rather than aligning strictly with the higher impairment-focused standards often seen in other jurisdictions.

Thank you very much for taking the time to consider outside feedback. I really appreciate and support the desire to keep criteria up-to-date and in line with modern research on hearing loss. WSIB has also obviously been going to a lot of effort over the past few years to streamline their processes.

Sincerely,

Rachel Dingle

Addendum: Just because I'm writing anyway. In cases where hearing loss is deemed sensorineural, pure tone average should be calculated from air conduction thresholds rather than bone conduction thresholds. Bone conduction variability is too high.

SCHEDULE 2 EMPLOYERS' GROUP

Via email Consultation_Secretariat@wsib.on.ca

January 30, 2026

Consultation Secretariat
WSIB
200 Front St. West
Toronto, Ontario MSV3J1

Re: Stakeholder Feedback on Draft Noise Induced Hearing Loss (NIHL) Policy

On behalf of the Schedule 2 Employers' Group (S2EG), we appreciate the opportunity to provide feedback on WSIB's draft policy regarding Noise-Induced Hearing Loss (NIHL).

S2EG represent an inclusive group where relationship and collaboration built a community, providing premium-quality education to both public and private sector organizations that relate to workers' compensation, disability management, health & safety, and workplace wellness. Schedule 2 Employers are in a unique position as fully self-insured stakeholders, and we recognize the importance of ensuring fair and consistent adjudication for workers while maintaining clarity and predictability for employers.

We support WSIB's goal of updating the NIHL policy and improving consistency in decision-making. However, some of the proposed changes raise concerns for Schedule 2 Employers, who are directly responsible for the full cost of claims. Any policy changes may significantly impact cost predictability, evidentiary expectations, and employer accountability.

The S2EG supports modernization, but clarity and fairness remain essential.

Suggested Clarifications

- Maintain a strong focus on workplace-specific actual noise exposure evidence rather than generalized assumptions.
- Ensure age-related and non-occupational factors (e.g., hobbies, environmental exposure) are fully taken into account in adjudication.
- Provide clear guidance on shared responsibility when multiple employers contributed to exposure.
- Uphold objective medical and audiological standards for entitlement decisions.
- Clarify application of the policy to existing claims to avoid retroactive uncertainty.

1. Cost and Predictability

Schedule 2 Employers bear the full cost of their allowed claims and the risk of increased cost if entitlement criteria broaden without corresponding attention. Any expansion of entitlement without defined limits could lead to undesirable unpredictable and escalating costs, complicating financial planning and risk management. Schedule 2 Employers need stability for long-term forecasting and planning.

Recommendation: Define clear eligibility criteria and cost-sharing mechanisms to maintain predictability.

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Noise-Induced Hearing Loss
WSIB Policy No. 16-01-04

2. Workplace-Specific Evidence

The proposed approach appears to rely on assumptions about noisy occupations. Actual workplace-specific noise monitoring data is a more reliable indicator of causation than occupation-level assumptions and should, therefore, be relied upon as the standard adjudicative process. In circumstances where exposure is intermittent or limited in duration (for example, one day per five-day work cycle), does this alter the causal nexus, and how should this be reflected in the standard of proof required?

Recommendation: Continue prioritizing scientific, evidence-based assessments and require documented workplace-specific exposure whenever possible.

3. Multiple Employers and Other Contributing Factors

Hearing loss typically develops over decades and may involve exposure across multiple workplaces, non-work activities, and aging. Considering factors such as age-related hearing loss, recreational noise, and cumulative lifetime exposure.

Recommendations:

- Require adjudicators to fully analyze alternative causes and consider all contributing factors.
- Clarify how Section 94 of the Act applies when multiple Schedule 2 Employers are involved, including proportional cost allocation.
- Address scenarios involving Schedule 1 and Schedule 2 Employers and define fairness principles for cost-allocation.
- Establish a baseline for environmental exposure to ensure consistency.

4. Fair Allocation of Responsibility

Without clear guidance, a single employer could be held liable for cumulative exposure spanning multiple jobs. The policy should provide clear guidance on how responsibility is shared. Without this, there is a risk that a single Schedule 2 Employer could be held responsible for hearing loss that developed over a much longer period.

Recommendation: Develop a transparent framework for apportioning responsibility among employers in gradual-onset cases.

5. Medical and Testing Standards

Consistency in medical and audiological criteria is critical. Reducing emphasis on baseline testing or NIHL-specific patterns could lead to inconsistent and unsupported decisions. Objective clinical criteria protect both workers and employers.

Recommendation: Retain objective standards, including timelines and characteristic audiogram patterns.

6. Retroactive Impact

Employers are concerned about reopening denied claims or retroactive application of new rules with potential financial and administrative burden of retroactive application.

Recommendation: Confirm that changes apply only to new claims adjudicated on or after the policy's effective date.

We also encourage WSIB to address additional considerations such as age-related hearing loss, hearing protection device documentation, and compliance standards for audiograms. These

Re: Policy Consultation Submissions
Noise-Induced Hearing Loss
WSIB Policy No. 16-01-04

clarifications will help ensure fairness, consistency, and predictability for all stakeholders.

Additional Considerations

- **Section 94 Provisions:** Ensure clarity on employer responsibilities when occupational disease results from multiple employments.
- **Scientific Basis:** Confirm whether 2018–2019 research remains valid and address risks associated with hobbies or other non-work factors.
- **Age-Related Loss:** Avoid fixed correction factors; evaluate age-related changes in the context of individual claims. Consider retaining the current method (0.5 deduction/year of age) as the standard, unless the unique circumstances of a particular worker's medical evidence can support that the deduction should not apply. This also avoids the proposed 'overwhelms' methodology.
 - Data from the Canadian Health Measures Survey (CHMS) and [Canadian Hearing Services](#)¹ show that audiometrically measured hearing loss becomes increasingly prevalent with age among Canadian adults, highlighting age as a significant non-occupational factor; [Statistics Canada: Hearing health of Canadian adults](#)².
- **Hearing Protection Devices (HPDs):** Consider terminology alignment (e.g., PPE) and clarify expectations for documentation.
 - Decision-making should include consideration of applicable Canadian Standards rating and the effectiveness of hearing protection equipment, including Noise Reduction Rating (NNR).
- **Non-Economic Loss (NEL):** Explain cost implications of removing presbycusis adjustments.
- **Audiogram Standards:** Define compliance requirements and clarify whether WSIB will cover costs for incomplete or non-compliant assessments.
- **The age-related component of hearing loss** has been addressed in [Dr. John Rutka's medical discussion paper](#)³ prepared for WSIAT, which outlines the distinctions between noise-induced and age-related hearing loss based on audiogram findings. Recommend that the WSIB incorporate the audiogram standards identified by Dr. Rutka into its adjudicative framework. This guidance could be formalized within a reference document, such as an Adjudicative Practice Document.

Policy-Specific Observations

This section summarizes key observations related to the *Assessing Evidentiary Requirements* components of the draft policy. While scientific context is valuable, consideration should be given to whether technical explanations are best embedded directly within the policy or provided separately as supporting resources materials.

Key Observations

- **Claims Meeting or Exceeding NET:** The section currently makes no reference to OHSA standards. Consider whether an OHSA citation would strengthen clarity or alignment with industry benchmarks.
- **Combined Exposure:** The term *ototoxic substances* should be explicitly defined within the policy to ensure consistent interpretations and application.
- **Use of Industry-Wide Data:** Industry-wide or general noise-level data should only be used when credible, workplace-specific information cannot be obtained.

¹ Hearing Loss, Canadian Hearing Services, <https://www.chs.ca/hearing-loss>

² Hearing Health of Canadian Adults, Government of Canada, October 20, 2021, <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2021077-eng.htm>

³ Hearing Loss and Tinnitus, Workplace Safety and Insurance Appeals Tribunal, July 2013, <https://www.wsiat.ca/en/MedicalDiscussionPapers/hearingloss.pdf>

Re: Policy Consultation Submissions
Noise-Induced Hearing Loss
WSIB Policy No. 16-01-04

- **Non-Occupational Noise Exposure:** Additional details are needed on how WSIB will determine and evaluate potential non-occupational noise exposures (e.g., recreational activities or hobbies).
- **Calculation of Compensable Impairment:** While the section is generally clear, including an example of “pre-existing conditions not related to non-work-related noise exposure” would support consistent adjudication (e.g., genetic conditions).

While practice documents are not part of the policy document, it may be helpful to either incorporate or make reference to current, more comprehensive resources, such as those provided in the “Consultation note for draft Operational Policy Manual (OPM) document 16-0104 Noise-Induced Hearing Loss which accompanied the draft policy in the consultation package. It would be of great assistance to WSIB staff, system partners and stakeholders (healthcare providers, worker and employer groups) to have this document updated and reissued during this consultation/review period.
Thank you for considering our input.

We look forward to continued collaboration and remain committed to working together toward a fair, evidence-based NIHL policy that effectively balances the interests of workers, provides clarity for employers, and strengthens the broader system.

Yours truly,

A handwritten signature in blue ink that reads "Laura Russell". The signature is written in a cursive, flowing style.

Laura Russell, B.Sc. CRSP
Chair, Schedule 2 Employers' Group

SAC Submission on Draft NIHL Policy

1. Pure Tone Average (PTA) Threshold & Frequency Averaging

SAC offers cautious support for the move to a 26.25 dB PTA entitlement threshold, provided that the method for calculating this average is amended to reflect the pathophysiology of Noise-Induced Hearing Loss (NIHL):

- The Pure Tone Average (PTA) calculation includes threshold frequencies at 500, 1000, 2000, and 3000 Hz which fails to capture the hallmark of NIHL: the high-frequency notch at 3000 and/or 4000 Hz. In addition, including 500 Hz - a frequency rarely affected by occupational noise exposure - dilutes the clinical significance of a worker's impairment due to NIHL.
- The "Double Penalty": Workers with "normal" hearing at low frequencies who suffer severe, work-related NIHL at 4000 Hz will be unfairly excluded under the 26.25 dB threshold unless the math is adjusted.
- Total Functional Hearing Impairment accounted for: SAC is concerned that WSIB utilizes bone-conduction thresholds exclusively, even when there is an air-bone gap ≥ 10 dB. This methodology fails to account for total functional hearing impairment (e.g., a conductive hearing loss component) which is needed in order to have a full understanding of the workers hearing loss and to recommend the most appropriate treatment pathway.

Recommendation: SAC recommends revising the PTA calculation to exclude 500 Hz and mandate the inclusion of 3000 and 4000 Hz for both bone conduction and air conduction thresholds if there is an air-bone difference ≥ 10 dB. This ensures the policy captures the actual functional impairment experienced by the worker in noisy environments.

2. Noise Exposure Threshold (NET): 85 dBA vs. 90 dBA

SAC identifies a significant logical and regulatory inconsistency regarding the Noise Exposure Threshold (NET).

- Regulatory Conflict: Ontario's Occupational Health and Safety regulations mandate that employers provide hearing protection at 85 dBA. The WSIB's guidance of 90 dBA implies that "harm" only occurs at higher levels, creating confusion for both employers and workers.

- 3 dB Exchange Rate Logic: Under the 3 dB exchange rate, exposure at 90 dBA is only permitted for limited durations. Requiring a five-year history at this level ignores the physiological reality of cumulative damage from long-term exposure to moderate noise (85–89 dBA).

Recommendation: SAC urges the WSIB to align the NET with Ontario's 85 dBA standard. Furthermore, the policy must explicitly state that the NET serves as guidance and is not a "minimum requirement" for entitlement, particularly for workers with long-term exposure to moderate noise.

3. Professional Scope: Ensuring Diagnostic Integrity

SAC is concerned by the lack of clarity regarding which providers are authorized to perform initial diagnostic assessments.

- Diagnostic Gatekeepers: The determination of NIHL - including the critical task of ruling out underlying pathologies (e.g., retrocochlear issues, metabolic factors, or middle ear disease) - requires the high-level training of an audiologist or physician.
- Technical Risks: Initial assessments performed by non-regulated or non-diagnostic providers often involve poor masking practices or the misinterpretation of bone-conduction data, leading to incorrect classification of loss and subsequent claim denials.

Recommendation: SAC insists that the policy explicitly require the initial diagnostic assessment be completed by an audiologist or physician utilizing maintained and calibrated diagnostic audiometric equipment.

4. Asymmetrical Hearing Loss

The draft policy's framing of NIHL as "strictly symmetrical" is clinically narrow and fails to account for established audiological clinical evidence.

- Total Functional Hearing Impairment accounted for: SAC is concerned that WSIB utilizes bone-conduction thresholds exclusively, even when there is an air-bone gap ≥ 10 dB. This methodology fails to account for total functional hearing impairment (e.g., a conductive hearing loss component) which is needed in order to recommend the most appropriate treatment pathway
- Technical Pitfalls in Masking: Poor masking practices (notably acoustic radiation at 4000 Hz) create "false conductive gaps" and incorrect asymmetry findings.

- **Biological Variance:** Approximately 13% of the population presents with natural asymmetry due to occupational exposure patterns or "head shadow" effects.

Recommendation: Allow for audiologists' clinical judgment to interpret the entire profile (including tympanometry and bone conduction) rather than applying a rigid air-conduction asymmetry cutoff.

5. Tinnitus Assessment Criteria

Tinnitus is a specialized diagnostic domain that requires clinical education beyond manufacturer-based training.

Current policy states "facilities with tinnitus testing are required." This necessitates diagnostic equipment and clinical protocols unavailable in most dispensing-only environments.

Recommendation: Formally recognize audiologists as the primary assessors for tinnitus benefits. Assessments should include objective measures and standardized scales (e.g., Tinnitus Handicap Inventory) to ensure diagnostic rigor.

6. Removal of the Presbycusis Deduction

SAC strongly supports the removal of the 0.5 dB age-based deduction.

This practice is clinically outdated and creates unnecessary administrative burdens. We agree with the WSIB's recognition that hearing loss results from a complex combination of noise exposure, aging, and comorbidities that cannot be fairly separated by a mathematical formula.

Conclusion

SAC appreciates the opportunity to provide feedback on the draft NIHL policy and remains committed to supporting a framework that is clinically sound, evidence-based, and fair to Ontario workers. The recommendations outlined in this submission reflect longstanding clinical knowledge regarding the presentation, diagnosis, and functional impact of NIHL. By updating the PTA calculation, aligning noise exposure thresholds with provincial regulations, clarifying professional scopes, allowing clinical judgment in cases of asymmetry, strengthening tinnitus assessment criteria, and eliminating outdated age-related deductions, the WSIB can ensure a policy that more accurately reflects real-world clinical practice and improves the consistency and equity of adjudication. SAC looks forward to continued collaboration with the WSIB to ensure that Ontario's workers receive timely, accurate, and clinically appropriate recognition of NIHL-related impairments.

From: [Courtney Brown](#)
To: [Consultation Secretariat](#)
Subject: Changes to WSIB NIHL Program
Date: Friday, January 30, 2026 12:58:26 PM

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Hi there,

I have some feedback on the proposed changes to the NIHL program. I am an audiologist who has been practicing in Northern Ontario for over 10 years. Given the amount of industry in the region, I serve an extremely large volume of WSIB patients.

I have never understood why WSIB includes .5 and 1kHz in the calculation for entitlement, and does not include 4kHz. It is well documented in the literature that **the most affected frequencies by occupational noise exposure are 3 to 6kHz**. The discussion paper titled Hearing Loss and Tinnitus prepared by John Rutka in 2003 states that “**NIHL initially affects higher frequency hearing (3-6 kHz range, for nearly all occupational exposures)** than those frequencies essential for communication (i.e. 500, 1000 and 2000 Hz).” The paper further states that “The 4000 Hz “notch” or “dip” in sensorineural hearing has been a classic finding in NIHL over the years. Some noise sources however such as gunfire may maximally affect hearing at 6000 Hz. Noise exposure from chipping machines and jackhammers characteristically damage the higher frequencies severely before affecting the lower frequencies. Why the 4000 Hz frequency appears more affected than other frequencies continues to generate some controversy. There is good pathologic evidence however that demonstrates maximal cochlear hair cell loss in the tonal areas where the 4000 Hz hair cells normally reside in both animals and humans.” Given the above information, it would be much more reasonable to use 2,3,4 and 6kHz when calculating entitlement, since these are the frequencies primarily affected by occupational noise exposure. I feel that if the frequencies used to calculate entitlement were changed, then the increase to 26.25dB would be more fair to workers. Increasing the average threshold for initial entitlement to 26.26dB is not just if WSIB continues to use .5 and 1kHz in the calculation, as these likely normal hearing thresholds will skew the average and make less workers eligible.

Thank you for your time and consideration,

Courtney Brown
Audiologist, M.Cl.Sc., Reg. CASLPO

Superior Hearing Centre
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**Submission to WSIB Consultation
Re: Proposed Changes to Noise-Induced Hearing
Loss (NIHL) Policy**

**The Provincial Building and Construction Trades
Council of Ontario (Ontario Building Trades)**

January 13, 2026

Introduction

The Provincial Building and Construction Trades Council of Ontario (Ontario Building Trades) proudly represents 16 skilled trade craft unions and approximately 150,000 tradespeople and apprentices working on public and private construction projects across Ontario. Our members regularly face hazardous noise environments, placing them at significant risk of Noise-Induced Hearing Loss (NIHL).

We acknowledge and appreciate the WSIB's initiative to update and modernize the NIHL policy (Draft Operational Policy Manual document 16-01-04). Keeping policies aligned with current scientific evidence is vital to protecting workers' health. However, after a thorough review, we have concerns that the proposed changes could introduce new obstacles for workers seeking compensation, potentially making it more difficult to access the support they deserve compared to the existing 1990 Policy 16-01-04.

While updating policies is essential, we are concerned that this review may prioritize cost reduction over expanding entitlements for workers affected by NIHL. This is particularly troubling given WSIB's own data, which shows that the total number of NIHL claims has steadily increased year over year since 2009, with the most significant growth occurring from 2020 onward.

Key Issues and Commentary on Policy Changes

1. Hearing Assessment Requirements

- **Policy Change:** Mandatory inclusion of both air and bone conduction testing for entitlement claims, raising the standard beyond air conduction alone as under the current policy.
- **Impact:** While improving diagnostic accuracy, this may create access barriers due to limited availability of clinicians performing bone conduction testing. This could delay claim processing, increase costs, or add complexity for workers, particularly those in remote areas.

2. Raising the Hearing Loss Entitlement Threshold from 22.5 dB to 26.25 dB

- **Policy Change:** The proposed increase in the minimum average hearing loss threshold for Noise-Induced Hearing Loss (NIHL) entitlement, from 22.5 dB to 26.25 dB, while intended to align with the American Medical Association (AMA) Guides and harmonize compensation criteria.
- **Impact: We do not support increasing the Hearing Loss Entitlement Threshold from 22.5 dB to 26.25 dB**, as this change raises important concerns that could create challenges for workers. The concerns include:

- **Excludes workers with mild but real hearing loss:** The current threshold NIHL entitlement enables workers with a minimum hearing loss of 22 dB to qualify for hearing aids. This provision is critical, as it allows many affected workers to continue their trades work in a safe and productive manner. Maintaining this threshold supports not only their hearing health but also overall workplace safety and productivity.

The proposed increase of the entitlement threshold to 26.25 dB would significantly restrict access to hearing aids. Under this new standard, workers would only qualify if their hearing loss exceeded this higher level and is formally deemed an impairment. This change effectively excludes workers experiencing mild to moderate hearing loss between 22.5 dB and 26.25 dB, a group that currently benefits from NIHL coverage. Despite experiencing genuine auditory challenges impacting communication, safety, and job performance, these workers would fall below the revised minimum standard and consequently lose access to necessary hearing aids. This exclusion risks undermining workplace safety, diminishing quality of life, and limiting the ability of these workers to remain productive tradespeople.

- **Contradicts early prevention and intervention principles:** Increasing the threshold discourages early recognition and rehabilitation of hearing loss. Early intervention is critical in managing NIHL, using hearing protection strategies, and preventing progression. Under the new threshold, workers and healthcare providers may miss the opportunity to address hearing loss promptly.
- **Disadvantages vulnerable workers:** Workers who have been exposed to occupational noise for shorter periods or at lower intensities may be disproportionately affected, as their hearing loss might register within the previous 22.5 to 26.25 dB band. This particularly impacts part-time workers, apprentices, or those in intermittent noisy environments.
- **Disconnect between impairment and functional limitations:** While the 26.25 dB threshold corresponds to what qualifies as a “ratable permanent impairment” under the AMA Guides, it does not necessarily reflect all functional hearing difficulties workers face. Some workers with hearing loss below this level may still have trouble communicating or working safely but won’t qualify for compensation.

3. Noise Exposure Threshold (NET) and Equivalency Table

- **Policy Change:** The policy focuses on determining if a worker’s hearing loss is caused by workplace noise. This is assessed by comparing the worker’s noise exposure to a Noise Exposure Threshold (NET). The NET is commonly defined as:
 - A time-weighted average noise level of **90 decibels (dBA)** over an 8-hour workday,
 - Experienced for a minimum cumulative duration of **5 years**.

The policy also introduces a detailed equivalency table that defines other noise level and exposure duration combinations considered equal to this 90 dBA for 5 years standard. For example:

- 84 dBA over 40 years
- 89 dBA over 7 years

- 94 dBA over 1.25 years

This means that lower exposure levels require longer durations to reach the equivalent risk, and higher noise levels require less time.

Previously, claims might have been assessed more simply, often using the standard 90 dBA for 5 years benchmark. Now, with multiple thresholds depending on sound level and years of exposure, claims must precisely meet these combinations. Workers with varied or inconsistent noise exposure histories could find it difficult to prove they meet these detailed criteria.

- **Impact:**

- **Longer Exposure Required at Lower Noise Levels:** For workers exposed to noise below 90 dBA, the exposure duration required to meet the threshold can be decades (e.g., 40 years at 84 dBA). This long duration requirement may exclude workers who have not been in that environment for such extended periods, even if their hearing has been harmed.
- **Increased Burden of Proof for Claims Below NET:** The policy allows for some flexibility by considering claims that do not meet NET when supported by strong medical evidence or combined risk factor analysis. However, this “below threshold” route places a heavier burden on workers to provide detailed medical records and occupational histories.
- **Potential for Claims to Be Denied Due to Strict Thresholds** The detailed NET and equivalency tables could mean borderline cases or those with mixed noise exposure histories find it harder to establish entitlement, increasing the risk of claim denial.

What Remains Consistent and Helpful in the Policy

- The baseline concept of 90 dBA over 5 years remains a clear standard.
- There is recognition that higher noise levels lead to hearing loss over shorter periods, reflecting real-world risks.
- The policy acknowledges claims may be approved even if exposure is below thresholds, as long as sufficient medical evidence is provided.

4. Standardized Hearing Assessments and Documentation

- **Policy Change:** Requirement to submit assessments in WSIB-standardized format or equivalent, with the possibility of returning incomplete or non-compliant reports.
- **Impact:** This raises the technical bar for submission quality but may result in claim delays or repeated clinical visits, increasing administrative and personal burdens on workers.

5. Exclusion of Noise Exposure Outside WSIB-Covered Employment

- **Policy Change:** Explicit exclusion of noise exposure during non-covered employment periods from impairment calculation.

- **Impact:** Workers with diversified, mixed employment histories, common in construction, may be disadvantaged by reduced benefit eligibility, a departure from prior more inclusive interpretations.

6. Expanded Consideration of Non-Occupational Hearing Loss Factors

- **Policy Change:** Broader criteria considering when age-related hearing loss, ototoxic drug exposure, or other medical causes "overwhelm" occupational contributions.
- **Impact:** Establishing significant occupational NIHL among older workers or those with multifactorial hearing loss may become more difficult, increasing the risk of claim denials in complex cases.

7. Presbycusis Factor Removal

- **Policy Change:** The existing policy applied a presbycusis (age-related hearing loss) deduction (~0.5 dB per year after age 60) to adjust measured loss for natural decline. The proposed policy removes this.
- **Scientific Evidence:**
 - Recent studies (e.g., Borg 1983; Yamashita et al. 2004; Jensen et al. 2015; Liu et al. 2012) indicate that NIHL can progress and cause delayed cochlear and neural damage after noise exposure ends. "Hidden hearing loss" and synaptopathy complicate the traditional distinction from presbycusis.
 - This supports the policy shift recognizing the total hearing impairment without fixed age-based subtractions, potentially benefiting workers by reducing underestimation of occupational injury.
- **Impact:** We support this informed removal but caution that adjudicators require comprehensive clinical and occupational evidence to appropriately apportion causation.

8. Benefit of Doubt

- **Policy Change:** Maintained as a procedural safeguard ensuring workers receive benefits when evidence is evenly balanced.
- **Impact:** We strongly support retention of this principle as critical protection for claimants.

9. Tinnitus Benefits

- **Policy Change:** Requirement of documented ongoing tinnitus for at least two years for benefit entitlement.
- **Impact:** This may delay or complicate access to tinnitus benefits relative to prior policy's less stringent criteria.

Conclusions

The Ontario Building Trades remains deeply concerned that the proposed revisions to the WSIB NIHL policy appears more focused on reducing overall costs than on enhancing workers' benefits. This approach risks having a negative impact on workers who rely on fair and timely compensation for NIHL. Moreover, the draft policy pays little attention to prioritizing the prevention of hearing loss in workplaces, which is a missed opportunity to address the root causes of this occupational injury.

In the current state of construction workplaces, there is little being done in the area of hearing conservation for workers. Most workplaces do not even take basic measures to protect workers' hearing. One of the biggest reasons for this neglect is that NIHL claims, like any occupational disease claims, are not experience-rated; instead, costs are pooled collectively in the WSIB fund. With no accountability assigned to individual employers, there is little incentive or impetus for workplaces to implement effective preventative measures.

We are not advocating for NIHL claims to be experience-rated. However, raising the entitlement threshold from 22.5 dB to 26.25 dB may create the short-term appearance of fewer allowed NIHL claims and give the illusion of improvement in noise prevention. In reality, this decrease in claims will be due to many affected workers simply no longer qualifying for benefits, not because noise exposure or hearing loss has actually improved. Consequently, a significant percentage of workers will continue to work on construction sites with diminished hearing, which can jeopardize their safety and that of others due to decreased communication ability and situational awareness. Furthermore, continued exposure to hazardous noise will exacerbate hearing loss over time.

While the proposed WSIB NIHL policy is scientifically detailed and aims to improve the accuracy of claims, it simultaneously raises evidentiary and procedural thresholds necessary to qualify for benefits, making it more difficult for many workers to successfully claim NIHL benefits compared to the protections offered under the current, long-standing 1990 policy 16-01-04. This is particularly concerning for:

- Workers with intermittent or complex noise exposure histories.
- Older workers or those with multifactorial hearing loss.
- Workers with limited access to specialized audiological services.
- Raising the Hearing Loss Entitlement Threshold from 22.5 dB to 26.25 dB.
- Changes to the Noise Exposure Threshold (NET) Criteria for NIHL Entitlement.
- Individuals with mixed or partially non-WSIB-covered work histories.

The policy's removal of the presbycusis factor aligns with evolving scientific understanding that recognizes the progressive nature of age-related hearing loss and supports a more equitable evaluation of total impairment. We accept, agree with, and support this change, as it reflects a fairer approach to assessing hearing loss. However, this adjustment requires more nuanced

adjudication, placing an additional burden on the claims process and underscoring the need for skilled assessment.

Given these concerns, we recommend the following actions to improve the policy:

1. **Improve Access to Testing:** WSIB should ensure timely access to bone conduction testing and support clinicians in meeting submission standards.
2. **Provide Clear Guidance:** Offer plain-language resources to help workers and clinicians prepare complete, compliant hearing loss and exposure reports.
3. **Maintain the Current 22.5 dB Threshold for Initial Entitlement:** Keeping the 22.5 dB minimum for initial NIHL claims helps catch hearing loss early, providing timely access to compensation for hearing aides, hearing protection education, and medical care. Early identification supports workers in managing their hearing health and prevents further deterioration.
4. **Maintain 26.25 dB as the benchmark specifically for ratable permanent impairment benefits, while allowing lower thresholds for initial claims:** This approach separates early health protection from long-term impairment compensation, ensuring workers aren't excluded too soon.
5. **Provide Flexible Pathways for Workers Near the Threshold:** Incorporate allowances for workers with documented hearing difficulties who fall just below 26.25 dB but demonstrate workplace functional limitations or combined exposure risks. This flexibility ensures no worker faces barriers simply due to a strict numeric cutoff.
6. **Regularly Review and Adjust Thresholds Based on Emerging Evidence:** Commit to ongoing evaluation of hearing loss data, workplace risks, and claim outcomes to keep the policy responsive to real-world conditions.
7. **Involve worker representatives and health experts** in this review process to ensure balanced perspectives.
8. **Improve Noise Exposure Threshold (NET) Criteria for NIHL Entitlement:** To ensure fair and accessible compensation for workers affected by NIHL, we recommend the following enhancements to the proposed Noise Exposure Threshold (NET) policy:
 - a. **Simplify and Clarify Exposure Criteria:**
Streamline the NET equivalency tables and provide clear, straightforward explanations to reduce complexity and help workers and clinicians better understand how noise level and duration requirements apply.
 - b. **Allow Greater Flexibility for Variable Exposure Histories:**
Recognize the realities of fluctuating noise exposure common in many trades by incorporating allowances for intermittent or mixed-level noise exposure, rather than requiring strict adherence to fixed thresholds.
 - c. **Lower Duration Requirements for Moderate Noise Levels:**
Reduce the required exposure duration for noise levels below 90 dBA (e.g., 84–89 dBA) to prevent unjust exclusion of workers exposed to moderate noise for substantial, but not decades-long, periods.

- d. **Facilitate Alternative Evidence Submission:**
Provide accessible guidelines and support for workers to submit comprehensive medical, audiological, and occupational history evidence when exposure does not fully meet NET, minimizing administrative burdens.
 - e. **Enhance Communication and Support:**
Commit to proactive education and outreach for workers, employers, and healthcare providers about NET requirements and claim processes, including union and health and safety involvement.
 - f. **Implement Ongoing Review and Adjustment:** Establish mechanisms to monitor claim outcomes related to NET criteria and adjust policies responsively to better reflect real-world noise exposure and protect worker health.
- 9. Uphold Benefit of Doubt:** Maintain the benefit-of-doubt principle to protect worker interests.
- 10. Reconsideration Period:** Allow workers previously denied NIHL claims due to the presbycusis factor to resubmit or request reconsideration under the new policy, provided they meet general eligibility criteria. This will address past inequities, demonstrate fairness, and facilitate fair assessments. WSIB should proactively inform affected workers and their representatives.
- 11. Monitor Policy Outcomes:** Regularly review claim acceptance and dispute data to guide ongoing policy improvements.

The Ontario Building Trades thanks WSIB for the opportunity to provide feedback. We look forward to collaborating to ensure that workers exposed to occupational noise receive fair, timely, and scientifically sound compensation for NIHL.

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WSIB NIHL Policy Consultation: <https://www.wsib.ca/en/nihlconsultation>

From: [Clayton Fisher](#)
To: [Consultation Secretariat](#)
Subject: NIHL changes
Date: Friday, December 12, 2025 3:29:53 AM

CAUTION: This email originated from outside the organization. Do not click any links or open any attachments, unless you recognize the sender and know that the content is safe. If you are unsure or believe that you were the target of a phishing attempt please contact IT Security as soon as possible.

Hello,

As an audiologist with over a decade of clinical experience including countless cases assessing and treating NIHL, I am qualified to provide feedback on the proposed NIHL changes:

Using a pure tone average as a criteria to determine if a person has suffered occupational noise induced hearing loss is an outdated and inappropriate method.

However, if PTAs must still continue to be used, the calculation should include 4 kHz, and exclude 0.5 kHz, to obtain a more relevant “high-frequency average”.

If the included frequencies cannot be changed, then the PTA criteria for approval should not change and should remain at 22.5 dB.

I would argue that existing pure tone average criteria should actually be lowered given the omission of 4 kHz, but the proposed removal of age corrections would compensate somewhat for this.

Thank you for your consideration.

Clayton Fisher, M.Cl.Sc.
Audiologist, CASLPO #6256

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Submissions from the
UNITED FOOD AND COMMERCIAL WORKERS
(UFCW) LOCALS 175 & 633
to the Workplace Safety and Insurance Board (WSIB)
Consultation Secretariat

Regarding:
Noise Induced Hearing Loss (NIHL),
Operational Policy document 16-01-04

January 2026

INTRODUCTION

UFCW Locals 175 & 633 represents more than 70,000 workers across the province of Ontario in most workplace sectors – notably retail, industrial, healthcare, and hospitality. Our Union strives to provide our members with the highest quality service and assistance; including strong collective agreements that improve the conditions for our members.

The Union's Workers' Compensation Department endeavours to assist and guide our injured workers as best as possible within the Workplace Safety and Insurance Board (WSIB) system and its policies, practices, and procedures. Putting forward our feedback in regards to proposed changes to *Operational Policy 16-01-04, Noise-Induced Hearing Loss (NIHL)* is an important opportunity for our Union to advocate for our members

Based on the posted consultation note in November 2025 on the WSIB's website, proposed policy changes include such areas as:

- Aligning the hearing loss and permanent impairment requirements
- Removing the presbycusis factor
- Clarifying the NET to streamline decision-making
- Hearing assessment requirements
- Consideration of hearing protective device (HPD) use
- Non-economic loss (NEL) benefits for NIHL
- Tinnitus

Proposals

The Union generally supports the removal of the presbycusis factor ("age factor"). Many workers do not have access to or the need for audiogram testing until there is pervasive and insidious onset, more often than not, later in life. In addition, since the audiogram testing is not needed until later in life, the medical would have no baseline nor progression through the workers' years of exposure. This would have a negative impact on the evidence supporting a work-related noise exposure claim, and instead, by default, would be seen as an age factor. Moving forward, the WSIB must advise and train adjudicators to take a comprehensive and clinical approach, based on current scientific evidence, to determine occupational relationships, appropriate allotment of causation, and degree of permanent impairment.

Secondly, we support the Consultation Draft's acknowledgement of asymmetrical hearing loss. It is beneficial to keep the adjudication on asymmetrical hearing loss open to some interpretation based on the merits and justices of the claim; particularly, should a worker's noise exposure be unilateral, i.e., having the source of the noise in a fixed placement to the affected ear.

In the consultation notification, WSIB has noted that; "the total number of NIHL claims has generally increased year over year since 2009, with the most significant growth occurring from 2020 onwards."

It is widely understood that NIHL has a long latency period and the majority of application for NIHL claims, as stated, occur as workers age, with an average age of 65. Therefore, any changes to such a policy should include serious reflection, and be based, on workplace trends, aging of the general working population, scientific evidence, and prevention models.

We do support the need for policy updates on the issue of NIHL; however, we remain hesitant that this review and policy adjustment are not based in timely and quality health service delivery to injured workers, but instead are based on prioritizing costs and premiums to WSIB and Employers.

NOTABLE POLICY CHANGES AND SELECT HIGHLIGHTS OF OTHER UPDATES

Aligning the hearing loss and permanent impairment requirements

There seems to be a clear discrepancy in how NIHL claims are adjudicated versus other physical and psychological injuries. The *Workplace Safety and Insurance Act (WSIA)*, section 33(1), clearly states,

A worker who sustains an injury is entitled to such health care as may be *necessary, appropriate and sufficient* as a result of the injury and is entitled to make the initial choice of health professional for the purposes of this section. [emphasis added]

Unlike traumatic NIHL, the majority of claims for NIHL are based on a gradual onset over many years of exposure. This latency period naturally results in claims being registered later in a worker's career. Regardless, if a worker can show place, time, and activity, and initial entitlement can be established per *Operational Policy 11-01-01*, then the worker would be entitled to *necessary, appropriate, and sufficient* health care benefits. In cases of NIHL, this will typically be hearing aids. There are no other *Operational Policies* that require injured workers to meet the threshold for a permanent impairment in order to qualify for health care benefits.

The Consultation Draft "sets a minimum average hearing threshold of 26.25dB for initial entitlement, replacing the previous threshold of 22.5dB. This change aligns with the minimum level of hearing loss required for a ratable permanent impairment under the AMA Guide, 3rd Edition." This is, however, only an evidence-informed threshold for determining compensation for a permanent impairment, and it does not take into account the entitlement factor and need for health care benefits prior to reaching the threshold for a ratable impairment. Furthermore, with a threshold of 22.5dB, Ontario had the lowest level of hearing loss for injured workers for determining a permanent impairment. By increasing the threshold, the WSIB is ostensibly making it harder for workers to get entitlement to NIHL, let alone receive access to health care benefits.

Jurisdictional scanning would show the WSIB that the average level of hearing loss is 22.5dB to 26.25dB; but more importantly in many provinces/territories, entitlement may be granted at lower levels of loss for hearing aids.

We do not support this increase to 26.25dB as it will also increase the number of denied claims for workers with mild but real NIHL. By allowing more workers access to NIHL entitlement and health care benefits, workers can continue to work and be productive members of the working community. Workers need access to hearing aids in order to maintain a quality of life and be safe and productive in the workforce.

NIHL is preventable but irreversible. In O. Hong et al., it discusses, “the inability to hear can be a significant threat to worker’s safety and health.”¹ The article describes types of hearing loss, epidemiology, signs, symptoms and audiometric characteristics, prevention, and impacts of hearing loss. One thing that this policy clearly overlooks is the impact of hearing loss. O. Hong et al., states in part,

Although it is not a life-threatening health issue, hearing loss has a profound impact on an individuals’ quality of life, primarily through the social handicap resulting from communication interference and various adverse outcomes such as depression, fear, embarrassment, loss of self-esteem, friction in relationships, and stigma.

[...]

Reported that workers, supervisors, and hearing conservation administrators recognize that worker’s safety may be compromised when co-workers have a hearing loss that impacts their ability to communicate and hear important environmental sounds.²

Greater consideration needs to be applied to the increase from 22dB to 26.25dB, as it will effectively create immense barriers to workers with mild to moderate hearing loss that may not be ratable, who would greatly benefit from access to health care benefits, such as hearing aids.

Clarifying the NET to streamline decision-making

Making adjudication easier to understand for decision-makers, workers and representatives is essential to avoid objections and appeals. That said, the NET is not an actual change; it has been established in operational policy for many years.

However, what we take issue with in the Consultation Draft is that it “maintains the existing NET of 90dBA, measured over an 8-hour workday, for a cumulative duration of at least 5 years, or an equivalent combination of occupational noise level and duration of exposure.” [emphasis added]

Ontario is the only province that uses 90dBA instead of 85dBA. Occupational Health and Safety legislation defines hazardous noise as 85dBA; and yet, WSIB has been inaccurately using 90dBA.

If the WSIB is truly prepared to assist members in being eligible for benefits and services, they would adjust this adjudicative criterion. NIHL is not simply allowed for exposure to loud noises, it

¹ O. Hong et al., *Understanding and preventing noise-induced hearing loss*, Disease-a-Month, 59 (2013): 110-118

² Ibid

is allowed for exposure to hazardous and extreme noises. Placing a higher threshold for entitlement is contrary to other legislation such as OHSA.

Furthermore, the Draft, alludes to how decision-makers may consider all the evidence of a claim; but it would be prudent for WSIB to include *11-01-03, Merits and Justice* to this policy language, as maintaining rigid criteria and thresholds may overlook all the facts and circumstances of a claim. The detailed frequency table is a good baseline to assist in adjudication; however, it creates black or white criteria for allowing NIHL and does not take into account workers with mixed or asymmetric hearing loss, borderline hearing loss, or inconsistent noise exposure.

Hearing assessment requirements

The proposed requirements for hearing assessments are confusing as it states that the NIHL policy,

1. Allows decision makers to assesses every hearing assessment, and
2. Requires all hearing assessments to include both air and bone conduction.

It is unclear if the policy mandates audiograms containing *both* air and bone conduction testing.

Further, the consultation draft states that WSIB has “developed a comprehensive hearing assessment and standardized audiogram template in collaboration with the College of Audiologists and Speech-Language Pathologists and Association of Hearing Instrument Practitioners, which has resulted in the proposal of a unified WSIB form for hearing assessments.” Not to dismiss the validity of the education and experience of such associations, but how can a standardized audiogram be provided to WSIB when the research clearly shows that there are inconsistency, bias, and varied opinions on how hearing assessments should be conducted and read, specifically around air and bone conduction?

Therefore, for a comprehensive consultation, it would benefit stakeholders to have the opportunity to review the proposed WSIB standardized audiogram template form. There are various studies and conclusions on whether air conduction, bone conduction, or both, are necessary to fully determine the degree of a person’s hearing loss.

In terms of the accuracy of the air-bone gap (ABG), research shows that practitioners are not reaching the same conclusions. R. Margolis, in 2016, found that audiograms resulted in positive ABGs in patients with conductive and mixed hearing losses.³ However, “negative ABGs are usually interpreted as resulting from measurement error or from the variability inherent in air-conduction (AC) and bone-conduction (BC) thresholds.”⁴ Margolis had earlier, in 2008, made

³ Margolis R, Wilson R, Popelka G et al. Distribution Characteristics of Air-Bone Gaps –Evidence of Bias in Manual Audiometry. *Ear Hearing* 2016; 37(2): 177- 188. doi:10.1097/AUD.0000000000000246.

⁴ Ibid

conclusions that bone conduction testing is biased as expectations can sway the results even when the tester attempts to be unbiased.⁵

In Coles et al., in a 1991 paper, found there are limitations of BC values for compensation and the BC measurements have limited accuracies in addition to intrinsic biological variability that is often not considered.⁶ The paper goes on to offer a reasonable compromise for determining the amount of non-compensable (conductive) loss in the ear, in terms of range of air-bone gap (dB) to amount of conductive hearing loss (dB). These ABG measurements were to help determine compensation and disability; however, these recommendations and conclusions were criticized by Williams and Haughton⁷ for being too arbitrary.

Clearly, there remains contested and contrary viewpoints on hearing assessments and it is premature for WSIB to propose a standardized hearing assessment form without additional consultation and stakeholder involvement. That said, some guidance and education to workers, representatives, and practitioners about what sorts of hearing assessments, i.e., air conduction, bone conduction and/or both, would assist adjudicators in making decisions on NIHL would be a benefit.

Consideration of hearing protective device (HPD) use

We appreciate the language chosen when adjudicators are to consider the use of hearing protective devices (HPD). We would caution against placing significant weight on the use and accessibility of HPDs as many sectors that provide HPD do not necessarily meet the standards for effective prevention of NIHL.

O. Hong et al. notes “in order to fully prevent NIHL, workers must consistently use HPDs when noise levels are high; however research shows that workers do not consistently use them.”⁸ Therefore, advocacy and promotion of hearing conservation programs by the WSIB to Employers is paramount to ensure that organizations are meeting occupational health standards in regards to HPD, such as field testing, ensuring fit, care and maintenance and usage of HPDs, and ensuring periodic audiometric testing is conducted. Employers should further consider employee and management education and training on the use of HPD and continue to investigate engineering and administrative control improvements to reduce hazardous noise risks.

⁵ Margolis R, Wilson R, Popelka G et al. Distribution Characteristics of Air-Bone Gaps –Evidence of Bias in Manual Audiometry. *Ear Hearing* 2016; 37(2): 177- 188. doi:10.1097/AUD.0000000000000246.

⁶ Coles R, Lutman M, Robinson D. The limited accuracy of bone-conduction audiometry: its significance in medicolegal assessments. *The Journal of Laryngology and Otology* 1991 Jul; 105: 518-521.

⁷ Williams R.G. and Haughton PM. The Letters to the Editor, The limited accuracy of bone conduction audiometry. *The Journal of Laryngology and Otology* 1991 Dec; 105: 1096-1098

⁸ O. Hong et al., (2013): 110-118

Non-Economic Loss (NEL) benefits

As stated earlier, we disagree with only allowing NIHL claims if the worker's audiogram findings are considered ratable for a non-economic loss (NEL) benefit. Regardless, any policy on NIHL, where the loss is of at least 26.25dB this is generally consistent with a jurisdictional scan of Canadian provinces and territories. Further, per WSIA section 47(1)(2),

- (1) If a worker suffers a permanent impairment as a result of the injury, the Board shall determine the degree of his or her permanent impairment expressed as a percentage of total permanent impairment.
- (2) The determination must be made in accordance with the prescribed rating schedule.

Although not explicitly stated, it is widely understood that WSIB continues to use the American Medical Association (AMA) Guides to the Evaluation of Permanent Impairment, 3rd Edition, as its rating schedule. As such, per the Draft policy, "entitlement to NIHL (hearing loss of at least 26.25dB in both ears) are considered to have a ratable permanent impairment are eligible for a NEL benefit." However, the following Draft policy clarification is problematic: that when a worker has, "entitlement for NIHL and NEL benefit and experiences a worsening of their hearing impairment is only eligible for consideration of additional NEL entitlement if they have remained in or returned to occupational noise exposure. There is limited scientific evidence that hearing loss progresses after the cessation of excessive noise exposure at work."

Workers with physical injuries and allowed NELs who experience a worsening and request an NEL redetermination do not need to meet the requirement to still be working. An NEL worsening is still considered; so, why is stricter criterion being applied to NIHL NEL requests?

Tinnitus

The Consultation Draft proposes replacing *Operation Policy 16-01-08, Tinnitus, Post-January 2, 1990*. There is some concern with this proposed change as not all claims for tinnitus involve NIHL.

In fact, Mazurek et. al, found that, "between 57 and 76% of tinnitus patients were shown to have NIHL,"⁹ which leaves a large portion of tinnitus patients without NIHL. For example, some people can have tinnitus without hearing loss if they have damage to the auditory nerve, conductive tinnitus, sensorineural hearing loss, vascular tinnitus, and/or various medical conditions such as mTBI, Meniere's disease, TMJ disorders, inner ear pathologies, side effects of medication, stress and anxiety. If the WSIB eliminates/replaces the Tinnitus policy, it must consider what other Operational Policies will deal with entitlement to Tinnitus (i.e., 11-01-01) and if there are any criteria to said entitlement.

⁹ Mazurek B, Olze H, Haupt H, et al. The More the Worse: the Grade of Noise-Induced Hearing Loss Associates with the Severity of Tinnitus. *Int. J. Environ. Res. Public Health*. 2010; 7:3071-3079.

Furthermore, both NIHL and tinnitus come with secondary conditions. With any type of hearing loss and the perception of sound, the,

“...ability to hear and understand is essential to social engagement and staying connected to one’s environment. There are many serious negative consequences of NIHL, including communication interference that can substantially affect social integration, functional ability, self-esteem, job performance, and quality of life at work and outside work. Individuals with NIHL need to understand that their hearing loss significantly affects others including co-workers and family members.”¹⁰

Therefore, we take issue with the established guideline in *Operational Policy 16-01-08*, which is maintained in this Consultation Draft that,

Entitlement

Claims for tinnitus are eligible for compensation under the following circumstances

- there is an accepted claim for occupational noise-induced hearing loss,
- and
- *there is a clear and adequate history of 2 or more years of continuous and severe tinnitus,*
- and
- the condition has been confirmed by a specialist with facilities for testing tinnitus.

[emphasis added]

Only providing eligibility and compensation for tinnitus if there is an adequate history of two or more years of continuous and severe tinnitus is simply not in keeping with the scientific evidence, and contradicts WSIA 161(3),

- (3) The Board shall monitor developments in the understanding of the relationship between workplace insurance and injury and occupational disease,
- (a) So that generally accepted advances in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this Act; and
- (b) In order to improve the efficiency and effectiveness of the insurance plan.

Studies addressing time frames for tinnitus involve all the types of tinnitus associated with NIHL. The WSIB must consider the medical below that states that tinnitus becomes chronic when it has been present for *six months* or greater.

¹⁰ O. Hong et al., *Understanding and preventing noise-induced hearing loss*, *Disease-a-Month*, 59 (2013): 110-118

- Cima R, Mazurak B, Haider H, et al. A multidisciplinary European guideline for tinnitus: diagnostics, assessment, and treatment. HNO. 2019; 67:10-42.
 - Acute if patient has tinnitus for less than 3 months
 - Subacute after 3 months
 - Chronic for 6 months or more
- Dalrymple S, Lewis S, Philman S. Tinnitus: Diagnosis and Management. Am Fam Physician. 2021; 103(11):663-671.
 - Chronic tinnitus as tinnitus lasting equal to or greater than 6 months
- Tunkel D, Bauer C, Sun G, et al. Otolaryngology-Head and Neck Surgery. 2014; 151(2S): S1-S40.
 - Chronic when it has been present for at least 6 months (chronic tinnitus is also referred to as permanent or persistent tinnitus)
 - Some studies have used tinnitus of 3 months durations for eligibility
- Wallhausser-Franke E, D'Amelio R, Glauner A, et al. Transition from Acute to Chronic Tinnitus: Predictors for the Development of Chronic Distressing Tinnitus. Frontiers in Neurology. 2017; 8:605.
 - Some studies define duration of up to 3 months as subacute and tinnitus lasting at least 6 months as being chronic
 - Acute tinnitus was tinnitus duration of less than 28 days
 - Subacute tinnitus was less than or equal to 3 months
 - Chronic tinnitus was equal to or greater than 6 months

Placing such a high threshold of two years is cruel and unnecessary. A worker should not need to suffer for two years without entitlement, health care benefits, and support.

CONCLUSION

The Union offers this submission under the principal that the needs of Ontario's workers, especially those who have suffered a workplace injury or illness, should be our primary concern.

Given the historic high level of WSIB claims and low level of compensation provided to workers, it is objectively clear that any policy considerations need to be reviewed, updated, and implemented with the best interests of the injured worker in mind and not the financial concern of the Employer and/or WSIB.

As to financial concerns, if WSIB is worried about the financial and personal impact of NIHL, then it should consider utilizing the Unfunded Liability surplus to:

- support more hearing conservation programs,
- improve access to HPDs (including proper fit/user comfort, training, maintenance),
- provide greater audiometric testing on a broader range of sectors that are at a high risk of NIHL,

- encourage administrative and engineering solutions to improve tools and machinery to reduce workplace noise,
- and more.

The surplus money could be used to incentivize Employers to proactively address hazards for NIHL to reduce any associated costs; instead of simply issuing a blank cheque to Employers with no structure or guidance on its use.

The Consultation Draft appears to move forward in favour of injured workers in some ways – such as the removal of the presbycusis factor – but also fails workers by increasing the entitlement rate from 22.5dB to 26.25dB which will clearly affect injured workers’ accessibility to health care benefits and compensation for real and valid NIHL claims.

Based on our review of the proposed changes to NIHL, the Union recommends and requests the following:

1. Maintain the current 22.5dB threshold for hearing loss entitlement.
2. Keep the ratable measurement of 26.25dB for permanent impairments.
3. Use 85dBA – the Occupational Health & Safety baseline for hazardous noise – instead of the 90dBA.
4. Include Merits and Justice; in addition to Benefit of Doubt for any of the areas of this policy that fall into a ‘grey area’ for adjudicators, such as when the NET is slightly below the years of exposure or hearing loss falls below the dB rate for entitlement.
5. Share the proposed WSIB standardized audiogram template form with external stakeholders for review and consideration under this consultation prior to finalizing any proposed policy changes.
6. Invest in and increase education for the prevention of NIHL with the use of HPDs.
7. Apply an equal and just approach to NEL redeterminations for NIHL.
8. Apply the current scientific evidence to entitlement to tinnitus by reducing the history of symptoms of two or more years.
9. Retroactively reconsider any NIHL claims that applied the presbycusis factor.

Respectfully submitted by *United Food and Commercial Workers (UFCW) Locals 175 & 633*

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USW D6 SUBMISSION

There are some positive aspects in the proposed policy changes;
however, there are aspects that appear to violate legislation that must
be changed.

WSIB NIHL Policy
Consultation
submitted by
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Introductory Remarks:

The United Steelworkers (USW) is the largest private sector union in both Canada and North America, representing approximately 1.2 million active and retired workers. USW District 6 is the largest of United Steelworkers' 13 districts with over 79, 000 members and approximately 50, 000 retirees located in Ontario, New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island. Our union represents workers in every sector the Canadian economy.

It has been a long-standing practice in Ontario to consult the public regarding proposed legislative, regulatory and policy changes, and we appreciate the opportunity to participate in this process. While the opportunity is appreciated, as well as the time allotted for this consultation, we have concerns regarding the proposed changes to the policy. Even when the proposed changes seem to be a positive step, there are concerns regarding the lack of detail or clarity regarding implementation of such changes. We submit that there's much work to be done to reach the stated goals of the policy changes to really have a revised NIHL policy that "strengthens consistency, timeliness, and quality in entitlement decisions for NIHL claims and seeks to enhance transparency about decision-making for occupational NIHL for workers, employers, and the broader stakeholder community".

Background:

On November 10, 2025, the WSIB initiated a consultation regarding proposed changes to the Noise-Induced Hearing Loss Policy, providing a deadline of January 30, 2026, to provide feedback. Occupational NIHL has long been recognized as a permanent but preventable occupational disease peculiar to and characteristic of exposure to hazardous noise. The WSIB has recognized this relationship through policy since at least 1988. There haven't been any significant changes to entitlement criteria in the policy since 1992, as stipulated in the Consultation note, and now the WSIB has engaged stakeholders for their feedback on a draft policy.

Comments:

It is our position that some of the proposed changes do not align with the WSIA; specifically, we contend that those proposed changes are inconsistent with sections 1, 15(2), 33, 46, 47, 119, and 161. We do not dispute the Board's authority to establish or update policies, but we do assert that the Act requires Board policy to be consistent with, and authorized by, the WSIA as noted in s. 126(4). Therefore, we submit that the very agency that is charged with administering the WSIA will need to make several changes to the draft policy in order for it to be consistent with, and authorized by, the WSIA.

There are three evidentiary requirements for initial entitlement listed in the draft policy. We will discuss the hearing loss threshold and the noise exposure requirements first in our comments below. In our view, these requirements are the most at odds with the provisions of the WSIA cited above.

Hazardous noise:

Section 1 of the WSIA is the purpose clause, with the first and fourth bullets being the most applicable to this consultation. The first item listed in the purpose clause is to promote health and safety in workplaces. We submit that the WSIB's reliance on a noise exposure level of 90 dBA fails to promote health and safety as it contradicts the Occupational Health and Safety Act, [Regulation 381/15: Noise](#). The noise regulation requires employers to,

“ensure that no worker is exposed to a sound level greater than an equivalent sound exposure level of 85 dBA, $L_{ex,8}$ ”. [see section 2(4)]

Quite frankly, the WSIB lacks the authority to allow employers to violate that Occupational Safety and Health Act and/or its regulations. Therefore, we submit that the WSIB must use a noise level of 85 dBA as defined in Regulation 381/15.

Compliance with Ontario's noise regulation has long been part of WSIB policy. Policy 04-03-06 Occupational Noise-Induced Hearing Loss (dated June 3, 1988) referenced the noise regulation in effect at that time (Regulation

714/82). Policy 16-01-03 Occupational Noise-Induced Hearing Loss, before January 2, 1990, also references the noise regulation (488/01). While the current policy does not cite the noise regulation, it does stipulate that exposure to hazardous noise is required for entitlement to benefits and the only definition for hazardous noise is provided in Regulation 381/15. Given that the WSIB does not have the authority to set exposure limits, and that they have a duty to promote health and safety, then we submit that the NIHL policy must comply with Regulation 381/15.

We recognise that s. 159 of the WSIA authorises the WSIB to establish policies regarding entitlement to benefits. However, s. 159 does not serve to displace the Board's other legislative obligations or to allow a policy to be inconsistent with other sections of the WSIA. Nothing in s. 159 authorises the Board to permit employers to violate any provision of health and safety legislation. Therefore, it is our position that the only way to have the noise exposure criteria of the policy be consistent with, and authorized by, the WSIA is to change it to 85 dBA.

Initial entitlement:

With respect to the fourth item in the purpose clause, the proposed alignment with permanent impairment levels of hearing loss to qualify for initial entitlement would serve to deny, rather than provide, compensation and other benefits to workers. Health care is one of the other benefits prescribed by the WSIA and workers with mild hearing loss who could have their hearing restored through hearing aids would be denied that health care benefit. There are WSIAT Decisions [[WSIAT Decision No. 1292/22](#) is an example and it reviews similar decisions] that have considered the merits and justice of claims that did not meet the 22.5 dB hearing loss threshold of policy, and allowed claims for health care benefits (i.e., hearing aids). The proposed change to align with the NEL criteria appears to be an attempt to escape providing health care benefits for workers who would benefit from hearing aids. This in turn would fail to adhere to the purpose clause.

As per s. 161(2),

“The Board shall evaluate the consequences of any proposed change in benefits, services, programs and policies to ensure that the purposes of this Act are achieved.”

Nothing in the Consultation note indicates that such an evaluation was conducted, and the information above demonstrates that these proposed changes fail to achieve the purposes of the WSIA stipulated in s.1. We therefore submit that maintaining the exposure criterion of 90 dBA and increasing the minimum hearing loss to 26.25 dB fails to achieve the purpose of the WSIA as noted above.

NIHL is recognized as an occupational disease, and s. 15(2) of the WSIA stipulates that,

“The worker is entitled to benefits under the insurance plan as if the disease were a personal injury by accident and as if the impairment were the happening of the accident.”

No other injury, or occupational disease for that matter, requires a worker to have a permanent impairment in order to grant initial entitlement to benefits. This is not just a violation of s. 15(2), it is also a form of discrimination based on the type of disability.

The WSIA is clear in s. 119 that decisions are made based on the merits and justice of a case and provides for the benefit of doubt favouring the worker if the evidence is approximately equal. Nothing in s. 119 suggests that a worker needs to have a permanent impairment in order for initial entitlement to be granted. Additionally, nothing in s. 47 suggests that it is to be used to determine initial entitlement to benefits. In fact, s. 46 is clear that a decision regarding a NEL is separate from the initial entitlement decision as it notes that not all workplace injuries (which would include occupational diseases) result in a permanent impairment and this is also supported by s. 47(13) which stipulates that,

“For the purposes of this Act, a worker shall be deemed not to have a permanent impairment if the degree of his or her permanent impairment is determined to be zero.”

There is nothing in the WSIA that would support the proposed policy change of aligning initial entitlement with the NEL criteria. However, the sections of the WSIA noted above show that such a proposal is not consistent with, or authorized by, the Act.

Requiring a worker to meet the NEL threshold for initial entitlement, which would include entitlement to health care benefits as prescribed by s. 33 is inconsistent with the WSIA. It is clear that a worker only needs to sustain a workplace injury for entitlement to health care that “may be necessary, appropriate and sufficient as a result of the injury”, and there’s nothing to suggest that a worker needs to have a permanent impairment before they become eligible for entitlement to health care benefits. It is therefore submitted that the proposed policy change to require 26.25 dB hearing loss as the minimum threshold for initial entitlement is not consistent with, or authorized by, the WSIA.

All together, the information above demonstrates that WSIAT Decisions have established that there can be merit and justice in allowing claims that do not meet the 22.5 dB hearing loss threshold. Policy needs to be consistent with, and authorized by, the WSIA. Changes to policy need to be evaluated to ensure that the purpose clause of the Act are achieved. It is not necessary for a worker to have a permanent impairment in order to be granted initial entitlement to benefits under the WSIA. The WSIB does not have the authority to authorize an employer to exceed exposure limits prescribed in regulations under the Occupational Health and Safety Act. There is nothing to support maintaining the noise exposure level at 90 dBA, or to raise the threshold for hearing loss to that required for a NEL.

Hearing loss threshold:

The Consultation note provides the rationale for using 26.25 dB hearing loss as,

“It will also align Ontario’s approach to that of most other Canadian workers’ compensation boards.”

Aligning with other compensation boards is not listed as a consideration in the WSIA, and we believe that the premise itself is inaccurate. There are seven

jurisdictions that use 25 dB for initial entitlement (those jurisdictions are New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Yukon, and currently Ontario)¹. That means that over half of the jurisdictions are already aligned, and that if alignment were necessary then the other jurisdictions should be conforming to the threshold of 25 dB.

What becomes glaringly obvious in Table 1 is that Ontario is the only province that doesn't use 85 dBA for hazardous noise and it's also the only province requiring 5 years exposure for entitlement. If there was truly a desire to align with other jurisdictions, then the WSIB should adopt 85 dBA as hazardous noise and only require 2 years exposure for initial entitlement to benefits. There are better reasons than aligning with other jurisdictions to make these changes that will be discussed below.

Three of the remaining six jurisdictions have policies that seem to be silent regarding the threshold for initial entitlement for NIHL. Alberta has a high threshold for a permanent impairment of 35 dB, while Saskatchewan and Manitoba use 26.25 dB like Ontario. However, nothing in the NIHL policies for those Western provinces states that a permanent impairment is required for initial entitlement to benefits. That means that Ontario's current practice of not requiring a NEL for initial entitlement is already aligned with those jurisdictions.

Out of the remaining three jurisdictions; Quebec is silent regarding the hearing loss threshold for initial entitlement but provides a presumption of work-relatedness, PEI has their threshold set at 26 dB, and BC uses 28 dB. There are three other jurisdictions that have a presumption of work-relatedness for NIHL (BC, Alberta and New Brunswick). Given the fact that the relationship between hearing loss and hazardous noise is well established, and that the report from [Dr. Paul Demers](#) noted that the WSIB's "list of presumptions is very limited compared to other jurisdictions", then the WSIB should exercise the authority granted to them under s. 183 of the WSIA to add NIHL to Schedule 3.

¹ See Table 1: Jurisdictional scan for NIHL (1 page enclosed)

Declaring NIHL a Schedule 3 disease:

Adding NIHL to Schedule 3 isn't about aligning with other jurisdictions, it's about acting on the recommendations from Dr. Paul Demers and complying with s. 161(3) of the WSIA. That section stipulates that,

“The Board shall monitor developments in the understanding of the relationship between workplace insurance and injury and occupational disease,

(a) so that generally accepted advances in health sciences and related disciplines are reflected in benefits, services, programs and policies in a way that is consistent with the purposes of this Act; and

(b) in order to improve the efficiency and effectiveness of the insurance plan.”

It is our position that it would be more efficient and effective to add NIHL to Schedule 3 and develop a rebuttal matrix instead of continuing with a policy.

There is a well-established cause and effect relationship between hazardous noise and hearing loss. When the exposure to hazardous noise occurs in the workplace then the resulting hearing loss is work-related. An entry into Schedule 3 would be as simple as having Column 1, Description of Disease being ‘noise induced hearing loss’ with Column 2, Process as ‘any process involving exposure to hazardous noise’. Given that 2 years exposure to hazardous noise is generally accepted as sufficient to cause hearing loss, then that could be an amendment to the WSIA requiring a 2-year history of exposure in the same way that s. 15(5) & (6) impose a 2-year exposure history for the presumption to apply to silicosis and pneumoconiosis respectively.

Like any other Schedule 3 entry, the worker would need to have the described disease (NIHL) and have worked in the process described for the presumption to apply. Mixed hearing loss would still invoke the presumption for the portion that is noise induced, but the conductive loss would not be afforded the presumption. A lack of workplace exposure to hazardous noise would also negate the presumption. When the presumption does not apply, the claim is adjudicated based on the individual merits and justice, applying

the benefit of doubt where applicable, to determine whether or not workplace exposures were a significant contributing factor in the onset of the hearing loss.

A definition for noise induced hearing loss could be added to the WSIA to clarify that it is sensorineural hearing loss of 20 (or 22.5) dB resulting from exposure to hazardous noise in the workplace. This would make it clear that a threshold of hearing loss is required and that other causes of sensorineural hearing loss such as ototoxic substances would not be afforded the presumption of s. 15(3). We believe that this is the most efficient and effective way to adjudicate NIHL claims.

Adding NIHL to Schedule 3 would avoid the need to clarify how presbycusis would be applied in the new policy. There is mention of “age-related hearing loss” in the draft policy, but not enough clarity regarding when to consider it or what evidence is required to support that such effects overwhelmed the workplace exposure. The section about non-work-related factors overwhelming occupational exposure seems to be at odds with the last paragraph in the section about establishing work-relatedness that states,

“It is not necessary for the worker’s occupational exposure to be the sole, primary, or predominant cause of the NIHL to allow the claim for initial entitlement. When it is established that the occupational exposure has significantly contributed to the development of the NIHL, there will be entitlement even if there is also a history of non-occupational noise exposure or the presence of other non-work-related contributing factors.”

If a worker has noise induced hearing loss and has the required exposure, then initial entitlement should not be denied despite any non-occupational factors.

Presbycusis:

The proposed changes in the draft policy regarding “age-related hearing loss” overwhelming the occupational exposure despite having the noise exposure threshold being met is not consistent with [Policy 15-02-03](#) *Pre-existing Conditions* which stipulates that,

“Entitlement for a work-related injury/disease will not be denied due to the existence of a pre-existing condition.”

Any consideration of a pre-existing condition would make Policy 15-02-03 a relevant and applicable policy to be applied as per [Policy 11-01-03 Merits and Justice](#). Essentially, that section in the draft policy is applying the crumbling skull doctrine without any proof that the worker would have suffered hearing loss absent the workplace exposure to hazardous noise while violating WSIB policy. Therefore, that section of the draft policy needs to be abandoned should the Board ignore our recommendation to add NIHL to Schedule 3 or develop a policy regarding the application of the presumption.

Eliminating the presbycusis factor is consistent with s. 161(3) as the two scientific papers cited in the Consultation note support that there should not be an adjustment for presbycusis. Several studies regarding presbycusis were reviewed by Leroux, T. and A. Pinsonnault-Skvarenina (2018). [Review of the Literature on the Links between Occupational Hearing Loss and Presbycusis, Institut de recherche Robert-Sauve en sante et en securite du travail](#). It noted a study that stated presbycusis was caused by noise exposure and had nothing to do with aging. A theory about presbycusis not being possible for those with hearing loss due to noise postulated that “one part of the cochlea was already destroyed and could not be affected by a second pathological process”. The review also stated that the evidence showed that “exposure to noise accelerates the process of presbycusis”. NIOSH was cited regarding the use of corrective factors for presbycusis stating that they are not used due to “great variability that exists among individuals”.

The second scientific paper referenced, Themann, C. L. and E. A. Masterson (2019). ["Occupational noise exposure: A review of its effects, epidemiology, and impact with recommendations for reducing its burden."](#) J Acoust Soc Am 146(5): 3879., supported not using corrective factors for presbycusis. Again, several studies were reviewed, and the overall conclusion was that,

“Allocating the relative contribution of noise and aging an individual’s hearing loss is not possible”.

These studies reflect what is generally accepted advances in the understanding of hearing loss, so eliminating presbycusis would be consistent with s. 161(3) of

the WSIA. Therefore, age-related hearing loss should not be a factor to consider in noise induced hearing loss claims that are a result of exposure to hazardous noise.

Threshold for hearing loss:

As for the suggestion that the level of hearing loss be lowered to 20 dB, that is also supported by the Themann and Masterson paper that noted under section “V. IMPACT OF WORKPLACE NOISE AND HEARING LOSS”, “D. Quality of life”, in the second last paragraph before Table IV it provides a different classification for hearing loss as "mild (20–34 dB), moderate (35–49 dB), moderately severe (50–64 dB), severe (65–79 dB), profound (80–94 dB) and complete (≥ 95 dB) levels of hearing impairment". There are other scientific papers that agree with that, or have a similar classification for mild hearing loss (see for examples: Chen K, Su S, Chen K, et al. An overview of occupational noise-induced hearing loss among workers: epidemiology, pathogenesis, and preventive measures. *Environmental Health and Preventive Medicine* (2020) 25:65: <https://doi.org/10.1186/s12199-020-00906-0>; Humes L, [The World Health Organization’s hearing –impairment grading system: an evaluation for unaided communication in age-related hearing loss](#). *Inter Journal*; and Squire L, Colombo B, McKinney S. [Rapid Audiogram Interpretation](#). Published 2019 by Plural Publishing, Inc. San Diego, CA.). Therefore, lowering the required hearing loss to 20 dB would be consistent with s. 161(3) of the WSIA.

Science and legislation support adding NIHL to Schedule 3 without consideration of presbycusis. Both papers referenced in the Consultation note use 85 dBA as the threshold for hazardous noise, which validates our recommendation in that regard. The studies don’t support the 5 years of exposure requirement that is currently in the policy. Mild hearing loss is relatively consistently stated as beginning at 20 dB loss of hearing, which endorses our recommendation to lower the required hearing loss from 22.5 dB to 20. We submit that there is sufficient evidence to warrant adding NIHL to Schedule 3, as well as defining hazardous noise as 85 dBA or more and lowering the required hearing loss for initial entitlement to benefits to 20 dB. Therefore, we request that the WSIB adopt those recommendations.

Pure tone audiogram:

We appreciate that the Board has recognized that there is sufficient scientific evidence stating that an air-bone-gap of 15 dB or less is normal. Using bone conduction values in mixed hearing loss is appropriate, but there is a lack of clarity regarding the values to be used in noise induced sensorineural hearing loss. The implication is that air conduction values would be used, and this has consistently been stated in the WSIAT discussion papers regarding hearing loss. A recent [WSIAT Decision](#) considered the policy as well as the standard statement from a WSIB audiologist noted in paragraph [23] regarding bone conduction values; the Vice-Chair found that the use of air conduction values was supported by science and Tribunal jurisprudence. Several studies also support that proposition and can be provided if required, but that seems unnecessary since it is the Board proposing this change. Therefore, we recommend that the WSIB clearly state that air conduction values are used to determine the level of hearing loss in NIHL claims that don't have a diagnosed conductive component.

Worker no longer exposed to hazardous noise:

The draft policy states that,

“For clarity, if a worker does not remain in or return to occupational noise exposure, any subsequent change in hearing impairment is not considered work-related and is not eligible for additional NEL entitlement.”

This statement doesn't reflect what is generally accepted by the scientific and medical professionals regarding the deterioration of hearing loss after leaving the noisy environment. As previously noted, s. 161(3) requires the Board to reflect such information in their policies.

The Leroux and Pinsonnault-Skvarenina paper that was cited twice in the Consultation note stated that,

“It is therefore conceivable that ending exposure to noise

does not guarantee that the underlying physiopathologic processes in the progression of hearing loss (as observed among retired workers) will cease”.

In [WSIAT Decision No. 1896/19](#), the Medical Assessor addressed the issue of hearing loss deteriorating after noise exposure ended in paragraph [16] in response to question 4. That question was “Do you agree with the proposition that hair cell loss, and the related proposition that NIHL “stabilizes,” when exposure to noise ends?” The Medical Assessor said “NO.” and provided an explanation that cited several studies to support that answer. Given the evidence that refutes the draft policy statement, and the application of s. 161(3) of the WSIA, then we recommend that the WSIB substitute that statement with one that reflects the generally accepted principle that hearing loss can deteriorate after noise exposure ends.

NEL calculation statement:

Another issue with the draft policy is the information regarding reducing the NEL rating based on covered and non-covered noise exposure. While we understand the intent of that proposal, we note that it isn’t consistent with or authorized by s. 47 of the WSIA. Section 47 of the WSIA is reproduced below.

“Degree of permanent impairment

47 (1) If a worker suffers permanent impairment as a result of the injury, the Board shall determine the degree of his or her permanent impairment expressed as a percentage of total permanent impairment. 1997, c. 16, Sched. A, s. 47 (1).

Same

(2) The determination must be made in accordance with the prescribed rating schedule (or, if the schedule does not provide for the impairment, the prescribed criteria) and,

(a) having regard to medical assessments, if any, conducted under this section; and

(b) having regard to the health information about the worker on file with the Board.”

It is clearly stated in the draft policy that the exclusions are part of determining the permanent impairment; therefore, s. 47 must be applied.

The prescribed rating schedule mentioned in s. 47(2) is explained in s. 18 of O. Reg. 175/98 reproduced below.

“Rating Schedule

18. (1) The American Medical Association Guides to the Evaluation of Permanent Impairment (third edition revised) as it read on January 14, 1991 is prescribed as the rating schedule for the purposes of subsection 47 (2) of the Act. O. Reg. 175/98, s. 18 (1).

(2) The criteria prescribed for the purposes of subsection 47 (2), for impairments not provided for in the rating schedule, are the criteria in the listings in the rating schedule for those body parts, systems or functions which are most analogous to the conditions of the worker. O. Reg. 175/98, s. 18 (2).”

Nothing in the Act or its regulations states that the WSIB can develop a formula for calculating a worker’s permanent impairment. It is clearly stated that the prescribed rating schedule must be used, and if the impairment isn’t listed in the rating schedule, then the WSIB must use what is most similar to that impairment found in the AMA Guides. Therefore, that section of the draft policy is not consistent with, or authorized by, the WSIA.

Damage to the ear from non-covered noise exposure is no different than the damage caused by occupational exposure to hazardous noise. Absent an audiogram from the time before, or after as the case may be, of covered exposure the two exposures cannot be separated. This is very reminiscent of the COPD apportionment issue. Prior to the Board conducting their scientific review regarding COPD apportionment, the USW met via conference call with senior executives from the WSIB to ask why they were conducting a scientific

review to answer a question of law. As noted above, it is the law that dictates how a permanent impairment is calculated. WSIB is bound by the Act and therefore, despite any intentions of only compensating for covered exposure, they cannot rely on their own opinion of how to calculate a worker's permanent impairment. Therefore, we recommend that the entire section regarding excluding non-covered exposure be eliminated.

Tinnitus:

Combining the tinnitus policy with the NIHL policy makes sense, but the minimum two-year duration for tinnitus isn't supported by science. The vast majority of scientific literature, and American and European clinical practice guidelines state chronic tinnitus is tinnitus that persists for 6 months or greater. See for examples: Cima R, Mazurak B, Haider H, et al. [A multidisciplinary European guideline for tinnitus: diagnostics, assessment, and treatment](#). HNO. 2019; 67:10-42.; Dalrymple S, Lewis S, Philman S. [Tinnitus: Diagnosis and Management](#). Am Fam Physician. 2021; 103(11):663-671.; Henry, J. ["Measurement" of Tinnitus](#). Otol Neurotol. 2016; 37: e276-e285.; Tunkel D, Bauer C, Sun G, et al. [Otolaryngology-Head and Neck Surgery](#). 2014; 151(2S): S1-S40. Based on this generally accepted scientific and medical information, and the application of s. 161(3), we recommend that the WSIB use 6 months as the minimum duration for entitlement to benefits for tinnitus in NIHL claims.

Other effects of hearing loss not being considered:

It is noted in the Themann and Masterson paper under section "V. IMPACT OF WORKPLACE NOISE AND HEARING LOSS", "D. Quality of life" in the first paragraph that,

"Hearing loss is strongly associated with depression and depressive symptoms".

They go on to say that such an association exists with tinnitus too. Other health issues linked to hearing loss noted by Themann and Masterson include; cardiovascular disease, balance problems, and lower income. While any loss of earnings resulting from an allowed NIHL claim could be claimed and compensated according to WSIB policies, the other issues seem to be absent

from consideration. The WSIB should conduct a review of the association between cardiovascular disease and hearing loss to determine compensability. Given the strong association between hearing loss and depression, we recommend that the WSIB monitor claims for secondary psychological conditions and provide or adjust benefits accordingly (e.g., increase NEL, pay LOE, etc.).

4000 Hz:

Studies have shown that noise induced hearing loss affects the 4000 Hz and 6000 Hz frequency first (Hong O, Kerr M, Poling G, Dhar S. [Understanding and preventing noise-induced hearing loss](#). Disease-a-Month 2013; 59: 110-118.). Moore et al (2022) noted that by not using 4000 Hz frequency there was an underestimation of the incidence of NIHL (Moore B, Lowe D, Cox G. [Guidelines for Diagnosing and Quantifying Noise –Induced Hearing Loss](#). Trends in Hearing 2022; 26: 1-21.). Smoorenburg (1992) found that the best predictor of the speech reception threshold was the average of the hearing threshold levels at 2000 and 4000 Hz frequencies (Smoorenburg G. [Speech reception in quiet and in noisy conditions by individuals with noise-induced hearing loss in relation to their tone audiogram](#). J. Acoust. Soc. Am. 1992; 91: 421-437.). Wilson (2011) tested military veterans for word recognition with background noise revealing that speech recognition was significantly better by the average of the hearing threshold levels at 1000, 2000, and 4000 Hz than the average at 500, 1000, and 2000 Hz frequencies (Wilson R. [Clinical experience with the words-in-noise test on 3430 veterans: Comparisons with pure-tone thresholds and word recognition in quiet](#).). These studies demonstrate the importance of including the 4000 Hz frequency for NIHL claims.

We recognize that the prescribed rating schedule uses 500, 1000, 2000 and 3000 Hz frequencies for permanent impairment rating in NIHL claims, but that does not prevent the WSIB from including 4000 Hz for initial entitlement. In fact, sections 159(a.3) and 161(3) provide the legislative authority to make such an amendment for the purpose of determining initial entitlement without requiring and change to the WSIA or O. Reg. 175/98. Therefore, we recommend that the Board either add 4000 Hz to the criteria for initial entitlement or eliminate the use of 500 Hz and utilize 4000 Hz instead.

Final comments and recommendations:

The draft policy references other applicable policies such as Benefit of Doubt, Entitlement to Health Care, Hearing Devices, etc., but for some reason does not refer to the Merits and Justice policy. The policy has indications that there may be situations requiring consideration of the individual merit and justice of the claim, but it is not explicitly stated that Policy 11-01-03 *Merits and Justice* would apply. Any claim that does not meet the policy criteria, whether it is a policy explaining the application of Schedule 3 or an initial entitlement policy, must be considered on its individual merit and justice as per s. 119 of the WSIA. Therefore, we recommend that the WSIB specifically reference the Merits and Justice policy.

We do appreciate that there's a statement in the draft policy stipulating that the use of hearing protection devices won't be considered in determining the noise exposure. There are many reasons why hearing protection shouldn't be used to calculate noise exposure like improper fit or poor-quality devices, etc. However, the most obvious to us is that this is a no-fault system and using hearing protection devices to determine exposure would imply fault on the worker who didn't wear them or wasn't provided hearing protection.

The 15 dB variance for asymmetrical hearing loss is also a positive change. This could avoid appeals, or at the very least avoid having to explain why one ear was affected more than the other. Perhaps additional guidance regarding asymmetrical loss of more than 15 dB would be beneficial if that becomes a prevalent issue.

Summary:

We do appreciate the effort of the WSIB to update this policy, and that some elements of the draft policy are more reflective of the current science. It is our position that the best approach would be to add noise induced hearing loss to Schedule 3 and make the necessary changes to the WSIA. Then the recommendations, summarized below, could be used in a policy to explain the application of the presumption in these claims.

Recommendations:

1. Set the noise exposure threshold (NET) to 85 dBA and reduce the required exposure duration to 2 years.
2. Maintain the current hearing loss threshold of 22.5 dB at a minimum but lowering it to 20 dB would be more reflective of generally accepted knowledge regarding hearing loss.
3. Add NIHL to Schedule 3 and define noise induced hearing loss in the WSIA as sensorineural hearing loss of 20 (or 22.5) dB resulting from exposure to hazardous noise in the workplace.
4. If NIHL isn't added to Schedule 3 then the policy needs to refer decision-makers to Policy 15-02-03 for any consideration of a pre-existing condition instead of using the draft language regarding age-related hearing loss.
5. State clearly that air conduction values are used to determine the level of hearing loss in NIHL claims that don't have a diagnosed conductive component.
6. Recognize that hearing loss can deteriorate after noise exposure ends.
7. Eliminate the entire section regarding excluding non-covered exposure from the draft policy.
8. Set the minimum duration for tinnitus to 6 months for entitlement to benefits in NIHL claims.
9. The WSIB should conduct a review of the association between cardiovascular disease and hearing loss to determine compensability.

10. Monitor NIHL claims for secondary psychological conditions and provide adjust benefits accordingly.
11. Either add 4000 Hz to the criteria for initial entitlement or use 4000 Hz in place of 500.
12. Include a specific reference to Policy 11-01-03 *Merits and Justice*.

Should you have any questions, or require additional information, please feel free to contact the undersigned.

Respectfully submitted on behalf of USW District 6 by,

Andy LaDouceur & Sylvia Boyce

Andy LaDouceur, USW D6 Health, Safety and Environment Coordinator and
Sylvia Boyce CNO Department Head for Health, Safety and Environment

Table 1: Jurisdictional scan for NIHL

<u>Jurisdiction</u>	<u>Hazardous Noise (dBA)</u>	<u>Duration of exposure (years)</u>	<u>Level of hearing loss (dB)</u>
<u>British Columbia</u>	85	2	28
<u>Alberta</u>	85	2	35 ⁺
<u>Saskatchewan</u>	85	2	26.25 ⁺
<u>Manitoba</u>	85	2	26.25 ⁺
<u>Ontario</u>	90 [*]	5	22.5 [^]
<u>Quebec</u>	85	?	?
<u>New Brunswick</u>	85	2	25
<u>Nova Scotia</u>	85	?	>25
<u>Prince Edward Island</u>	85	2	26
<u>Newfoundland and Labrador</u>	85	2	25
<u>Yukon</u>	85	2	25
<u>Northwest Territories</u>	85	2	25 [✓]
<u>Nunavut</u>	85	2	25 [✓]

⁺35 dB for Alberta and 26.25 dB for Saskatchewan & Manitoba are the minimum requirements for a permanent impairment, but the policies seem to indicate that entitlement to hearing aids may be granted at lower levels of loss.

^{*} Occupational Health and Safety legislation defines hazardous noise as 85 dBA, but WSIB uses 90 dBA for entitlement.

[^]22.5 dB is the current loss required (it is a function of rounding up to 25 that was the previous version of policy that applies to claims prior to January 2, 1990)

[?] presumption applies without specifying duration of exposure or level of loss for initial entitlement, other information indicates that 30 dB is required for a permanent impairment award.

[?] duration of exposure not stated, but there must be an audiogram with 5 years of leaving the noisy environment.

[✓] previous version of policy required 25 dB loss, but it is absent from current policy.

From: [Richard Beall](#)
To: [Consultation Secretariat](#)
Subject: NIHL Policy 16-01-04 Draft
Date: Monday, December 22, 2025 3:48:46 PM

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To whom it may concern,

The change in moving the minimum threshold up to 26.25 dB of loss is a significant change from 22.25 dB. Health Care Benefits do not need to be in alignment with Permanent Impairment. There are other policy's that only include health care benefits and not a permanent impairment. If this change will go forward then the values for calculation should be 500 Hz, 1000 Hz, 2000 Hz, and **4000 Hz**, as this is in alignment with the audiogram typical notch. The use of un-masked bone conduction should not be used as there is medical support that cross over sound can be heard which changes the audiogram. The use of air conduction has been shown in many Tribunal decisions to be the correct values for NIHL. The change in hearing level in my opinion seems to only be to reduce the number of allowed claims going forward.

The new addition for exclusion of non-covered exposure in determining permanent impairment, really is similar to apportionment of benefits. This is similar to COPD offset for smoking. This proposed calculation is far to simple as it does not include the level of exposure to noise. This will lead to significant additional appeals.

Where can a copy of the WSIB form for hearing assessments be found?

Richard Beall
USW Local 2251
CWS Committee Chairperson
WSIB/Occupational Disease Committee Chairperson
(705) 942-3900



WORKERS' HEALTH AND SAFETY LEGAL CLINIC

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30 January 2026

Via Electronic Mail

Consultation Secretariat
Workplace Safety and Insurance Board
200 Front Street West
Toronto Ontario
M5V 3J1

RE: Occupational Noise-Induced Hearing Loss Consultation

To Whom It May Concern:

The Workers' Health and Safety Legal Clinic ("the Clinic") appreciates the opportunity to make submissions regarding the proposed changes to the Noise Induced Hearing Loss Policy.

Who We Are

The Clinic is a community legal clinic funded by Legal Aid Ontario. Our mandate is to provide legal advice and representation to non-unionized low wage workers in Ontario who face health and safety problems at work. We also advocate for systemic change and law reform to improve health and safety legislation and protections for workers.

Overview

There are four issues to be addressed the within these submissions:

1. The removal of the presbycusis factor;
2. The divergence from occupational health and safety legislation;
3. The alleged conformity with practices in other provinces; and
4. The higher barrier to entitlement;

A Welcome Change

The Clinic welcomes the removal of the presbycusis factor in adjudication. It is submitted that the best use of reviewing policy is not an approach that restricts entitlement but expands it to ensure no worker is left with the burdensome need to appeal decisions.

Such an approach, like removing the presbycusis factor, would be in a similar vein to the recommendations from the Occupational Cancer Research Centre with respect to occupational disease.¹ The WSIB needs an expansive approach to entitlement.

The Right to Refuse the “Acceptable”

The [Occupational Health and Safety Act](#)² empowers workers in the province with the right to refuse unsafe labour.³ In the interests of occupational health and safety, [O. Reg. 381/15](#), exists to protect workers from unsafe levels of noise.

A worker exposed to an environment where the noise level registered above 85 dBA without any protection, would have valid grounds to make a work refusal. The proposed policy contemplates sustained exposure above occupational health and safety legislated limits. The WSIB should not diverge from the occupational health and safety standard as to what would be an acceptable exposure level. Occupational health and safety should be guiding the policy.

Conformity with Reality

Having had the benefit of reviewing the submissions from the United Steelworkers, the Clinic supports and endorses those submissions. Of particular note is their review of other jurisdictions with respect to using 26.25 dB as the new higher hearing loss threshold. Their investigation of other jurisdictions finds that the majority of jurisdictions use the lower standard of 25 dB. Clearly, the new proposed approach will not “align Ontario’s approach to that of most other Canadian workers’ compensation boards.” That is simply untrue.

If the WSIB intends to use the higher threshold, making it harder for workers with what would be under a lower standard an allowed claim, dispense with the pretense. Take ownership of a conscious decision that could serve to disentitle workers.

Expand Entitlement Not Restrict It

The tying of entitlement to the NEL impairment level is another proposed change that will limit entitlement. This is not a method of expanding entitlement or helping more workers. For example, there are situations where entitlement for a hearing aid would be granted without reaching the permanent impairment threshold.

The question is examined in an appeal that pre-dates the potential applicability of [s. 126](#) of the current legislation.⁴ In [Decision No. 482/90](#)⁵ the Panel weighed the difference between the requirement for a pension award as opposed to the need for healthcare. In what I would submit is an approach that puts the worker first, the Panel acknowledged varying thresholds.

In this appeal, the worker had a quantifiable hearing loss that was an impairment. While it may not have reached a level to award a pension, the worker still required a hearing aid. There may not have been a disablement to the level of pension; there was still enough of an impairment to warrant coverage of a hearing aid.

¹ <https://www.occupationalcancer.ca/resources/scientific-evidence-work-relatedness-cancer-report/>

² R.S.O. 1990, c. O.1.

³ [Occupational Health and Safety Act](#), [s. 43\(3\)](#).

⁴ [Workplace Safety and Insurance Act, 1997](#), S.O. 1997, c. 16, Sched. A, as amended.

⁵ 1991 CanLII 5041 (ON WSIAT)

Recommendation and Conclusion

With the greatest of respect, the WSIB should be looking at ways to assist more workers. The proposed policy will adversely impact workers. As such, it is the Clinic's position that:

1. The removal of the presbycusis factor is a welcome change;
2. Exposure level should conform with health and safety legislation at 85 dBA;
3. Use the hearing loss threshold of 22.5 dB; and
4. The requirement to reach a permanent impairment level of entitlement should be removed.

Thank you for the opportunity to make additional submissions.

Yours truly,

John Bartolomeo

John Bartolomeo
Lawyer / Co-Director