



Section:	Occupational Health	Date of Issue:	2014.08.06
		Issued By:	Staff Wellness
Part:	Health Surveillance Program for Noise Exposure	Revision #:	1
		Revision Date:	2023.07.31
		Revised By:	B.Webster, E.Kerr

1.0 Purpose.....2

2.0 Scope.....2

3.0 Definitions2

4.0 Guiding Principles4

5.0 Responsibilities.....4

 5.1 Faculty & Staff:.....4

 5.2 Supervisor & Manager:.....4

 5.3 Environment, Health and Safety:.....4

 5.4 Staff Wellness:.....4

 5.5 Contract Physician:5

6.0 Internal Processes5

7.0 Audiometric Testing5

8.0 Recall Testing.....6

9.0 Referrals and Follow Up.....6

10.0 Education6

11.0 Post Exposure Testing6

12.0 Alberta Workers’ Compensation Board Claims7

13.0 Alberta Human Services.....7

14.0 Confidentiality of Audiometric Data7

15.0 Reporting.....7

16.0 Evaluation.....7

17.0 Supplemental Documents.....7

1.0 Purpose

The University of Calgary depends on the contributions of Faculty and Staff to create a high-quality learning environment and support the University in being one of the top research universities in Canada. To achieve this, prevention and early detection of any occupational illness and injury is essential.

The University of Calgary is committed to promoting the health of Faculty and Staff with comprehensive health surveillance programs. Noise induced hearing loss is a preventable hearing disorder. Some work areas and work activities at the University of Calgary have been identified as having noise exposure levels that are high enough to require the use of additional controls such as hearing protective devices (HPD's) to prevent noise induced hearing loss (NIHL).

This program has been developed in accordance with legislated requirements, as outlined in Part 16 of the current Alberta Occupational Health & Safety (OH&S) Code; including CSA Standard Z107.6:16 (R2020), Audiometric testing for use in hearing loss prevention programs.

2.0 Scope

This program applies to University of Calgary Employees. It is in addition to, and does not replace, provisions in current Collective Agreements. Any employee serving less than a 6 month term are outside the scope of this program and will not be included.

3.0 Definitions

ALARP	ALARP stands for "as low as reasonably practicable".
Audiometric Technician	A person who has passed an audiometric technician course approved by the Director of Medical Services or has been approved by the Director of Medical Services as having the equivalent of an approved audiometric technician course and who, in either case, has passed a requalification examination when requested to do so by the Director of Medical Services.
Audiometry	A method of hearing assessment that tests an individual's ability to hear sounds of different intensities and frequencies. Audiometry detects early noise-induced hearing loss before the affected individual is even aware that it is happening.
A-weighted decibel	The A-weighted decibel or dBA, is a type of decibel measurement which closely represents the manner in which a human ear responds to noise.
Baseline Audiogram	The audiogram against which future audiograms are compared.
Decibel	The decibel (dB) is a unit of measurement of sound pressure level that is logarithmic and dimensionless.
Employee	An individual who is a worker as defined under the Occupational Health Act and includes both University employees and non-employees such as Students, Volunteers, or Appointees who are performing work on behalf of the University.

Hearing threshold	The sound level below which a person's ear is unable to detect any sound. For adults, 0 dB is the reference level.
Noise-exposed worker	As per Schedule 3, Table 1 of the Alberta OH&S Code, any worker who is or may be exposed in excess noise levels as per defined exposure duration (85dBA TWA), is considered to be a noise-exposed worker and is required to be included in the Health Surveillance Program for noise exposure.
Noise induced hearing loss (NIHL)	Hearing loss or change in hearing that is believed to be caused by noise when assessed by a qualified health professional.
No significant shift in hearing (no change)	A periodic audiogram that does not meet the shift criteria of other periodic audiograms. i.e. hearing threshold has not changed since previous test(s).
Normal audiogram	Hearing threshold in both ears equal or less than 25dB.
Manager/Supervisor	<p>“Manager” means the individual at the University who is not a member of a bargaining unit and who supervises or directs the work of an Employee.</p> <p>“Supervisor” means an individual who directs or oversees a person, group, department, organization, or operation for the University.</p>
Possible hearing loss baseline audiogram (abnormal audiogram)	An audiogram that indicates hearing at a threshold greater than or equal to 30dB.
Possible contribution of noise baseline audiogram (early warning audiogram)	A difference between hearing threshold at 3000, 4000, 6000 and adjacent lower frequency equal or greater than 15dB.
Reference audiogram	A test which other audiograms are compared to for the purpose of assessing changes in hearing. A baseline audiogram is typically a reference audiogram.
Shift in hearing that is not a “Significant threshold shift”.	A shift in hearing that does not meet the criteria for a significant threshold shift and is a change of 10dB more (deterioration) or less (improvement) than a reference test.
Significant threshold shift (STS)	<p>An average shift of the hearing threshold levels at 2000, 3000, and 4000Hz of equal or greater than 10dB in either ear.</p> <p>or</p> <p>A shift in the hearing threshold level of equal or greater than 15 dB at 3000 or 4000 Hz in either ear.</p>
Time-weighted average	The time-weighted average (TWA) represents the average (noise) exposure measured over a typical 8-hour workday.
Three Decibel Exchange Rate	When the sound energy doubles, the decibel level increases by three.

Traumatic noise exposures

An incident where workers are exposed to sudden extremely elevated noise levels, i.e. explosion.

4.0 Guiding Principles

The University believes that:

- All employees have a responsibility to identify and control hazards in the workplace;
- Faculty and staff are active participants both identifying hazards that exist in their work areas and protecting themselves from identified hazards;
- Support is provided for those exposed to identified hazards in their work area through effective communication and collaboration with Environment, Health and Safety (EHS) and Staff Wellness;
- Regular communication between managers and their staff to identify potential hazards and controls is essential;
- This program is a legislative requirement under the Alberta OH&S Code;
- All parties have an obligation to meet their responsibilities under this program.

5.0 Responsibilities

5.1 Faculty & Staff:

- Report any noise concerns to their direct supervisor or manager for investigation;
- Attend all health surveillance activities, as defined by the health surveillance program for noise exposure;
- Seek solutions to health and safety issues in their work areas;
- Follow implemented controls that keep noise exposures in work areas to ALARP.

5.2 Supervisor & Manager:

- Report any new or previously unidentified sources of noise to EHS for follow up;
- Implement controls to maintain all noise exposures in the work areas to ALARP;
- Ensure noise exposed workers are available for all health surveillance activities or follow up activities, as outlined in this program;
- Ensure communication to EHS and Staff Wellness if there is a change to work environments or processes where a worker may become noise exposed or where a worker may no longer be noise exposed;
- Communicate compliance expectations to their staff;
- Seek solutions to health and safety issues in their work areas;
- Use implemented controls to maintain noise exposures in the work area to ALARP.

5.3 Environment, Health and Safety:

- Conduct noise assessments to identify noise exposed workers and report to Staff Wellness;
- Notify Staff Wellness if workers are noise exposed and require health surveillance, or if changes to work processes or environments cause a group to be or no longer to be noise exposed.

5.4 Staff Wellness:

- Manage the Health Surveillance Program for Noise Exposure along with any supporting resources and documents;
- Support workers and managers in fulfilling their responsibilities;

- Ensure health surveillance activities meet or exceed legislated requirements;
- Ensure audiometric testing is completed for noise exposed workers;
- Provide feedback to noise exposed workers upon completion of audiometric testing;
- Ensure appropriate recalls of noise exposed workers;
- Ensure appropriate referrals and recommended follow-up is communicated to workers when required;
- Provide workers with education and health promotion related to noise in the workplace, NIHL, use and correct fit of hearing protection;
- Maintain and report statistics and trending related to audiometric testing as appropriate;
- Ensure evaluation, continuous improvement and revision of the program;
- Provide advice and support to supervisors/managers regarding noise exposure concerns or issues related to noise in the workplace;
- Maintain confidentiality of health records;
- Maintain health surveillance records according to legislated standards/University retention requirements.
- Did you want to add something about fit testing HP?

5.5 Occupational Health Physician:

- Review medical information and audiogram for validity;
- Classify the audiogram;
- Recommend follow up for the employee;
- Notify the employee within 30 days of any possible hearing loss or significant threshold shift;
- Advise on the effectiveness of the program.

6.0 Internal Processes

Noise exposed workers will be identified in collaboration with the EHS department. Noise monitoring and reporting will be conducted by EHS, and any identified noise exposed work groups will be communicated to the Occupational Health division of Staff Wellness.

Staff Wellness will manage surveillance groups for noise exposed employees. Trending from health surveillance will be compiled and any work activities that may require follow up or testing will be reported to EHS and the area manager.

All audiometric testing data will be stored in the University of Calgary's electronic medical record system and retained for not less than 67 years.

7.0 Audiometric Testing

Audiometric testing will be conducted on all employees who are identified as noise exposed workers. Baseline testing will occur within 6 months of initial hire with a repeat test conducted not more than 12 months following the baseline test. Periodic testing will then occur every 2nd year thereafter.

Baseline testing will occur when there have been identified processes or job changes that cause a worker to become noise exposed. This testing will be conducted within 6 months of job or process change.

Staff Wellness is responsible for conducting the audiometric testing. Any person conducting the testing will be a certified audiometric technician. The tester is responsible to conduct the audiometric testing, record results, and provide a written copy of results to the employee. In the event services are provided by a third party contractor, the contract company will ensure the tester is a certified

audiometric technician. The contract company will be responsible to provide results to the employee, and a copy will be forwarded to the Occupational Health Nurse, Staff Wellness.

Equipment used to conduct audiometric testing will be maintained according to manufacturer requirements. Maintenance records will be documented and retained for not less than 67 years.

At the time of audiometric testing, a medical history will be collected in the form of a questionnaire. The audiometric technician will review the audiogram for indicators of early NIHL. If there is any indication, the tester will advise the employee of these results. At this time additional education regarding the proper use of hearing protective devices will be reinforced. Test results will be forwarded to the Occupational Health Nurse, Staff Wellness for interpretation and monitoring.

8.0 Recall Testing

Noise exposed workers will be recalled within 12 months of their baseline test, and every two years thereafter. Recalls will be coordinated and managed through Staff Wellness. The supervisor/manager will ensure that time is provided for the employee to attend scheduled appointments.

Workers may also be recalled for testing following an acute exposure to noise, such as an explosion. In the event the worker has an acute exposure, recalls will be performed at regular intervals, to monitor return to normal hearing. Staff Wellness will co-ordinate and manage all recalls related to acute noise exposures.

9.0 Referrals and Follow Up

In the event that audiometric testing indicates a possible hearing loss audiogram or a significant threshold shift, the worker will be notified of the change. The abnormal test results will be sent to the occupational health physician for review.

If the audiometric testing results are confirmed as possible hearing loss or as a significant threshold shift, the physician is responsible to notify the Occupational Health Nurse, Staff Wellness, who will then notify the worker within 30 days. Any worker with a confirmed possible hearing loss audiogram or significant threshold shift will be offered a one-on-one education session with the Occupational Health Nurse to provide focused education. Employees who do not participate in the one-on-one education session will be sent a notification letter indicating the results of their hearing test and recommended follow-up care.

Staff Wellness will document all physician recommendations and will co-ordinate further referrals, recall testing or education that is recommended.

10.0 Education

The worker will receive hearing loss related education as needed. Proper use of HPD will be demonstrated and hearing protection fit testing will be provided to the employee by Staff Wellness.

11.0 Post Exposure Testing

In the event that a worker has a traumatic noise exposure, Staff Wellness is to be notified and will coordinate follow up testing, if required. This will be conducted in conjunction with an occupational physician/audiologist. Any traumatic noise exposures will be reported to the area manager for investigation.

12.0 Alberta Workers' Compensation Board Claims

Noise-induced hearing loss arising from occupational noise exposure is a compensable occupational disease in Alberta (WCB Alberta, Policy 03-01 Part II). If a worker is suspected to have NIHL, a report can be filed to WCB. This involves completing Workers' noise induced hearing loss package.

Should the worker decide to file a claim with WCB it is their responsibility to complete and submit the applicable WCB hearing loss package forms:

- Workers' Employment Record-noise induced hearing loss (C131)
- Hearing Information Questionnaire (C042).

Post-acute noise exposure is to be reported to WCB and Staff Wellness within 24 hours of exposure and reporting will follow the same process as reporting an injury or illness.

13.0 Alberta Human Services

NIHL is a notifiable disease under Section 6 of Alberta's Occupational Health and Safety Regulation. The Occupational Health Physician, Staff Wellness will report any diagnosed NIHL to the Director of Medical Services, Alberta Human Services.

14.0 Confidentiality of Audiometric Data

Audiometric data is confidential medical information and will only be shared with the worker, except in the event when a WCB compensable claim exists or notification to Alberta Government Jobs, Economy and Trade is required. Staff Wellness will maintain all audiometric testing records in a manner consistent with the principles of medical confidentiality.

Any release of medical information by Staff Wellness must be accompanied by a Release of Information form, that will be retained in the employee's medical file. Any requests from the employee to access their medical file will be forwarded to the Occupational Health Nurse, Staff Wellness for review.

15.0 Reporting

Staff Wellness will report compliance with this program on an as needed basis.

Surveillance data will be gathered based on work areas and any possible hearing loss audiograms. Trends will be reported to EHS and the management team for the specific work area on an annual basis.

16.0 Evaluation

Staff Wellness will conduct an annual evaluation of this program. Evaluation will include review of the overall program as well as the procedures that support the program. Auditing of audiometric testing, documentation and follow-up will be conducted for quality assurance.

17.0 Supplemental Documents

Alberta OH&S Act, Regulation and Code (2023)

CSA Standard Z107.6:16 (R2020), Audiometric testing for use in hearing loss prevention programs

EH&S Hearing Conservation Program