

Noise

Noise - Audiometric Tests

On this page

[What is audiometric testing?](#)

[Why do audiometric testing?](#)

[What can workers expect during the test?](#)

[Who does the audiometric testing?](#)

[Who should be included in audiometric testing?](#)

[Where do you find audiometric testing requirements in Canadian legislation?](#)

What is audiometric testing?

Audiometric testing is a type of hearing test. It establishes a baseline measurement of the worker's hearing and then repeats the testing at regular intervals to determine if there are any changes in the worker's ability to hear.

Why do audiometric testing?

Noise is a serious health hazard. Prolonged exposure to noise in excess of occupational exposure limits can lead to permanent noise-induced hearing loss, a common occupational disease in Canada.

Employers should create and implement a hearing conservation program for workers exposed to noise at the workplace. Audiometric testing of a worker's hearing is important to the success of a hearing conservation program.

Audiometric testing helps determine if there are any early indications of noise-induced hearing loss. Because occupational hearing loss happens gradually over time, workers often fail to notice changes in their hearing ability until a relatively large change occurs. By comparing audiometric tests from past years, early changes can be detected and appropriate protective measures can be implemented to prevent further damage. In addition, overall results can be compared from year to year to identify trends within occupations or between different departments at the workplace.

What can workers expect during the test?

During an audiometric test, a worker is seated in a sound-treated booth or other appropriate room and a set of headphones is placed over the ears (or inserts placed into the ears). When the worker is ready, the audiometric technician sends a series of tones through the earphones to one ear, and then the other. The worker signals as each tone is heard. The worker's thresholds are recorded for each ear either on a graph, called an audiogram, or numerically on a chart.

The audiogram shows how loud a tone must be to be barely heard by the worker, at a number of different pitches or frequencies. In the early stages of noise-induced hearing loss, the audiogram will show some hearing loss for high-pitched sounds. As hearing loss advances, the audiogram shows a hearing loss for many pitches. Workers with advanced hearing loss will notice the sounds of speech and surrounding sounds becoming muffled.

As part of the audiometric test, workers should expect to be counselled about the necessity, use, maintenance, and replacement of hearing protection.

An explanation of the test results should be provided to the worker. Workers should also be provided with a copy of their test results.

The test results will typically be classified as normal or abnormal. If a worker's test result is found to be normal, no further testing is required until the next scheduled test.

If a worker's test result is found to be abnormal, the audiometric technician may ask the worker for additional medical history, and advise the worker to follow up with an appropriate medical professional for more in-depth testing.

Who does the audiometric testing?

The employer is responsible for making sure that audiometric tests are conducted by an audiologist or a person who is certified and competent to conduct audiometric testing.

Who should be included in audiometric testing?

Workers who may be exposed to excessive levels of noise at the workplace should be included in audiometric testing. Generally speaking, audiometric testing is recommended when a worker is exposed to noise levels greater than 85 dBA (a full shift averaged exposure). However, requirements may vary depending on the legislative requirements in your jurisdiction.

Also consider including workers who are exposed to ototoxicants in the workplace. Ototoxicants are chemicals that may affect hearing alone or in combination with noise exposure.

Where do you find audiometric testing requirements in Canadian legislation?

The following are references to the federal, provincial, and territorial legislation where you will find the audiometric testing requirements from the different jurisdictions in Canada. Since legislation is amended from time to time, the jurisdiction should be contacted for the most current information. Where specific requirements are not listed for audiometric testing, please consult with the [jurisdiction](#) as it may be covered by other medical surveillance requirements or employer duties.

Canada

British Columbia

Occupational Health and Safety Regulation
Part 7 Section 7.8 and 7.9

Alberta

Occupational Health and Safety Code
Sections 223 and 224

Saskatchewan

The Occupational Health and Safety Regulations, 2022
Part VIII Section 8-5

Manitoba

Workplace Safety and Health Regulation
Part 12 Section 12.4, 12.5 and 12.6

Ontario

Quebec

Regulation respecting occupational health and safety
Division XV Section 136

New Brunswick

Underground Mine Regulation
Part III Section 12

Nova Scotia

Prince Edward Island

General Regulations
Part 8 Section 8.9 and 8.10

Newfoundland and Labrador

Occupational Health and Safety Regulations

Part VI Section 68

Northwest Territories

Occupational Health and Safety Regulations

Part 8 Section 116 and 117

Nunavut

Occupational Health and Safety Regulations

Part 8 Section 116 and 117

Yukon Territories

Occupational Health Regulations

Section 6

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