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| <i>Potential Hazard Review</i> | |
| <u>Physical Hazards</u> | |
| • Noise | |
| <i>Personal Protective Equipment</i> | |
| • Earplugs and/or Earmuffs | |
| <i>Related Safe Work Practices</i> | |
| • Medical Exams, Vaccinations and Records | |
| <i>Authority</i> | |
| • 8 CCR 5095-5099 | |
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This Safe Work Practice (SWP) addresses the hazards of noise, and is dedicated to helping you avoid an injury or illness from known hazards and their consequences - hearing loss.

You are advised to follow these recommendations, read and follow this SWP and any related SWPs, complete any required or recommended training, and to obtain advice from a Qualified Person if you have any questions.

A Qualified Person is a person **designated** by the employer; and by reason of **training**, experience, or instruction who has demonstrated the ability to perform safely all assigned duties; and, when required is properly licensed in accordance with federal, state, or local laws and regulations.

All tasks require that you:

- Use the equipment in accordance with the guidelines set forth by the manufacturer. This includes following all signs and labels, and reviewing any manufacturer's operating manuals.
 - If the instructions provided in the operating manual conflict with this SWP, then follow the instructions in the manual. The manufacturer's instructions prevail over this SWP.
- Review the safety data sheets (SDSs) for each chemical.

- Be trained on this SWP and those listed above as related. Training on SWPs must be completed before initial assignment, and is required to be reviewed annually.
1. Where noise cannot be reduced, Hearing Protective Devices (HPDs), such as ear muffs or ear plugs, must be worn to protect against hearing impairment. HPDs are assigned a Noise Reduction Rating (NRR) and is a guideline that indicates the amount of potential protection a hearing protection device will give in a noisy environment. The NRR is listed on the hearing protective device packaging. The higher the NRR, the more protection the equipment provides.
 - a. The NRR is determined under ideal laboratory conditions and cannot be used as a direct measurement of the protection that each wearer will receive.
 - b. A general rule of thumb is that the actual protection provided by the hearing protective device equals about half of the stated NRR. So for example, if you are using earplugs with a NRR of 31, in reality, they are only reducing the noise to the wearer by about 15 decibels.
 - c. Use the NRR as a relative indicator of noise protection. A hearing protective device with a NRR of 31 certainly provides more protection than one with a NRR of 20. Employees at RPD who are in the Hearing Conservation Program (HCP) should be provided with hearing protective devices that have NRRs on the high end (25-31).
 2. The Hearing Conservation Program (HCP) applies to RPD job classifications which meet one or more of the following criteria (see the table below to see which job classifications are enrolled in the HCP):
 - a. The tasks performed in this job classification may expose the employee to noise levels in excess of 85 decibels (dBA) as measured over an 8 hour workday.
 - b. The tasks performed in this job classification may expose the employee to impulse or impact noise (noise that is not continuous such as a nailgun) at or above 140 dBA at any time.
 - c. The tasks performed in this job classification may expose the employee to hazardous noise levels that are highly variable and unpredictable, and EHS has determined that the following job classifications should be included in the program (this can also be found in the Medical Exams, Vaccinations and Records SWP).

RPD Job Classes Enrolled in RPD’s Hearing Conservation Program

| General Job Type | Job Classifications | | | | | | |
|------------------|---------------------|------|------|------|------|------|------|
| Gardeners | 3417 | 3418 | 3419 | 3422 | 3424 | 3428 | |
| Arborists | 3434 | 3436 | | | | | |
| Crafts/Trades | 7108 | 7205 | 7208 | 7213 | 7215 | 7226 | 7311 |
| | | 7328 | 7334 | 7335 | 7344 | 7346 | 7347 |
| | | 7348 | 7355 | 7376 | 7395 | 7501 | 7514 |
| | | 9343 | 9345 | | | | |
| Custodians | 2708 | 2716 | | | | | |

3. The degree of hearing hazard is related both to the level of the noise as well as to the duration of the exposure. In general, you can tell if a noise situation is too loud by considering these two rules of thumb:
 - a. First, if you have to raise your voice to talk to someone who is an arm's length away, then the noise is likely to be hazardous.
 - b. Second, if your ears are ringing or sounds seem dull, like when your ears are plugged, and or flat after leaving a noisy worksite/environment, then you probably were exposed to hazardous noise.

4. Short, intense sounds may cause immediate short-term or long-term hearing loss depending on how loud the noise is, but usually hearing loss occurs gradually after prolonged exposure to loud noise. If you experience any of the above symptoms, and you are not in a job classification enrolled in the HCP, report the symptoms to your supervisor who should report it as an incident to EHS.

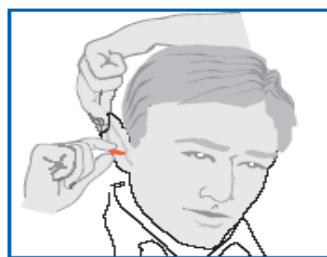
5. Employees in the HCP are required to have their hearing checked every year (these are called hearing "audiograms"). Audiograms act as a quality check for the HCP. If an employee is determined to be suffering from work-related hearing loss, it may tell us that hearing protection is not adequate or that hearing protective devices are not being used properly.
 - Supervisors can schedule audiograms directly with SFGH-OHS, as directed by EHS annually (contact information may change, so is not provided here).
 - Employees must not be exposed to excessive noise 14 hours prior to the test or it may falsely indicate hearing loss (excessive noise would be noise over 80 decibels without hearing protection).
 - Employees may be asked to return 30 days later for a retest. This is determined by the audiologist (the person doing the test).
 - If the employee has suffered a hearing loss that is presumed to be work-related, as determined by the audiologist, the employee and EHS will be notified. If it is believed that the employee has suffered a hearing loss that is NOT work related (e.g. age-related hearing loss), the audiologist will refer the employee to his/her own medical care provider for a personal evaluation. Hearing loss can be an indicator of other medical conditions.

6. Those employees to whom the program applies must wear HPDs when performing certain tasks (as noted in specific safe work practices). HPDs include earplugs and earmuffs.
 - a. Earplugs
 - i. There are several different types of earplugs:
 1. Expandable/disposable earplugs are compressed before insertion into the ear, and are held in place while they expand to fill the ear canal. They must be disposed of after every use.

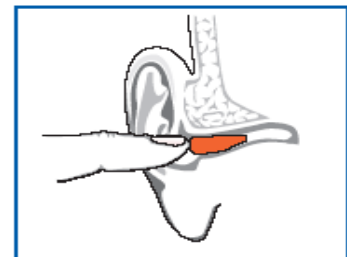
2. Push-in, disposable plugs do not require the user to roll the plug before inserting and are consequently more hygienic where hand cleanliness is an issue.
 3. Reusable earplugs feature flexible flanges that are sometimes easier to fit into different size ear canals. They can be inserted without rolling; however, they must also be cleaned after each use.
 4. Custom-molded ear plugs are made by taking an actual mold of a person's ear canal, and then fashioning a plug based on that mold, to give a "best fit". **Evidence to date shows that they provide no better protection than the plugs and muffs currently used.** Additionally, there is a greater chance of ear infection if the user does not store and clean his/her custom molded plugs properly. The advantage to using a custom-molded plug is that for persons who wear ear protection for long periods of time (>6 hours/shift), they may be more comfortable. Currently, they are not offered to RPD employees unless medical necessity has been established that considers the risk of using them.
- ii. To use the reusable earplugs:
1. Before inserting, inspect the plugs to be sure they are clean and pliable.
 2. Hands should be clean, since whatever is on a hand may be transferred to the ear canal via the earplug.
 3. To properly insert¹, users should reach over their heads and pull the tops of their ears up and back (to straighten the ear canal). The user then inserts the plug with the opposite hand. For expandable plugs, the user inserts the rolled up plug with the opposite hand and holds the plug in place while the ear plug expands.



Roll

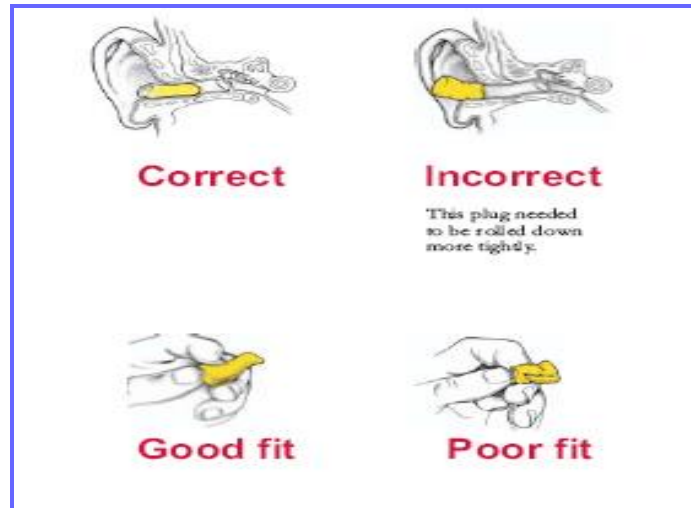


Pull



Hold

¹ National Institute for Occupational Safety and Health (NIOSH) – Inquiring Ears Want to Know: A Fact Sheet about Your Hearing Test (2008-102) http://www.cdc.gov/niosh/mining/pubs/pubreference/outputid_2573.htm.



- iii. Size matters! Not every earplug fits every ear. You may even need a different size for each ear. If you cannot get at least half of the ear plug into the ear canal, or if it can't expand enough to stay firmly seated, you need a different size, or you should consider using ear muffs.
 - iv. To check the fit of the earplug:
 - 1. Cup your hands over your ears and make a good seal.
 - 2. Count out loud while slowly cupping and uncupping your ears. If you have a good fit, your voice should sound about the same as you cup and uncup your ears.
- b. Earmuffs
- i. Earmuffs fit over the ears and are comprised of three parts:
 - 1. The cushion (foam or liquid filled) should be kept clean and pliable to create an effective seal.
 - 2. The cups fit over the ears to provide sound reduction protection.
 - 3. The headband provides the necessary pressure to maintain the designed level of protection. Do not stretch the headband.
 - ii. Consider using earplugs instead of earmuffs if you wear glasses, earrings or have facial hair. This will ensure a better fit and sound reduction.
 - iii. Both the earplugs and earmuffs provide about the same level of protection. Some people prefer one over the other for comfort reasons. Additionally, some persons wear both for maximal protection but care must be taken not to decrease the hearing so much that the task becomes unsafe for other reasons. If you have any questions about the effectiveness of hearing protective devices that you are using, please contact EHS.
7. Dispose of disposable earplugs after use.
8. If using re-usable earplugs, clean using mild soap. Make sure they are completely dry before storing them in their case.

9. Replace the seals of your earmuffs when they look worn or feel different after use.

References:

1. “Noise and Hearing Loss Prevention; Learn More about Hearing Loss Prevention; Workplace Solutions; Frequently Asked Questions”, National Institute for Occupational Safety and Health (NIOSH) Website, <http://www.cdc.gov/niosh/topics/noise/faq/faq.html>, Undated
2. “Have you Heard? Hearing Loss Caused by Farm Noise is Preventable”, National Institute for Occupational Safety and Health (NIOSH) Website, (2007-176) <http://www.cdc.gov/niosh/docs/2007-176/>, 1/15/08.
3. “They’re Your Ears: Protect Them”, (2007-175) National Institute for Occupational Safety and Health (NIOSH) Website <http://www.cdc.gov/niosh/docs/2007-175/>, 1/15/08.