

## Exercise C-2: Measuring Noise Levels Throughout the Day (Individual Activity)

**Learning objective:** By the end of this exercise, participants should understand how to download and use the NIOSH Sound Level Meter App (or a comparable Android App – NIOSH recommends SoundMeter) to inform decisions about hearing protection and other noise-reducing efforts.

### TEACHING MATERIALS:

- Sound Meter App (downloaded on to your phone in advance of the class)
  - iPhone – NIOSH SLM - <https://www.cdc.gov/niosh/topics/noise/app.html>
  - Android – SoundMeter App - <https://play.google.com/store/apps/details?id=com.gamebasic.decibel>

### Handouts (available in Appendix):

- When and What of Hearing Protection (C-A)
- Hazard Alert Card (C-B) **Note:** We have included the English 8.5 x 11 PDF version of this handout in this training program. Both the English and Spanish versions are available online at <https://www.cpwr.com/publications/hazard-alert-cards>. Contact CPWR in advance of any training at 301-495-8500 to order stock of the pocket size versions for free.

**When to use Hearing Protection**

Hearing protection should be used anytime the noise level is above 85 decibels. To give you an idea of what that means, normal conversation is about 60 decibels and a normal siren 90 decibels. If you have to wear your voice to be heard by someone an arm's length away, it is probably too loud.

Environment/Source	Approximate Sound Level (dB)
Pharmacist/Pharmacy Clerk	75
Receptionist	70
Chair-Lift	75
Service Counter	70
Handcuff	80
CPWR Pharmacist/Dispenser and PEG	90
NIOSH Recommended Exposure Limit (REL)	90
Normal Conversation	60
Normal Siren	90
NIOSH Recommended Exposure Limit (REL) for 15 min	100

**Not sure how loud it is?**  
Download the NIOSH Sound Level Meter App on your iPhone or Android phone.

**What you need to know about Hearing Protection**

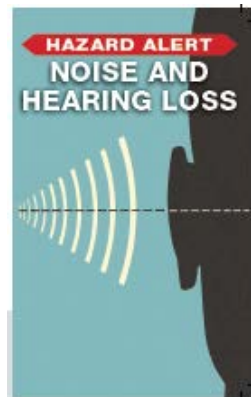
Your employer should provide hearing protection. This is for the job, the noise protection is needed. Common types include appropriate form ear plugs, pre-molded, reusable plugs, canal caps, and earmuffs. They only protect your hearing from noise.

**Expendable form ear plugs** are one of the most common. Follow these steps when inserting them:

1. Roll on the casing for a cone-like shape.
2. Roll back on it so the casing over your head with your thumb, and gently pull the top of the ear up and out.
3. Insert the casing and the ear canal, and
4. Hold it for 10-15 seconds.

**What type of hearing protection should I use?**  
For more hearing protection information, visit [www.niosh.gov](http://www.niosh.gov).

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### INSTRUCTOR NOTE:

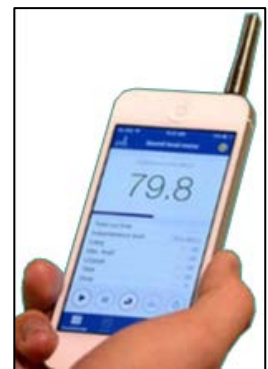
Download the app on your phone ahead of time and familiarize yourself with its features and how to read it.

This activity is intended to be integrated into hands-on training.

This activity will be ongoing throughout the day – ideally on a day when their will noisy equipment used or work performed.

#### 1. Before training begins:

- Provide the class with background on the app (what it is and how it can be used).



- b. Tell the trainees that NIOSH recommends the use of hearing protection at or above 85 decibels; make sure they have appropriate hearing protection and are using it. Note: Be prepared to reinforce the need for and use of hearing protection throughout the day.
- c. Tell them you will be taking readings at intervals throughout the day. Note: Depending on what type of hands-on training you have planned, you may want to take a reading every time the activity changes. Or you may simply take a reading once every hour.

**2. At the end of the day:,**

- a. Take a few minutes to bring the class back together as a group to report on the readings and explain what they mean.
  - *What was the loudest reading?*
  - *What work was being done at the time? (What type? Was the reading taken next to the operator, or of someone standing nearby?)*
  - *How many readings were over 85 decibels?*
  - *Do they have any questions on how to use the app?*
  - *Do they have any questions about the use of hearing protection?*
- b. Distribute the handouts and explain that they contain information that the workers should refer back to periodically to make sure they are taking appropriate steps to protect their hearing.

**INSTRUCTOR NOTE:**

**The NIOSH Sound Level Meter app has been validated through research as a way to easily use phones on a jobsite to measure the surrounding noise level in order to determine whether hearing protection is needed, and if so how much.**