Included in the scope-of-practice for an OHC is selecting, instructing, and counseling workers on hearing protection devices (HPDs). Part of assuring that HPDs, especially earplugs, may be fit safely and effectively involves inspecting the ear and ear canal. Although OSHA does not require a visual inspection of the ear under its regulatory mandates, it is considered a best practice for obvious reasons. It is not in the scope of practice for the OHC to determine what abnormalities might be suspected but to note whether the ear appears: normal or abnormal. If abnormal, record as such and bring your concerns to the attention of proper medical personnel. Always consult your professional supervisor (PS) when in doubt about what you are seeing.

Each course director (CD) will have their own teaching methods and sequence of presentation and may introduce additional concepts or exercises. To successfully complete this section you will need to execute the steps to their satisfaction.

**CAOHC REQUIREMENTS:** The candidate will demonstrate fitting a variety of hearing protection devices (HPDs)

- One testing practicum assistant for each 8 students
  - Note: Any testing practicum assistant(s) must be CAOHC-certified
- Representative samples of at least 4 separate types of hearing protection devices (HPD), types include:
  - Supra-aural muffs
  - Banded earplugs (canal caps/semi-inserts)
  - Disposable earplugs
  - Pre-molded earplugs
  - Custom molded earplugs
  - Helmets/combination communication HPD
- Adequate otoscopes, specula, hand-sanitizer and earplugs for class
- Allotted practice and practicum-time for examination is 60 min. for both initial and renewing students
The components of the Hearing Protection-Fitting practicum, including ear inspection, will consist of:

INSTRUCTIONS TO THE PERSON BEING EVALUATED
ASSESSMENT OF THE EAR
CONSIDERATIONS FOR HPD SELECTION
HPD FITTING and REMOVAL
COUNSELING on USE AND CARE

INSTRUCTIONS TO THE PERSON BEING EVALUATED

EVALUATED TASK: Did the student provide clear and concise instructions?

The individual being evaluated should be told the purpose of the Otoscopic check and fitting of the HPD. The Otoscopic check is NOT to diagnose abnormalities. It is to assure the fitting of HPD is safe and to rule out any contra indicators for fitting or testing.

ASSESSMENT OF THE EAR

EVALUATED TASK: Did the student correctly evaluate the ear?

- Examine the pinna and opening of the ear canal in consideration for HPD fitting and/or identifying issues:
  - ear infection, blocked canal, soreness
  - size of ear canal (ear plugs)
  - size/shape of head (noise muffs)
- Conduct a pinna-pull. Manipulate the pinna outward and upward to exposes the external canal for better viewing and reactions of discomfort
- (Assuming there are no obvious concerns with the ear.) Perform the Otoscopic inspection in a safe and thorough manner?
  - Select the largest otoscope speculum that will fit comfortably in the opening of the ear
  - Hold the otoscope so that the hand is braced against the head or cheek to absorb any sudden movement
  - Follows the bends of the canal without hitting canal walls
  - Identifies “normal” from “abnormal” canal and cerumen “wax” accumulation
  - Able to visualize the tympanic membrane (TM) and identify the landmarks

CONSIDERATIONS FOR HPD SELECTION

EVALUATED TASK: Did the student consider and discuss associated issues for HPD selection?
(This exercise, if evaluated, may be conducted by constructing a typical work scenario)

- Communication needs (interaction with co-workers, receiving verbal instructions, monitoring auditory alarms, etc.)
• Consideration of potential noise levels and length of exposure (product noise reduction rating (NRR))
• Compatibility with other personal protective equipment (PPE) (safety glasses, respirators, hoods, etc.)
• Contamination(s) in the work environment (dirt, grease, oil, etc.)
• Potential contamination from adrift HPD (foreign-object-damage (FOD); food packaging, etc.)
• Environmental considerations (tight spaces, hot areas, wet conditions, etc.)
• Worker’s physical limitations (arthritic hands, missing fingers, range-of-motion, etc.)
• Frequency of HPD being taken off and re-inserted/re-positioned during the day

**HPD FITTING and REMOVAL**

**EVALUATED TASK: Was the student able to demonstrate and instruct on the appropriate way to don and remove HPD?**

- Supra-aural (noise muffs):
  - Cushions fully enclose ears and seal tightly against head
  - Adjust height of each cup while holding headband down
  - (Behind-the-Head or Under-the-Chin supra-aural)
    - Support head strap use
  - Check for adequate fit. For both ears:
    - Loud sounds should be attenuated
    - Wearers voice should sound deeper, “hollow” or muffled to them

- Banded earplugs (canal caps/semi insert)
  - Caps/tips seated per manufacturers direction
  - Headband adjusted for over-the-head, behind-the-head, or under-the-chin
  - Check for adequate fit. For both ears:
    - Loud sounds should be attenuated
    - Wearers voice should sound deeper, “hollow” or muffled to them
  - Removal: carefully tilt out individual tips to avoid any sudden pressure changes

**EARPLUGS**

**Demonstrate Insertion:** Reach over head, pull on top of ear, pull up and back or out on the ear to open to fullest extent.

**Single use (disposable)**

- Roll-down plugs:
  - Hands clean
  - Proper roll-down technique until very thin, crease free cylinder
  - Seals the entire entrance of the ear canal once it re-expands