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### Learning Objectives

- ELO 5.1 Recognize a recordable illness or injury
  - Understand date of injury for illnesses and injuries
- ELO 5.2 Calculate illness and injury rates
- ELO 5.3 Recognize recordkeeping deficiencies
- Calculate a hearing loss standard threshold shift and make recordability determination for such cases
- Know how to properly insert ear plugs
- Know how to properly remove contaminated gloves
- Know how to read and interpret an audiogram

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### What to Report?

First Aid injuries  
No requirement to report to OSHA

Injuries and illnesses beyond first aid  
Record on OSHA 300 log within 7 days

Hospitalizations, amputations, loss of an eye  
Report to OSHA within 24 hours

Fatalities  
Report to OSHA within 8 hours

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### Purpose (of the Rule)

To require employers to record and report work-related fatalities, injuries and illnesses

- No determination of fault
- No admission of violation
- No correlation with workers' compensation

It is **ONLY** a factual documentation that a work related injury/illness occurred that met the criteria of the standard.



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Did the employee **experience an injury or illness**?

YES

Is the injury or illness **work-related**?

#### Determination of Work-Relatedness [1904.5]

Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the **work environment** unless an exception specifically applies.

A case is presumed work-related if, and only if, an **event or exposure** in the work environment is a discernable **cause of the injury or illness** or of a significant **aggravation to a pre-existing condition**.



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### 1904.7(b)(5) – Medical Treatment

Medical treatment is the management and care of a patient to combat disease or disorder.



It does not include:

- Visits to a PLHCP solely for observation or counseling
- Diagnostic procedures
- First aid



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### 1904.7(b)(5) – First Aid

Using nonRx medication at nonRx strength	Drilling of fingernail or toenail, draining fluid from blister
Tetanus shots	Eye patches
Cleaning, flushing, or soaking surface wounds	Removing foreign bodies from eye using irrigation or cotton swab
Wound coverings, butterfly bandages, Steri-Strips	Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means
Hot or cold therapy	Finger guards
Non-rigid means of support (ace bandage)	Massages
Temporary immobilization device used to transport accident victims (C-collar)	Drinking fluids for relief of heat stress



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### What is a PLHCP

Physician  
Licensed Health Care Provider  
Physicians Assistant  
Nurse Practitioner  
Chiropractor  
Physical Therapist  
Nurse working under a Drs. Order  
Dentist



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### 1904.6 – New Case

If there is a medical opinion regarding resolution of a case, the employer must follow that opinion  
If two or more PLHCPs make conflicting recommendations, the employer is required to base the decision on the best documented and most well reasoned evidence.  
If an exposure triggers the recurrence, it is a new case (e.g., asthma, rashes)  
If signs and symptoms recur even in the absence of exposure, it is not a new case (e.g., silicosis, tuberculosis, asbestosis)



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#### 1904.7(b)(7) – Significant Diagnosed Injury or Illness

The following work-related conditions must always be recorded at the time of diagnosis by a PLHCP:

- Cancer
- Chronic irreversible disease
- Punctured eardrum
- Fractured or cracked bone



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#### 1904.8 – Bloodborne Pathogens

- All work-related needlesticks
- Cuts from sharp objects contaminated with human body fluid
- Splashes or other exposures if it results in a bloodborne disease or meets the general recording criteria.



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#### 1904.9 – Medical Removal

- If an employee is medically removed under the medical surveillance requirements of an OSHA standard, you must record the case
- Lead, cadmium, benzene, silica



- If the case involves voluntary removal below the removal levels required by the standard, the case need not be recorded.



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## CALCULATING INCIDENT RATES



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### Types of Incident Rates

#### OSHA Recordable Incident Rate

Incident Rate  
OSHA Rate  
TIR  
TRIR

The number of employees per 100 full-time employees that have been involved in a recordable injury or illness in one year



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### Types of Incident Rates

#### Lost Time Case Rate

Lost Time Incident Rate (LTIR)  
Lost Workday Incident Rate (LWIR)  
LTCR  
Days Away Rate (DAR)

the number of lost time cases per 100 full-time employees in one year



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### Types of Incident Rates

#### DART Rate

Days Away Restricted or Transferred (DART)

Describes the number of recordable incidents per 100 full time employees that resulted in lost or restricted days or job transfer due to work related injuries or illnesses.



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### Types of Incident Rates

#### Severity Rate

Describes the actual number of lost days experienced as compared to the number of incidents experienced.



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### How to Calculate an Incident Rate

#### IR Formula

$$\frac{\text{Number Cases (N) X 200,000}}{\text{Number of Employee hours worked}}$$



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**200,000**

Incident rates are based on the number of injuries occurring to 100 employees in a year.

100 employees  
40 hours per week  
50 weeks per year  
(assumes 2-weeks of vacation)  
 $100 \times 40 \times 50 = 200,000$



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### Lost Workday Severity Rate

Total number lost workdays

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Total number of recordable incidents



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### Miscellany

Ear plug installation  
Glove removal



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## Measuring Hearing Loss

Within 6 months of an employee's first exposure at or above the action level (85 dBA 8-hr TWA), the employer shall establish a valid "baseline audiogram" against which subsequent audiograms can be compared.

Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise.

LOI: Employer may update the baseline if hearing improves

"Annual audiogram." At least annually after obtaining the baseline audiogram, the employer shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.



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## Audiograms

If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.

The baseline audiogram and most recent audiogram of the employee to be evaluated

If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift as defined in paragraph (g)(10) of this section has occurred, the employee shall be informed of this fact in writing, within 21 days of the determination.



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## Standard Threshold Shift

A standard threshold shift is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

In determining whether a standard threshold shift has occurred, allowance may be made for the contribution of aging (presbycusis) to the change in hearing level by correcting the annual audiogram according to the procedure described in Appendix F: "Calculation and Application of Age Correction to Audiograms."



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### Audiometric test requirements

Audiometric tests shall be pure tone, air conduction, hearing threshold examinations, with test frequencies including as a minimum 500, 1000, 2000, 3000, 4000, and 6000 Hz. Tests at each frequency shall be taken separately for each ear.



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### Recording Hearing Loss (OSHA 300)

If an employee's hearing test (audiogram) reveals that the employee has experienced a work-related Standard Threshold Shift (STS) in hearing in one or both ears, and the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (averaged at 2000, 3000, and 4000 Hz) in the same ear(s) as the STS, you must record the case on the OSHA 300 Log.



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### Hearing loss determination

1. Has the employee suffered a STS (Standard Threshold Shift)? The OSHA noise standard defines a STS as an average 10dB or more loss in one or both ears relative to the most current baseline audiogram averaged at 2000, 3000 and 4000 Hz. No → Stop. This is not an OSHA recordable hearing loss. Yes → Continue to question 2.
2. Is the employee's overall hearing level at 25dB or more above audiometric zero (current test without baseline)? Take this measurement for the affected ear(s) and average at 2000, 3000 and 4000 Hz. No → Stop. This is not an OSHA recordable hearing loss. Yes → Continue to question 3.
3. Is the hearing loss work-related? Remember that work-relatedness is assumed for hearing loss cases. Unless you can completely attribute the hearing loss to a non-work related event or the employee's physical condition, you must record the case on your OSHA Log. No → Stop. This is not an OSHA recordable hearing loss. Yes → Record this as a hearing loss case on your OSHA log. Check the appropriate category for the type of case (days away, restriction/transfer, or other recordable) and check Column M5: Hearing Loss.



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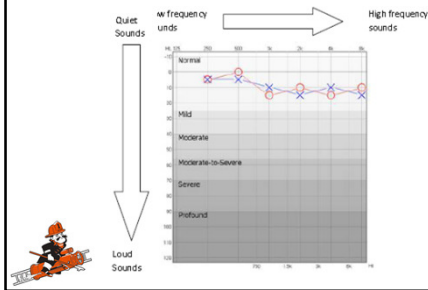
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### Sample Audiogram - Normal




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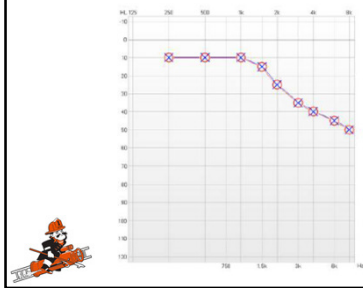
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### Sample Audiogram - Presbycusis (Age Induced Hearing Loss)




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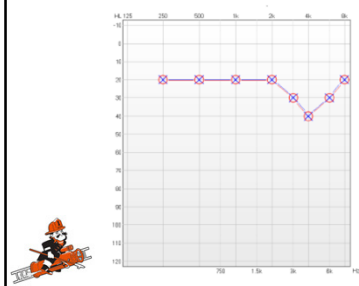
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### Sample Audiogram - Noise Induced Hearing Loss




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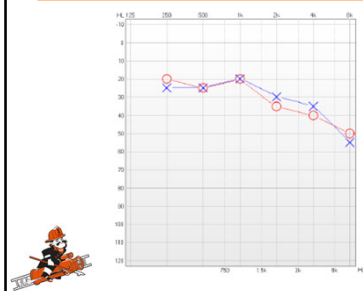
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### Sample Audiogram - Symmetrical Hearing Loss




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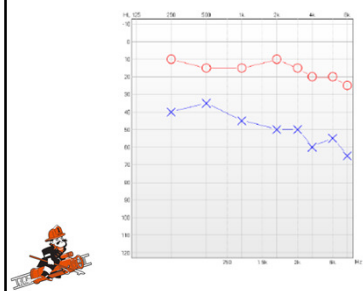
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### Sample Audiogram - Asymmetrical Hearing Loss




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### Sample Calculation / Lab Assignment




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