Unit VI Scholarly Activity

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In the following assignment, you will be given two different questions concerning the material covered in this unit. Each question should be answered using a minimum of 250 words each. Any resources, including your textbook, that are utilized to answer the questions should be cited and referenced using APA formatting. Please enter your response to each question in the spaces given below (spaces will expand as you type if more room is needed). All references will be entered at the end of the assignment. (Make certain to remove these highlighted instructions before submitting your assignment.)

1. The Occupational Safety and Health Administration (OSHA) currently has a permissible exposure limit (PEL) for noise of 90 dBA as an eight-hour time weighted average (TWA) exposure with an action level of 50% of that exposure. OSHA uses a 5 dB exchange rate (doubling rate); this means that if the exposure increases from 90 dBA to 95 dBA, the allowed exposure time decreases to one-half—from 8 hours to 4 hours.

   The National Institute for Occupational Safety and Health (NIOSH) and the American Conference of Governmental Industrial Hygienists (ACGIH) recommend using an exposure limit of 85 dBA instead of 90 dBA and also recommend using a 3 dB exchange rate. These levels are much more protective than the levels currently used by OSHA.

   Discuss the merits of each of the two methods. Provide your opinion as to which of the approaches you believe should be used. Support your answer with at least one professional/scholarly reference.

The recommended exposure limit (REL) set by NIOSH is established using scientific information that pertains to noise-induced permanent threshold shift (NIPTS) to the level and period of noise exposures. The OSHA PEL came to be through a series of debates and compromises that are part of endorsing any legislation. OSHA defines material hearing impairment as average hearing thresholds exceeding 25 dB HL at 1k, 2k, and 3k Hz. While NIOSH uses the same definition, they also include thresholds at 4k Hz. While neither exposure limit is completely protective, both allow for some sort of NIPTS. Additionally, since both are based on the average risk and not the vulnerability of a single person, there may be certain people that are at a higher or lower risk for developing noise induced hearing loss (NIHL) (Johnson, n.d.).

In conclusion, even though OSHA is responsible for the governing of noise exposure, I believe NIOSH's approach of having an REL of 85 dBA REL and a 3 dB exchange rate should be used. This protects the people more, and they are exposed to the allowable level dBA for a lesser amount of time than they would be with going by OSHA's exposure limit. It is also beneficial to the person since it is required that they are fitted with proper hear protectors if they are exposed to an eight-hour time weighted average of 85 dBA, and NIOSH's exposure limit only allows a maximum daily duration of eight hours for a level of 85 dBA instead of OSHA's exposure limit of 90 dBA (Mroszczyk, 2012).

2. OSHA does not currently have a regulation specifically covering ergonomic issues. OSHA has issued several guidelines for some specific industries. Consider a workplace you are familiar with where there is a potential for repetitive motion injuries.

   Discuss what methods you would use to identify tasks that would present the greatest risk for repetitive motion injuries. How would you establish an ergonomics program to address the issues? What would be the greatest obstacles in establishing the ergonomics program?

Estimations show that repetitive motion injuries account for over $20 billion for workers' compensation by itself. This number does not include other costs involved, such as productivity loss, replacement of the injured employee, and other possible related expenses (Rich, 2014).

Therefore, I would use multiple methods to identify tasks that would present the greatest risk for repetitive motion injuries. First I would begin studying previous records of workplace injuries and incidents, as well as workers compensation claims. Using this information could reveal a trend that identifies hazardous tasks. Once the tasks are identified, the employees completing this tasks should be observed to view how they are being instructed to complete the tasks. Additionally, it is important to speak with the employees to hear their thoughts and concerns about any discomfort they may have or potential hazards they may see.

To establish an ergonomics program to address the discovered issues, the control methods needed would need to be determined. This involves identifying if the task can be made safer through elimination, substitution, engineering, or administrative (Fuller, 2015). Removing or changing a procedure for completing a task would be an example of elimination or substitution. Engineering would involve changing the machinery that the employee is working with to make it safer. Rotating the tasks every four hours would be a way of using the administrative control method (Fuller, 2015). Using a combination of these controls would be an effective way of developing an effective ergonomics program.

In conclusion, the greatest obstacle that would be face while implementing the ergonomics program would be getting the employees to follow the revamped procedures for completing a task. I would describe this as the saying, “you can lead a horse to water, but you can make him drink”. Even if the perfect policies and procedures are in place to make a task safe, you still need your employees to follow them properly.

References

Fuller, T. P. (2015). Essentials of industrial hygiene. Itasca, IL: National Safety Council.

Johnson, P. (n.d.). Noise exposure: Explanation of OSHA and NIOSH safe-exposure limits and the importance of noise dosimetry. Retrieved from https://www.etymotic.com/downloads/dl/file/id/47/product/307/noise_exposure_explanation_of_osha_and_niosh_safe_exposure_limits_and_the_importance_of_noise_dosimetry.pdf

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Rich, M. (2014). Effective repetitive motion injury prevention. Retrieved from https://www.safetyservicescompany.com/industry-category/construction/keys-preventing-repetitive-motion-injury/