

Hazards Assessment & Controlling Mechanical Hazards and Falls

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Hazards Assessment, and Controlling of Mechanical Hazards, and Falls

Mechanical Hazards- Cut

Mechanical hazard is posed by some machines that have sharp edges; this machine continues to turn even shortly after the power is switched off. These turning blades present a mechanical hazard when power is switched on or off. Mechanical hazards that are related to machine blades can happen when a worker cleans the sharp edges and also when he or she is taking out the remains the machine was chopping (OSHA,2019). The hazard can also be presented by the basic machines because they have sharp parts that an individual should be careful about. The evaluation of the risk matrix and the level of severity of each of the cutting or severing hazards that have ever happened are represented on the same axis. The probability of the hazard repeating itself in the future is also plotted. The severity of this matrix is posed by the cutting machines hazard that varies from moderate to critical cuts.

The hazard is not possible to occur frequently as compared to the different forms of hazards. This type of hazard when it happens it has a high ability to result negative effects and also threats are posed to the functions of the related organization (OSHA, 2019; Relf, Lopes & Medeiros, 2018). The probability of cutting or severing hazard happening in the business with machines is intermittent if there are appropriate handling also carefulness on the share of the people who operate the machines this means that there would be an equally probability that the hazard may or may not happen (OSHA, 2019).

For one to be able to perform a risk evaluation of the hazard the number of occurrences in the target area is assessed. The main objective of finding the total occurrence of the hazard is to gain an understanding of the chances of occurrence of the hazard in the future. In this

assessment, the severity of each occurrence is looked for to be able to find the average chances of severity for the occurrences of the hazard within the same environment. Whereby there are no control measures implemented to save the situation then it will be possible to use the old cases to gain an understanding of the future possibilities.

		SCALE OF SEVERITY 		
SCALE OF LIKELIHOOD 	Catastrophic	Moderate	Insignificant	
Very Likely**	**	**		
Moderate				
Unlikely				

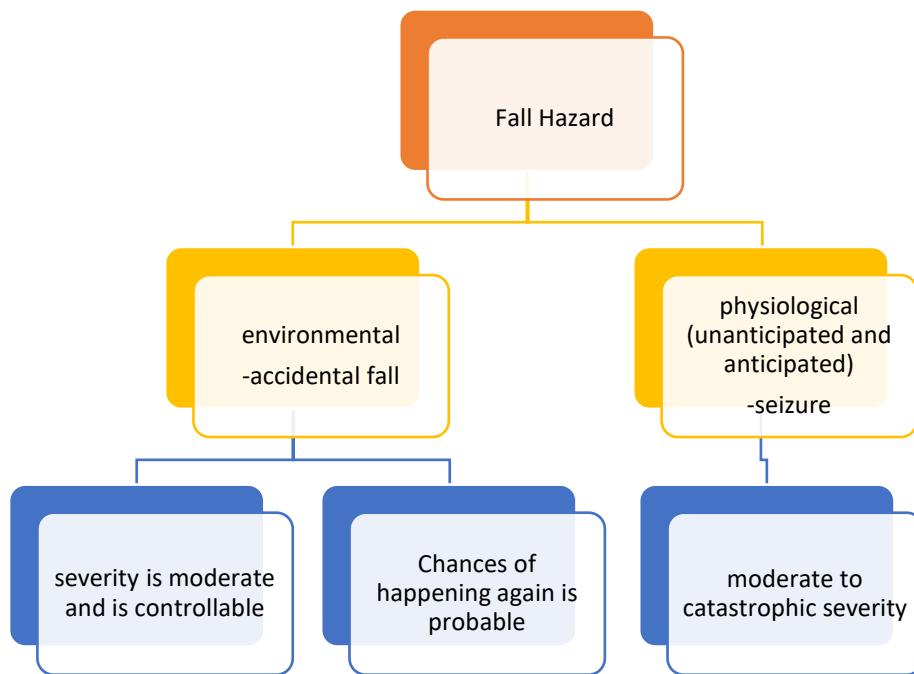
The hazard has moderate chances of occurring in the future and the severity of each instance is moderate to high, the hazard is likely to be important. According to Relf, Lopes, and Medeiros (2018), all dangers with a chance of occurring regularly are acceptable as a source of worry. Training workers on how, when, and where to use the machinery is one of the controls that might be put in place to cope with a mechanical danger like machine cuts. Another method to safeguard is the prohibit direct contact with the blades. This can be made possible by providing safety equipment or alternative cleaning methods for the apparatus in question (OSHA, 2019). The risk of the danger happening would be uncommon or unusual if these measures were in place. It is conceivable to conclude with such a low chance of occurrence. that the hazard severely would be minor, or even unimportant.

SCALE OF LIKELIHOOD 	Catastrophic	Moderate	Insignificant
Very Likely	**	**	
Moderate			
Unlikely **			

Part 2: Fall hazards

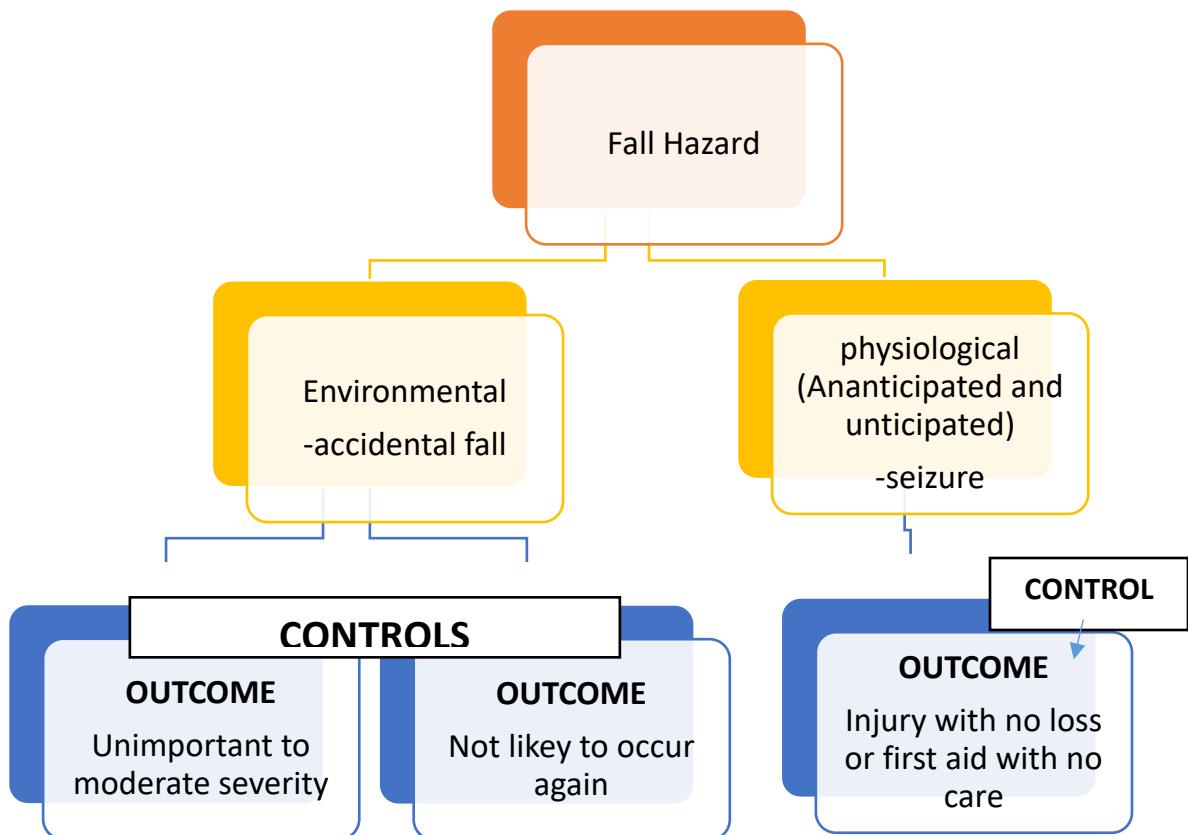
A fall hazard is caused by any objects, gaps, or a situation in the workplace that results in accidental loss of body support which leads to fall (Rajagopalan, Litvan and Jung, 2017). Fall hazards are common in workplaces this is created by several factors. For example, a weak or defective ladder is a fall hazard. Also using a fork truck without a proper personnel platform.

Having a better understanding of fall risks being regular in any workplace, it is possible to conclude that their happening is moderately period. Severity in workplaces may vary from inconsiderable to high levels of disaster (Lyon and Popov, 2016), this shows that there is a high need for an analytical evaluation of fall hazards. Falls have various types that follow the presence of the hazard. The risk assessment process is informed by all the chances of fall hazard which includes accidental, anticipated falls, and unanticipated physiological falls. To carry out the risk assessment, the past occurrence of all three, and the severity following each were evaluated to inform the risk assessment decision tree.



Fall hazard risks are high common and almost unavoidable, depending on their causes (Rajagopalan, Litvan & Jung, 2017). Some, for instance, are caused by physiological factors, as depicted in the decision tree. As such, the control that may be placed on them is minimal. However, controls may be implemented on the hazards related to the physical environment. First, it is possible to control fall hazards by insistence on clear walking around the workplace. The second control is to ensure that all loose ends or spaces in the workplace are maintained to avoid falls as people walk around them (Galecka and Smith, 2018). Another control that may also apply for physiology-related fall hazards is for individual people within the workplace to conduct a medical examination to ensure that they are aware and in control of their health at all times.

With these controls employed, the severity and the chances of occurrence of falls are expected to minimize. As result the level of falls are expected is minimal due to the control of the fall risks.



References

Galecka, C., & Smith, S. (2018). Fall protection: Top 10 misuses & what to do about them. Professional Safety, 63(6), 52–56. <https://search-proquest-com.libraryresources.columbiasouthern.edu/docview/2050595194?accountid=33337>

Lyon, B. K., & Popov, G., & Biddle, E. (2016). Prevention through design for hazards in construction. Professional Safety, 61(9), 37–44. <http://search.ebscohost.com.libraryresources.columbiasouthern.edu/login.aspx?direct=true&db=a9h&AN=118015566&site=ehost-live&scope=site>

Occupational Safety and Health Administration (2019). Chapter 1 - Basics of Machine Safeguarding. https://www.osha.gov/Publications/Mach_SafeGuard/chapt1.html

Occupational Safety and Health Administration. (1992). Residential fall protection program update https://www.osha.gov/doc/residential_fall_protection/ppt/index.html

Rajagopalan, R., Litvan, I., & Jung, T. P. (2017). Fall prediction and prevention systems: recent trends, challenges, and future research directions. *Sensors*, 17(11), 2509. <https://doi.org/10.3390/s17112509>

Reif, R. H., Lopes, D. S., & Medeiros, S. M. (2018). Machine shop safety: A look at the Woods Hole Oceanographic Institution program. Professional Safety, 63(4), 30–35. <https://search-proquest-com.libraryresources.columbiasouthern.edu/docview/2023370569?accountid=33337>

