# HN1400 – OHS

# Chapter 7 – Hazard Recognition and Assessment

**CHAPTER OBJECTIVES**

After reading this chapter, you will be able to do the following:

1. Identify the sources of workplace hazards.

2. Describe methods to systematically examine these hazards.

3. List ways to assess the probability, exposure and consequences of the hazards.

4. Describe the concept of risk assessment.

5. Recognize and define the terminology associated with hazard recognition.

6. Employ the various techniques available to determine risk.

7. Outline the effects and necessity of task analysis.

8. Be able to discuss various types of trauma, based on human activity.

9. Describe the nature and etiology of repetitive-strain injuries.

10. Describe the techniques of manual lifting.

11. Recognize the ergonomic factors associated with hazard recognition and assessment.

12. Describe the components of a hazard identification program.

**CHAPTER SUMMARY**

Chapter 7 defines hazard recognition and evaluation as the process of determining those factors likely to cause incidents, accidents, injuries, and property damage. It begins by defining and distinguishing between the terminologies associated with hazard recognition and the various types of injuries. The chapter describes the four areas of hazard identification; ergonomic, human, situational and environmental. The chapter concludes by discussing the methods and components of a hazard identification program.

**Terminology**

* **Hazard -** A hazard is a situation in the workplace that has the potential to harm the health and safety of people or to damage plant and equipment.
* **Event –** A workplace safety event is any activity that may occur on a day-to-day basis as a direct or indirect result of some human related undertaking
* **Incident –** A workplace incident is any observable human activity that is an unwanted even or occurrence that might have had a negative impact on people, property or process involved. Includes accidents and close calls
* **Accident –** an unwanted event that causes harm to people, property or processes.
* **Injury (direct, Indirect, Acute Trauma, Chronic Trauma)** – some negative outcome that occurs to a human being.
* **Repetitive strain injury** - a condition in which the prolonged performance of repetitive actions, typically with the hands, causes pain or impairment of function in the tendons and muscles involved.

**Types of injuries**

* **Overt/traumatic injuries** - are the result of a wide variety of blunt, penetrating and burn mechanisms. They include motor vehicle collisions, sports injuries, falls, natural disasters and a multitude of other physical injuries which can occur at home, on the street, or while at work and require immediate care.
* **Over Exertion Injuries -** physical overexertion is the most common cause of workers compensation claims. These types of injuries usually occur through repetitive motion such as typing, lifting heavy objects, or working in an awkward position. One can avoid physical overexertion by: Practicing good posture, Utilizing ergonomic workspaces, Lifting lighter loads, Decreasing the distance you must stretch to lift a heavy object, Taking frequent breaks to keep potential repetitive motion minimal, Strength training and stretching and Knowing your body's limits
* **Repetitive Strain Injury** - is a general term used to describe the pain felt in muscles, nerves and tendons caused by repetitive movement and overuse. It's also called work-related upper limb disorder or non-specific upper limb pain.
* **Awkward work positions – see** [**https://www2.worksafebc.com/PDFs/manufacturing/ergonomics/ergo\_awkward\_postures.pdf**](https://www2.worksafebc.com/PDFs/manufacturing/ergonomics/ergo_awkward_postures.pdf)

**Hazard Identification**

* Ergonomic factors
* Human factors
* Situational factors
* Environmental factors

**Developing a Hazard Identification Program: Ask:**

* What prompts the request?
* What is the nature of the hazard?
* What is the cost of the hazard?

**Components of hazard Identification**

* Walk through survey
* Safety sampling
* Analysis of Plant, Task and Jobs
  + Geographical information
  + Task and Job identity
  + Task analysis
* Reports and audits
* Hazard analysis
* Risk Assessment = (Probability of event x consequences of event x amount of exposure)
* Follow up