

# Workplace Health and Safety

## Assessing Risk

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# What is Risk

- *Risk* means:
  - the likelihood of harm arising from exposure to any hazards and,
  - the consequences of that harm.
- For example, cleaning fluids may be a potential hazard but not pose a risk of exposure unless incorrectly stored or handled.

# What is Risk

- Hazards and risks are not the same thing.
- A *hazard* is an act or condition that has the potential to cause damage to plant or equipment, or result in an illness or injury.
- A *risk* is the likelihood of a specific consequence occurring.
  - Usually expressed in terms of likelihood and consequence

# Levels of Risk

- The *likelihood* of something going wrong is not always the same
- The *consequences* of something going wrong are not always the same



# Levels of Risk

- How can risk be assessed?
- Risk = Hazard Identification + likelihood + consequences



# Assessing Risk

- Example 1: Sleeping in the park
  - Hazard Identification
    - Spinal injury (from falling tree)
  - Likelihood
    - Very low
  - Consequence
    - High
  - Risk
    - **Low**
- Risk = Hazard Identification + likelihood + consequences



# Assessing Risk

- Example 2: Putting head inside alligator
  - Hazard Identification
    - Cuts and lacerations
  - Likelihood
    - Very high
  - Consequence
    - Very high
  - Risk
    - **Very high**
- Risk = Hazard Identification + likelihood + consequences



# Assessing Risk

- Risk Matrix
  - Assess risk according to likelihood and consequence
  - All risk levels require action

		Consequences		
Likelihood	Minor	Moderate	Major	
Likely				
Possible				
Unlikely				

Intolerable Risk Level.  
Immediate action required

Tolerable Risk Level.  
Risks must be reduced so far as is practicable.

Broadly Acceptable Risk Level.  
Monitor and further reduce where practicable.

# What Does the Risk Level Mean?

Extreme / High Risk	Imminent / Serious danger. Immediate action is required – stop work. Identify and implement controls (temporary or permanent) to reduce risk to as low as reasonably practical
Medium Risk	Moderate danger. Action as soon as possible to implement controls (long & short term) to reduce the risk to as low as reasonably practical
Low Risk	Minor to negligible danger. Assess if further action can be taken. Take steps to monitor the controls so the hazard is maintained as “low” if the hazard cannot be eliminated completely

# Risk Management

- All risk can not be “eliminated”
- Risk must be managed
- Continual work must be maintained to reduce risk
- The work you do to minimize risk is called *risk management* or *risk control*

# Risk Management

- The aim of this process is to minimize the likelihood or consequence of a risk to an acceptable (minimal) level
- Risk management is a 6-step process with 3 main stages
  - Risk Identification,
  - Risk Assessment, and
  - Risk Control

# Risk Management

- Step 1: Identify the hazard
  - Examine the work area or consider the task or process and identify any hazards or potential threats to health and safety
- Step 2: Identify the Risk
  - Risk is the potential consequence of a hazard – correlating to the possibility of injury, illness, danger or loss as a result of a hazard.
  - Identify factors that may be contributing to the risk

# Risk Management

- Step 3: Assess the Risk
  - Evaluate the likelihood of injury occurring along with its possible consequences
    - Identify the likely severity or impact of any injury/illness resulting from the hazard, and
    - Identify the probability that the injury/illness will actually occur

# Risk Management

- Step 4: Control the Risk
  - We can use the Risk Control Hierarchy to map control measures to risk levels
  - Hierarchy of Control is discussed in the next lecture
- Step 5: Document the process
  - Should include:
    - Hazards identified,
    - assessment of the risks,
    - control measures in place,
    - how and when control measures are implemented,
    - evidence of monitoring and review, and
    - any checklist used in the process

# Risk Management

- Step 6: Monitor and Review
  - Continue to review and monitor the risk management process
  - Identify new hazards and continually review the effectiveness of controls

# Discussion Question / Exercise

- Situation: An employee spends 8 hours a day looking at a computer monitor for 2 years
  - Assess the risk of eye damage from the monitor over this period
  - What are the consequences and their likelihood?
  - What is the level of risk?
  - <http://www.ohsrep.org.au/faqs/workplace-and-amenities/offices-computers-and-eyesight>

# Summary

- Risk is the likelihood of harm arising from a hazard, and the consequences of that harm
- Risk assessment involves mapping the likelihood and consequences of harm for a hazard using the Risk Assessment Matrix
- Once we know the level of risk for a hazard, we can begin the process of managing the risk
- All risk must be managed

# References

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