Student Project Safety (Risk Management)

EMERGENCY PROCEDURES

Evacuation
- Alert tone (Beep, Beep) - Prepare to evacuate
- Evacuate tone (Whooping) - Evacuate the building
- Leave via nearest safe exit
- Walk - Do not run
- Do not use a lift

Emergency Contact
- Ext. 333 Security
- From a mobile: 9905 3333
Session Outline

- Legislative Framework
- Definitions
- What is Risk Management
- Monash Risk management program
  - Risk Matrix method
  - Control Banding method
- Following on from a risk assessment
- Major Hazard groups & Work-through example
- Additional Information/Resources

The legislative framework

Acts
Overarching legislation

Regulations
OHS Regulations (2007)
Provide specific duties

Compliance Codes - Manual handling, First aid
Provide practical guidance
Australian/Industry standards - AS2243.10
Provide minimum requirements, best practice
Definitions

- Hazard -
- Risk –

Risk = Consequence x Likelihood

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Controlled Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe Consequence &amp; High Likelihood</td>
<td>High Risk</td>
</tr>
<tr>
<td>Severe Consequence &amp; Low Likelihood</td>
<td>Low Risk</td>
</tr>
</tbody>
</table>
What is Risk Management?

- Evaluate
- Apply lessons learned
- Modify as necessary

Plan

- Establish a baseline
- Identify priorities
- Set improvement goals and standards

Act

- Continual improvement

Check

- Monitor and measure
- Find and fix
- Document results

Do

- Implement actions
- Plans to achieve goals

Why Manage Risk?

- Reduce the likelihood of injury to yourself and others
- Ensure that your research grant is not impacted
- Ensure that your research project is not impacted
- Provide a safe place to perform your research
- Manage the likelihood of potential litigation
- Reduce the likelihood of adverse publicity for the university
Who should be involved?

Team Effort

- Supervisor of
  - laboratory
  - student
  - area
- Person/s performing the task
- Supervisor/Safety Officer
- Others, as required

When do you do a risk assessment?

- All new activities including:
  - Ergonomic/Manual handling tasks
  - Equipment and machinery
  - Chemical use and storage
  - Radiation
  - Field trips
  - Working alone (after hours)

- Must be completed before commencement of project

- Assessments should be task/procedure based
Hierarchy of Control

1. Elimination
2. Substitution
3. Isolation
4. Engineering
5. Administrative measures
6. PPE

Most effective

Least effective
The Risk Assessment Matrix

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Almost Certain</th>
<th>Likely</th>
<th>Possible</th>
<th>Unlikely</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near Miss/Fall Injury</td>
<td>Minor</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Serious</td>
</tr>
<tr>
<td>First Aid Treatment required for a minor injury</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Serious</td>
</tr>
<tr>
<td>Medical treatment may be required</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Serious</td>
</tr>
<tr>
<td>Serious injury requiring admission to hospital</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Serious</td>
</tr>
<tr>
<td>Fatality or permanent disabling injury</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Serious</td>
</tr>
</tbody>
</table>

Record Sheet

<table>
<thead>
<tr>
<th>Record</th>
<th>Current Controls</th>
<th>Likelihood</th>
<th>Consequences</th>
<th>Current Risk</th>
<th>Proposed Controls</th>
<th>Responsible Person</th>
<th>Likelihood</th>
<th>Consequences</th>
<th>Residual Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Following a risk assessment…

- Completed risk assessments must be signed and dated by your supervisor.

- Safe Work Instructions/Safe Operating Procedures
  - Emergency procedures
  - After hours procedures

- Training
  - Lab/Equipment/Procedure specific
  - Specialised Monash OHS courses, e.g. radiation safety

- Review of risk assessments

Group Activity 1

Identify Hazard
Assess Risk
Control Risk
Review Control
What hazards are there?

- Animal/Insect/Vegetation
- Equipment/Machinery/Vehicles
- Manual Handling/Ergonomics
- Biological
- Outdoor Hazards
- Psychological/Social
- Chemical
- Water/Gases/Liquids
- Physical Hazards
- Hazardous Areas
- Radiation
Animal/Insect/Vegetation

Equipment/Machinery/Vehicle
Manual Handling & Ergonomics

Causes of Musculoskeletal Disorders (MSDs)

Frequent, repetitive movements
Work environment, static load, stress
Awkward posture, heavy load

Injuries occur either through gradual wear & tear or sudden damage
Progression of Injury

1. Symptoms appear when performing task
2. Pain remains after task has stopped
3. Pain continues in evening
4. Pain is present on waking
5. Pain is constant

✦ Early Intervention – get assistance

Workstation set-up

- Same principles apply when using laptops for > 2hrs/day

- Head
  - Head back, chin tucked
  - Eyes, shoulder, hips aligned

- Neck
  - Use headrest
  - Do not cradle phone between neck and shoulder

- Elbows
  - All elbows – slightly more than 90 degrees bend

- Chair
  - Fully adjustable with lumbar support in seat of the back

- Eyes
  - Level with top 1/3 of screen (60-24")

- Document Holder
  - Adjacent to and at same height as monitor

- Keyboard
  - Same height as elbows with wrist slightly bent, flexible/gently

- Mouse
  - Adjusted to and at same height as keyboard

- Chair Height
  - Knee slightly more than 90 degrees, feet flat on the floor

Take breaks every 30 minutes!
Work Zones

- Primary Zone
  - Items in constant use
  - Keyboard
  - Mouse

- Secondary
  - Items used regularly
  - Phone
  - Staplers, hole punch, etc...

- Tertiary Zone
  - Reference material
  - Photos etc....

In the Laboratory

Adjustable chair/footrest
- Leg room
- Work task flow
- Static posture

Lifting hazard
- Repetitive
- Use of force (thumb)
- Awkward posture

Maximum 5 hours/day
Biological

Outdoor
Radiation

Water/Gases/Liquids
Physical

Psychological/Social
Hazardous Area

Chemicals
Chemical properties – why do we use them?

Dangerous goods classes

- **EXPLOSIVE** 1
- **NON-FLAMMABLE** NON-TOXIC GAS 2
- **FLAMMABLE GAS** 2
- **TOXIC GAS** 2
- **FLAMMABLE LIQUID** 3
- **FLAMMABLE SOLID**
- **OXIDIZING AGENT** 5.1
Dangerous goods classes

What are hazardous substances?

Effect on human health = Toxicity $\times$ Exposure
When using chemicals you must consider:

- Purchasing
- Storage
- Labeling
- Disposal
- Emergency procedures

These areas must be addressed in your risk assessment!

Chemicals you use are your responsibility. 
Cradle to the Grave!

These areas must be addressed in your risk assessment.
Material Safety Data Sheets (MSDS)

- Identification
- Precautions for Use
- Health Hazard Information
- Safe Handling

Information in MSDS must be used to complete Risk assessment and develop Safe work instructions.

Chemsafe
Safety does not happen by accident!
It’s up to you!

For further information

- Supervisor, Safety Officer, Health and Safety Representative.

- OHS Consultant – Margaret Rendell
  - 9905 1060

- Occupational Health & Safety Branch
  - http://www.monash.edu/ohs/
  - Phone: 9905 1016 (enquiries)
  - OHSEHELPLINE@.monash.edu
For further information

- Supervisor, Safety Officer, Health and Safety Representative.

- OHS Consultant – Chris van den Bergen
  - 9905 1101

- Occupational Health & Safety Branch
  - [http://www.monash.edu/ohs/](http://www.monash.edu/ohs/)
  - Phone: 9905 1016 (enquiries)
  - OHSEHELPLINE@.monash.edu