

MATERIALS HANDLING

Introduction

Material handling can be a major source of occupational injuries whether the work is done manually or with mechanical assistance. Jobs that involve manual, mechanical or repetitive handling present the highest risk of injury. Material handling using powered industrial vehicles also present hazards and risks in movement and property damage.

Applicable ASU Policies

- EHS 105 - Personal Protective Equipment
- EHS 108-01 - Health and Safety Training
- EHS 108-02 - Defensive Driver Training
- EHS 205 - Storage of Hazardous Chemicals

Applicable Regulations

- 29 CFR 1910.176 Subpart N - Materials Handling and Storage
- 29 CFR 1910.132 Subpart I - Personal Protective Equipment
- OSHA General Duty Clause

Summary of Requirements

Material handling requires careful consideration of many factors including the area of ergonomics. Every job that involves manual, mechanical or repetitive handling should have a job analysis performed to determine how worker injury can be minimized.

Most back injuries that occur on the job are a result of poor lifting technique. Lifting and carrying objects should be designed out of jobs whenever possible. When lifting cannot be avoided, employees should get assistance with heavy and awkward objects. The risk of injury can be reduced by staying in good physical shape, planning the lift and removing all obstacles, getting a good grip, getting load close to the body and lifting with the legs. Avoid twisting the back and lifting a load above shoulder height. Lower the load carefully while bending the knees and keeping the back straight.

Manual Requirements

- Employees involved in manual material handling (i.e. lifting or carrying objects) must receive training in back safety and proper lifting techniques.
- Manually lifting loads should not exceed 45 lbs. (male) or 35 lbs. (female) and 35lbs. (male) and 20 lbs. (female), if repetitive or multiple lifts.
- Large or heavy objects should use a two person rule or mechanical equipment, whenever possible.
- Repetitive tasks should be evaluated using the ergonomic (bio-mechanic) theory to assess the risks and establish control procedures to reduce the potential for injury.
- Any department using computer workstations should reference the ASU "Computer Work Station Ergonomic Design Guideline" available on the ASU EH&S website.
- Use of personal protective equipment is mandatory when material handling present the potential for injury physical (splinters, crush), thermal (cryogenic, hot, cold) or chemical (acidic, caustic, toxic)
- Back belts are authorized and recommended to be worn provided the employee has been trained on proper lifting and back safety techniques. *Note: Employees must understand back belts assist*

in reducing fatigue during long periods of standing and does not increase back lifting strength or load lifting potential.

Mechanical Equipment Handling Requirements :

- Employees using any and all powered industrial vehicles or trucks must be trained prior to use and refresher training completed every three years.
- All incidents involving near-miss, injuries and property damage must be reported immediately to Campus Police or ASU EH&S Department.
- Employees operating cranes and hoists must have appropriate training.
- Only authorized employees who have been trained in specific equipment are allowed to operate powered industrial equipment at ASU.
- All mechanical equipment must be inspected before use.
- Discrepancies must be immediately reported and the equipment with the discrepancy must be taken out of service.
- Expired Recertification will result in loss of use of all powered industrial vehicle privileges until recertification has been completed.
- Material will be stored and piled in accordance with ASU Fire Safety Guidelines for height and compatibility. Fire sprinkler heads, doorways, electrical panels, eyewash and showers, fire extinguishers, and other emergency equipment cannot be obstructed or blocked at any time.
- Specific chemical or other hazardous material handling and storage requirements are outlined in the specific ASU EH&S program policy. Refer to the EH&S website for specific details on each program.

Training

Each department is required to provide training to all employees who are susceptible to material handling injuries. This would include proper lifting techniques, proper adjustment of workstations, and specialized training in how to use material handling equipment on the job. OSHA specifies that employees involved in the following materials handling operations must receive training:

- Powered Industrial Trucks (forklifts, tractors, backhoes, loaders)
- Cranes and hoists
- Powered platforms and man-lifts
- Servicing multi-piece rim wheels

Reporting

ASU EH&S must be notified immediately in the event of any incident resulting in the near-miss, minor or serious injury of any person or property damage. You must notify ASU EH&S immediately upon returning to work when you receive treatment for any back or muscle related work injury,.

Call 911 immediately for any serious or life threatening injuries.

Inspections

Mechanical equipment: Frequent" and periodic inspections must be conducted on powered industrial trucks, cranes and hoists and the inspections must be documented. A visual inspection must be conducted using an established checklist prior to any use.

Recordkeeping

All training sessions and inspections must be appropriately documented and maintained by the individual departments. Training sessions should have a sign-in sheet. Proof of required training should be maintained in the employee's personnel file. Documentation must be available for audit and inspection purposes.

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