

Sample Lesson Plan
Construction Training Program (10-hour)
Material Handling, Storage, Use and Disposal

Introduction

- Over 20% of all occupational injuries are back injuries.
- Lost workdays because of over-exertion due to lifting, pushing, pulling and carrying account for 27% of all lost-workday cases
- Injuries can also be caused by falling objects, improperly stacked materials or equipment.

Instructor's Activities

- PowerPoint presentation
- Discuss 29 CFR 1926 Subpart H
- Participant Discussion

Learning Objectives and Outcomes

I. Most common injuries occurring during material handling, storage, use and disposal

- A. Back injury
- B. Struck by injury
- C. Crushed by injury

II. Preventing injury when performing manual lifting

- A. Lift with your legs, keep your back straight and do not twist
- B. Get help when moving large or bulky items
- C. Use handling aids
- D. Break load into parts that are of a more manageable size and weight
- E. Avoid lifting above shoulder level
- F. Use gloves and safety shoes

III. Eliminating hazards when using forklifts to handle material

- A. Train employees in proper use and operation
- B. Center the load on the forks and close to the mast
- C. Avoid overloading
- D. Place load in lowest position for traveling
- E. Keep arms and legs inside truck
- F. No riders
- G. Don't drive with raised forks

IV. Eliminating hazards when using cranes to handle material

- A. Train employees in proper use and operation
- B. Check load chart in the cab and abide by load limits
- C. Inspect frequently
- D. Never lift people
- E. Avoid overhead power lines
- F. Insure area of travel is clear
- G. Have competent person inspect, as required

V. Eliminating hazards when using a sling to handle material

- A. Inspect slings each day before use and where service conditions warrant

- B. Ensure hooks, rings or other attachments have a rated capacity at least equal to the chain to which they are attached
- C. Don't use job or shop hooks or makeshift fasteners
- D. Lubricate ropes and chains
- E. Remove worn equipment from service, if damaged or defective

VI. Reducing or eliminating hazards when storing , using or disposing of materials

- A. Secure material stored in tiers by stacking, racking, blocking or interlocking to prevent from falling
- B. Post safe load limits for floors
- C. Keep aisles and passageways clear
- D. Don't store materials within 6 feet of a hoistway or floor opening
- E. Wear fall protection when working on stored materials in silos, hoppers or tanks
- F. Don't stack bricks more than 7 feet high and taper a loose brick stack after it is 4 feet high
- G. Remove nails before stacking lumber
- H. Stack lumber so it is stable and self-supporting
- I. Keep storage areas clear of accumulated materials that cause tripping, fires or explosions, or may contribute to harboring rats or pests
- J. Do not store potentially hazardous materials or incompatible materials; ensure they are properly disposed of

References

OSHA Standard: 29 CFR 1926 Subpart H (1926.250 to 1926.252)

OSHA Publications

<http://www.osha-slc.gov/OshDoc/Additional.html>

- 2236 Materials Handling and Storing
- 3072 Sling Safety
- 3170 Safeguarding Equipment and Protecting Workers from Amputations

OSHA References/Resources

- Construction Safety and Health Outreach Program - Materials Handling and Storage
<http://www.osha.gov/doc/outreachtraining/htmlfiles/mathan.html>
- Construction Safety and Health Outreach Program - Sling Safety
<http://www.osha.gov/doc/outreachtraining/htmlfiles/slides.html>
- OSHA Construction eCAT - Struck-by: Vehicles
<http://www.osha.gov/SLTC/etools/construction/struckby/vehicles.html>
- OSHA Technical Manual - Back Disorders and Injuries
http://www.osha.gov/dts/osta/otm/otm_vii/otm_vii_1.html
- OSHA Technical Manual - Forklifts, Powered Industrial Trucks
<http://www.osha.gov/SLTC/powerindustrialtrucks/index.html>

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