

# North Dakota State University

## Material Handling/Lifting

### I. Introduction

Improper use of materials and equipment of various sizes and weights can cause injury, disability, or even death. By learning and following safe practices for handling materials and equipment, we learn to help prevent injury and safeguard our lives and those of our coworker.

### II. Purpose

To ensure that all employees know the basic procedures for handling material and equipment properly in order to reduce the risk of a work related injury or death.

### III. Goals

To provide a safe operating procedure that maximizes personal safety while performing material handling duties and while handling equipment.

### IV. Procedure

#### A. Guidelines to keep your back in optimum condition

1. Plan the work to eliminate unnecessary lifting/carrying.
2. Organize the work so that the physical demands and work pace increase gradually.
3. Know your intended route. Working surfaces are to be adjusted to the correct height and walking surfaces level and well lit. Clear a pathway before you transport material.
4. Test the load for stability and weight. If the object is too bulky or weighs 50 lbs. or more, get assistance or use a mechanical lift.
5. Know the approximate weight of your load and make certain your equipment is rated to handle the job. Make sure all powered equipment and rigging is rated for a safe load limit. Do not exceed the manufacturer's recommended safe working load.
6. Wear appropriate shoes to avoid slips, trips, or falls.
7. To lift the object, separate feet, and put one slightly in front of the other.
8. Get a secure grip, using both hands whenever possible.
9. Keep load close to your body and tighten the abdominal muscles as you lift, maintaining the three natural curves of your spine.
10. Keep your head up and look straight ahead while making the lift.
11. Use your legs to push up and lift the load. Do not use the upper body or back.
12. Do not twist your body. Step to one side or the other to turn.
13. Lower the load by bending at the knees and keeping the back straight.
14. Alternate heavy lifting or forceful exertion tasks with less physically demanding tasks.
15. Push instead of pull when moving a load

#### B. Guidelines for general equipment use

1. Operate only the tools and equipment you are authorized to use.
2. Do not stand, walk, or work under suspended crane hooks, front end loaders, or hoists.
3. Riding a crane hook, equipment forks, excavator buckets, or on a load is prohibited.
4. Do not run hand trucks, mobile equipment, or vehicles over hoses, cables, welding leads, or extension cords.
5. Check tools and equipment prior to use. Perform general maintenance duties each day, checking for defects, repair needs, guards, etc. Remove all damaged or defective tools or equipment from use. Report all problems to your immediate supervisor.
6. Prior to operating any equipment, check for clearance limitations. Warning signs must be posted and visible.
7. All material must be properly stacked, secured and stable to prevent sliding, falling, or collapsing. Exits, aisles, and stairs must be kept clear to provide for the safe movement of employees and equipment and to provide access in emergencies.
8. Personal Protective Equipment is mandatory during the tasks or jobs that require special protective equipment. Each department is responsible for maintaining its equipment in working condition for which it was designed. If PPE is questionable, the supervisor is to be contacted for verification. The following is a partial list of PPE that may be required:

Safety Goggles	Foot Protection
Gloves/Aprons	Hard Hats
Face Masks/Shields	Respirators
9. General housekeeping is mandatory by all employees in their individual work areas. Employees are expected to maintain a neat and orderly work area, safe from accidents and injury and be in compliance with building and fire codes.
10. All stairways, corridors, ladders, hallways, and passageways are to be maintained in compliance with building safety and fire codes.

Exercise also plays an important role in keeping your back strong, healthy and flexible. A properly exercised back is less likely to be injured, so do not take unnecessary chances.