

Quick Start Guide Manual Material

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Manual Material Handling Program

Check Your Understanding. Does your organization need a Manual Material Handling Program? It is hard to imagine any organization that cannot benefit from a formal, controlled approach to material handling. If your organization manually moves products and materials by lifting, on carts (two and four wheel), roller conveyors or with manual/battery operated pallet movers, you would benefit from developing a Manual Material Handling Program. Proactive steps in material handling should be taken before an injury occurs. This program does not cover large equipment such as fork trucks, overhead and gantry cranes, crawler and truck cranes and derricks.

The implementation of a material handling program should help to reduce the frequency and severity of musculoskeletal injuries. The program standardizes training, safe work practices and inspection procedures.

Consider this example: Your employee needs to move some 50-pound boxes from a delivery truck to their workstation. They can choose to carry them to the workstation, place them on a cart, or place them on a pallet and move them with a manual pallet mover. How will your employees make that decision? Implementation of a comprehensive Manual Material Handling Program should help those employees make a safer decision.

For additional information

Material Handling LPIM

NIOSH Lifting Equation

Occupational Safety and Health Administration

Purpose

The purpose of the _____ Manual Material Handling Program is to apply ergonomic principles and sound decision-making to the workplace in an effort to reduce the number of manual lifts thus decreasing workplace injuries and, where possible, increasing productivity, quality and efficiency. A proactive material handling approach focuses on making changes when risk factors have been identified, as well as incorporating automated material handling into the design phase of new facilities, equipment, tools and scheduling changes.

All employees are required to follow the minimum procedures outlined in this program. Any deviations from this program must be immediately brought to the attention of the Program Administrator.

Scope

_____ strives to provide all employees with a safe and healthy workplace. This Manual Material Handling Program is integrated into our company's written safety and health program, and is a collaborative effort that includes all employees. The Program Administrator is responsible for the program's implementation, management and recordkeeping requirements.

A Glossary of terms is located in **Appendix A**

Program Responsibilities

Management: The management of _____ is committed to the safe handling of all materials.

Management supports the efforts of the Manual Material Handling Program Administrator and the Material Handling Committee (if applicable) by pledging financial and leadership support for the identification and control of material handling risk factors.

Material Handling Program Administrator: The Program Administrator will report directly to upper management and be responsible for this program. All evaluations, controls and training will be coordinated under the direction of the Program Administrator in collaboration with management. The Program Administrator will monitor the results of the program and determine additional areas of focus as needed. The Program Administrator will also:

- Ensure that those performing worksite evaluations and training are properly trained
- Ensure that control measures are implemented in a timely manner
- Schedule manager, supervisor and employee training and maintain records to include date, name of instructor, topic and materials used
- Follow-up with any material handling strategy and/or solutions
- Monitor the program on a quarterly basis and provide an annual review
- Assist in selection of appropriate material handling equipment and tools

Department Managers and Supervisors: Managers and supervisors of _____ will:

- Remain accountable for the health and safety of all employees within their departments through the active support of this program
- Attend material handling training on the recognition and control of work-related material handling risk factors; this is a supplemental component to our Ergonomics program
- Ensure that employees in their areas have received the appropriate training
- Ensure that safe material handling practices and principles are considered daily and when conducting worksite evaluations
- Ensure that recommended controls are implemented and/or used appropriately through active follow-up
- Provide employees with and ensure the proper use of appropriate tools, equipment, parts and materials
- Maintain clear communication with managers and employees
- Make assistance available to employees who manually handle or lift items weighing 50 pounds or greater

Employees: Every employee of _____ is responsible for conducting himself/herself in accordance with this policy and program. All employees will:

- Use two-wheeled trucks, four-wheeled carts, roller conveyors, pallet jacks, or any other material handling equipment in the manner established by managers and supervisors
- Ensure that equipment is properly maintained in good condition and when not, report it immediately
- Provide feedback to managers and supervisors regarding the effectiveness of design changes, new tools or equipment
- Attend training as required and apply the knowledge and skills acquired during training to their jobs, tasks, processes, and work activities
- Use proper lifting and material handling techniques as outlined in this policy
- Limit manual lifting or handling tasks to objects less than 50 pounds
- Get assistance whenever manually handling or lifting materials that are 50 pounds or greater
- Report injuries within 24 hours of their occurrence

Employee involvement is an essential element to the success of this program. A procedure has been established for employees to provide their input and assistance with worksite evaluations, identifying risk

factors, development and implementation of controls, and training. Employee participation in the program will occur only during company time. Employees that identify lifting hazards or other safety hazards will immediately notify their supervisor. If a supervisor is not available, they are to contact the Safety Manager or Program Administrator.

Manual Material Handling Risks

Material Handling Equipment. Additional tools and equipment are required when lifting or handling material weighing over 50 pounds. Manual material handling equipment should be used only for its designed task and maintained in good condition. The manual material handling equipment available at _____ includes:

- Two-Wheel Trucks: Do not overload these trucks; load a maximum of 200 pounds. Make sure hand trucks are stored in a vertical position when not in use.
- Four-Wheel Carts: Load material evenly on carts to prevent tipping and view obstruction. Push rather than pull carts, unless specially designed to be pulled.
- Roller Conveyor: Keep hands and feet away from pinch points and make sure that rollers extend beyond the load.
- Pallet Jacks (manual or powered): Use a jack properly rated for the load. Place the jack on a level, stable, and clean surface. Avoid metal-to-metal contact (jack to surface being lifted) by using woodshims.

Housekeeping. Material handling and storage areas must be kept free of excess materials that create hazards (i.e. fire, explosions, slips, trips, or infestation by insects or rodents.)

Aisles and Passageways. Where mechanical handling equipment is used, 10-foot safe clearances shall be allowed for aisles, at loading docks, through doorways, and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard.

Permanent aisles and passageways are marked with yellow lines. Clearance signs and warning of clearance limits are posted throughout the facility where headroom is below 10 feet. All equipment is marked indicating the working load it will safely support. Do not overload any piece of equipment.

The following is a list of materials/items that are commonly handled manually at _____ and the equipment that must be used to handle the material. The list does not cover every lifting occurrence in the workplace. If the task you are about to perform is not listed, contact your supervisor to determine the safest way to handle the material/item.

<u>Material to be lifted or moved</u>	<u>Equipment to be used</u>
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Employee Training

Training is intended to enhance the ability of managers, supervisors and employees to recognize work-related material handling risk factors and to understand and apply appropriate control strategies. Training in the recognition and control of these risk factors will be given as follows:

- To all new employees during orientation
- To all employees assuming a new job assignment requiring manual material handling
- When new jobs, tasks, tools, equipment, machinery, workstations or processes are introduced
- When high exposure risk factors have been identified

The minimum training requirements for all managers, supervisors and employees will include the following elements:

- An explanation of _____ material handling program and their role in the program
- Knowledge of job tasks that require manual material handling
- An understanding of the basics of ergonomics
- The methods used by _____ to minimize work-related risk factors

Training should include the following topics:

Mechanical aids for carrying or moving loads are to be used whenever possible to minimize manual material handling. These mechanical aids include hand trucks, carts, dollies, rolling conveyors, wheelbarrows, etc. When designing or modifying storage areas, store heavy items on shelves between knee and shoulder level and avoid storing items on the floor. Also, lighter items should be stored on top shelves. Whenever possible, decrease the object container size, change container shape and/or add handles to aid in handling.

Even when mechanical aids are used to move materials, some lifting cannot be avoided. Before you lift, remember the following:

- Use manual material handling devices (hand dollies, carts, lift tables, forklifts) where defined by the company and wherever possible in all other situations
- Wear supportive shoes
- When possible, push and pull rather than lift and lower
- Reduce the size of the material to keep it light, compact and easy to grasp
- Try to have most workplace deliveries placed at hip height
- Always keep objects in the comfort zone (between hip and shoulder height)
- Keep all loads close to and in front of the body
- Keep the back aligned while lifting
- Keep elbows near 90 degrees
- Avoid slopes
- Avoid uneven floors
- Maintain the center of balance
- Let the legs do the actual lifting
- Decide on the route to take
- Check the route for any problems or obstacles such as slippery or cluttered floors

Unloading objects should be done the same way as loading objects, but in the reverse order as follows:

- Slowly bend your knees to lower the load
- Keep your back straight and the weight close to the center of your body
- Allow enough room for fingers and toes when the load is set down
- Place the load on a bench or table by resting it on the edge and pushing it forward with your arms and body
- Secure the load to ensure that it will not fall, tip over, roll or block someone's way

One-arm loads are used when carrying items such as pails or buckets. Lifting and carrying one-arm loads should be performed as follows:

- Bend at the knees and waist, keeping your back straight
- Reach for the load
- Grasp the handle of the load firmly
- Lift with your legs, not your shoulders and upper back
- Keep your shoulders level while switching hands regularly to reduce overexerting one side of the body

Team lifts are used when objects are too heavy, too large or too awkward for one person to lift. Team lifts should be performed as follows:

- Work with someone of similar build and height, if possible
- Choose one person to direct the lift (e.g., "lift on the count of three")
- Lift with your legs and raise the load to the desired level at the same time
- Always keep the load at the same level while carrying
- Move smoothly and in unison
- Set the load down together

Overhead loads should be eliminated if possible, but if necessary, should be conducted as follows:

- When lifting or lowering objects from above the shoulders, lighten the load whenever possible
- Stand on something sturdy such as a step stool or platform to decrease the vertical distance
- When lowering objects from above the shoulders, grasp the object firmly, bring the load as close to your body as possible, slide it down slowly and proceed with your move

All training will be recorded on the employee training record form located in **Appendix A**.

Periodic Program Review

The Manual Material Handling Program will be reviewed annually. Annual walk-through inspections of equipment, procedures and processes will be documented with the forms in **Appendix B**.

Record Retention

All records will be retained for 10 years.

Appendix A – Employee Training Record

The following individuals received training on the Manual Material Handling Program.

Print Name	Sign Name	Date

Print Instructor's Name	
Instructor's Signature	
Instructor's Title	
Date of Training	

Appendix B – Annual Evaluation Report

Date of Evaluation:	Evaluated by (list all participants):
Written Program Reviewed: Yes No	
Comments on Written Program:	
The following specific procedures have been reviewed:	
The following specific procedures were modified:	
The following specific procedures were added:	
Reviews of the occupational injuries and illnesses log and the associated accident investigation reports were completed as part of this evaluation: Yes No	
The following injuries resulted from failure to use correct material handling procedures:	
If injuries are listed above, indicate corrective measures implemented:	