

Ergonomics Fact Sheet

Approaches to Improving Lifting Tasks

Lifting tasks can result in back and shoulder injuries if the tasks are poorly designed, if excessive loads are manually handled, or if lifting is performed on a repetitive basis. When lifting-related risks are present, the safety and productivity of the task can be improved in numerous ways other than putting in a hoist, or providing training. In fact, teaching people to lift 'correctly', as a stand-alone strategy to address lifting-related injuries, is not an effective approach for preventing lifting-related injuries.

Consider the following example of a lifting task and the possible solutions that could be considered to make the task safer. Additional ideas probably could be generated, but this example points out that many approaches exist to improve hazardous lifting tasks.

Lifting Task Example:

Bags of animal feed (or chemicals, fertilizer, etc.) are manually lifted from a bag sealing machine to pallets. The lifting task was determined to be unacceptably hazardous for workers. What alternatives are available?

Workplace Redesign Ideas

- Modify the height of the loading/unloading area to change the lift.
- Slide the bag instead of lifting it.
 - Use an air table.
 - Use a smooth metal surface.
- Use a raised work surface so that the person only has to lower material instead of lifting.
- Change the workstation layout to avoid twisting with the load.

Equipment Redesign Ideas

- Use a variable-height conveyor to mechanically raise bags.
- Use a spring-loaded leveler to position the material at the correct height.
- Use a stacker's forks to raise and lower the pallet to the correct height.
- Automate the task with bag palletizers or use industrial robots to handle the bags.
- Add mechanical assists such as a hoist or a powered conveyor to move the material.

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Ideas to Redesign Work Methods

- Use two people to handle the bags.
- Keep the load in close to the body.
- Avoid twisting with the load.

Change the Job Composition

- Rotate personnel to distribute the materials handling work among more people.
- Consolidate all lifting and materials handling into only a few jobs.

Change the Work Environment

- Control heat, dust, other factors that affect foot traction or grip.

Change the Process

- Purchase/sell the product in bulk quantities to eliminate manual handling of smaller units.

Change the Product

- Change the bag size and weight (lighter, OR heavier so a bag cannot be manually handled).
- Give it handles.
- Use a rougher bag surface for better grip.

So, the next time you identify a problem lifting job, consider some of the ergonomic approaches listed here to change the job. You can reduce the risk of injury to workers *and* improve productivity by doing so.

How can I learn more?

If you have a question contact the OHS Division's Ergonomist by E-mail at pettits@gov.ns.ca, by telephone at 424-5032 or toll-free at 1-800-952-2687, or write to:

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