

work **Safe!** Bulletin

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Lifting

What are the responsibilities?

The safe performance of manual handling tasks must be treated like any other work situation. *The Workplace Safety & Health Act places a responsibility upon employers to: "ensure, so far as is reasonably practicable, the safety, health & welfare at work of all his workers."*

As part of this responsibility, the employer should review and address the lifting requirements at the workplace. This should be done in cooperation with the safety & health committee or worker representative.

The Act also places a requirement upon workers to:

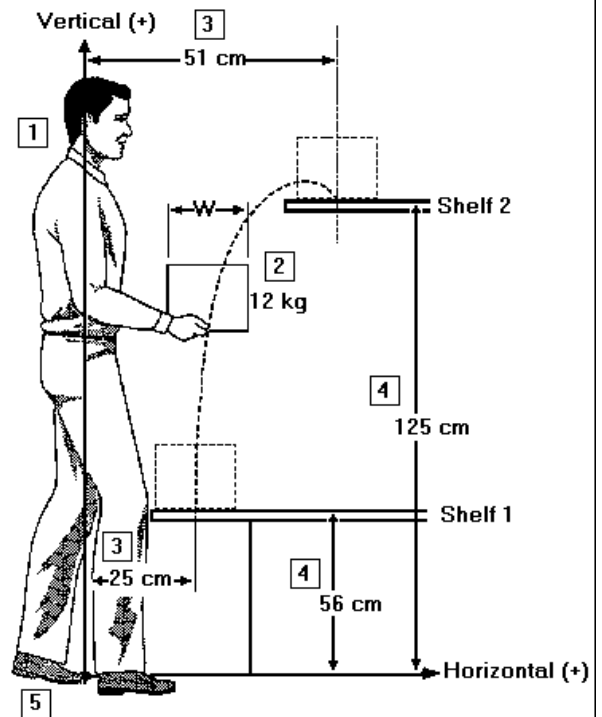
"take reasonable care to protect his safety & health and the safety & health of other persons who may be affected by his acts or omissions at work."

As part of this requirement, the worker should not lift in excess of his or her capabilities. If a worker encounters something that is too heavy to lift, then that worker should notify his or her supervisor and request assistance either in the form of mechanical aids or another person.

Is there a maximum weight that a man or woman can safely lift?

The answer to that question is YES, but it depends on several factors:

- 1. Worker:** Height, weight, age, physical fitness, medical conditions, previous injuries.
- 2. Object:** Is the object large or compact? Is it rigid or flexible? Does the shape make it hard or easy to grasp? Does it have handles?
- 3. Distance (between the Object and the Person):** How far is the object held from the person during the lift?
- 4. How Object is Lifted:** From what height is the object being lifted? To what height is the object being lifted? Is there any twisting or rotation involved? Does the object need to be carried for a long distance?
- 5. Work Environment:** Does the floor surface provide good stability, or is it slippery or sloped? Are there any tripping hazards? Is the area congested?
- 6. Frequency of the Task:** How often does the person have to lift? How much time does the person spend lifting in a day? How often does the person take a break? How long are the breaks between lifts?



The National Institute for Occupational Health and Safety (NIOSH) in the U.S. has developed a method of analyzing how difficult a lifting task is by combining many of the above factors into an equation. The equation requires that you measure certain aspects of the job, and the output is the Recommended (safe) Weight Limit (RWL) for that task. For more information on this method of analyzing a lifting task, an example use of this equation is available at the following internet site: [NIOSH Lifting Equation - Example Analysis](#)

What is the safe way to lift?

There isn't a guideline for the proper way to lift every type of object. What works for a banker box will not work for a piece of furniture or for lifting patient. Here are some guidelines on how to lift so that you are placing the least amount of stress on your body.

- The object to be lifted should be held as close to the body as possible. The farther the object is away from the body, the harder it is to lift.
- The best heights for lifting are between the knees and the shoulders. Lifts to/from below the knees or above shoulder height should be avoided.
- The distance that an object travels during a lift should be kept to a minimum.
- During lifting, the body should not be twisted or rotated at the waist. If the object needs to be placed beside the person, they should rotate by moving their feet.
- The work area should be clear and free from trip hazards.
- The back's normal curves should be maintained (i.e. as straight as possible, but not necessarily vertical) Feet should be positioned to maintain balance throughout the lift.
- Assistance should be available for heavy and/or awkward loads.
- Mechanical aids should be used as much as possible (e.g. lift tables, cranes, etc.)

Should I wear a back belt to do this job?

Research done to date has concluded that the use of back belts to decrease the risk of injury is inconclusive - they work for some of the people some of the time, but not all of the people all of the time.

Here are a few recommendations to follow if you are considering using a back belt:

1. **Be sure to consult with a physician prior to use.** Medical personnel should screen all candidates for cardio-vascular risk.
2. **Belt wearers must receive education on lifting mechanics and proper use of the belt.** The use of back belts can lead to a false sense of security, which could lead to overexertion and unsafe activities.
3. **Belts must not be prescribed until a full ergonomic assessment has been conducted of the individual's job.** Focus on the development of a company wide comprehensive ergonomic program.
4. **Belts should not be considered for long-term use.** Fitness, education on lifting mechanics and ergonomic assessments are the three primary factors that should be used to ensure a safe work environment. It is recommended that workers be monitored closely upon termination of belt use as this period appears to be characterized by elevated risk of injury.

