

Back Safety & Ergonomics in the Workplace

Environmental Health and Safety



Ergonomics Topics

- Ergonomics
- Musculoskeletal Disorders
- OSHA Standard
- Proper Lifting
- Preventing Back Injury
- Maintaining a Healthy Back
- Warming up for Work
- Proper Rest
- Exercises to Reduce Injury Potential
- Hand Tool Arm Vibration

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Ergonomics

ERGONOMICS is the process of fitting a job environment to a worker. To achieve this we use the following:

1. Engineering and Administrative Controls
2. Work site analysis
3. Training and education
4. Employee involvement

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Lifting Safety

Lifting is strenuous; however, with proper form and practice, you can prevent back injuries and reduce low back pain.



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Proper Lifting Strategy

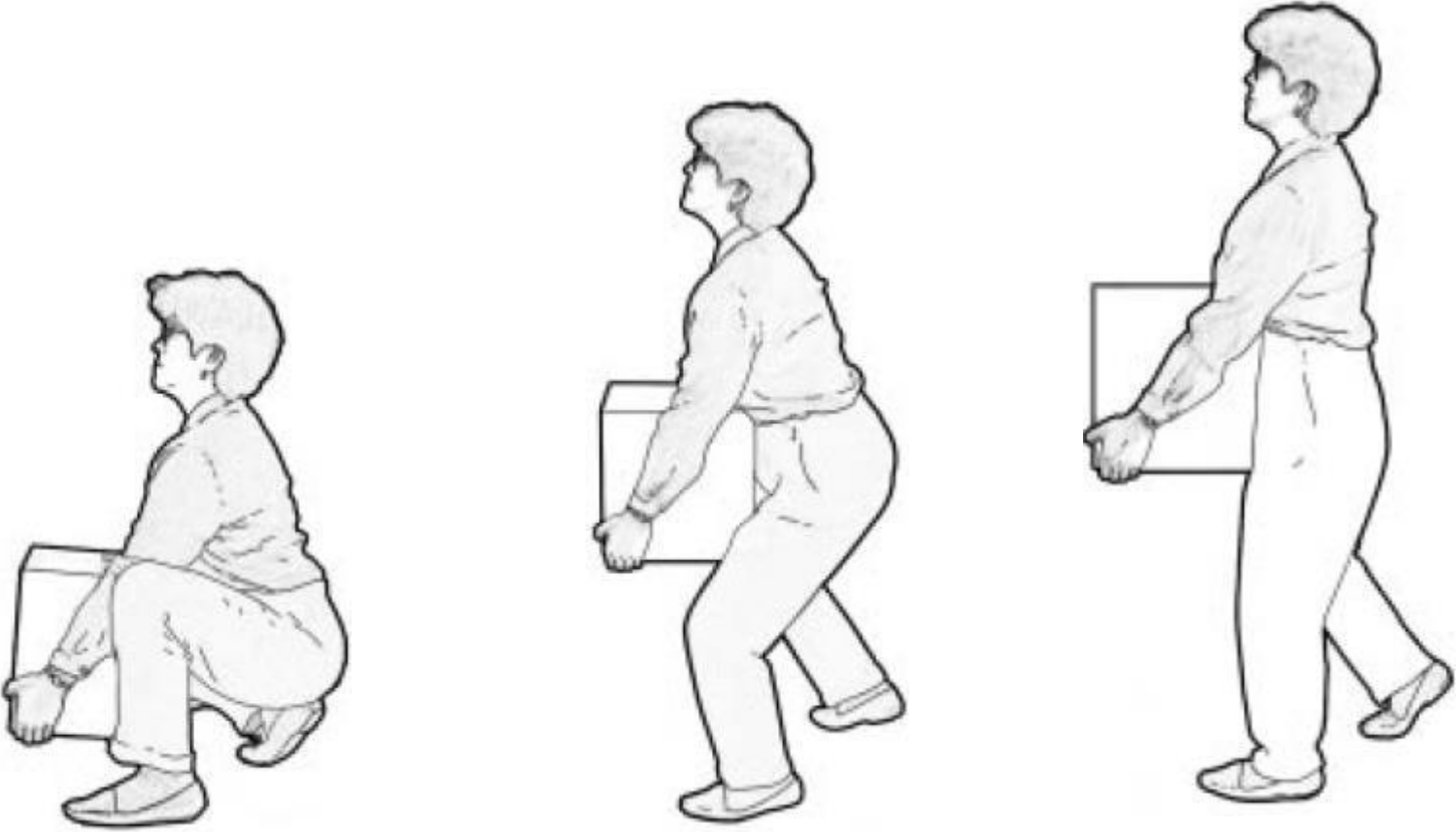
Five steps to follow when lifting an object:

1. **GET CLOSE TO THE LOAD** Get as close to the load as possible— as if you're hugging the object. Having the object close to your body put less force on your low back.
2. **MAINTAIN YOUR CURVES.**
Keep yourself in an upright position while squatting to pick up
3. **TIGHTEN YOUR STOMACH MUSCLES**
Tightening the stomach helps support the spine. *Don't hold your breath while tightening the muscles.*
4. **LIFT WITH YOUR LEGS**
Your legs are the strongest muscles in your body— so use them.
5. **PIVOT DON'T TWIST**
Turn with your feet, not your back. It isn't built for twisting from side to side

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Proper Lifting Strategy

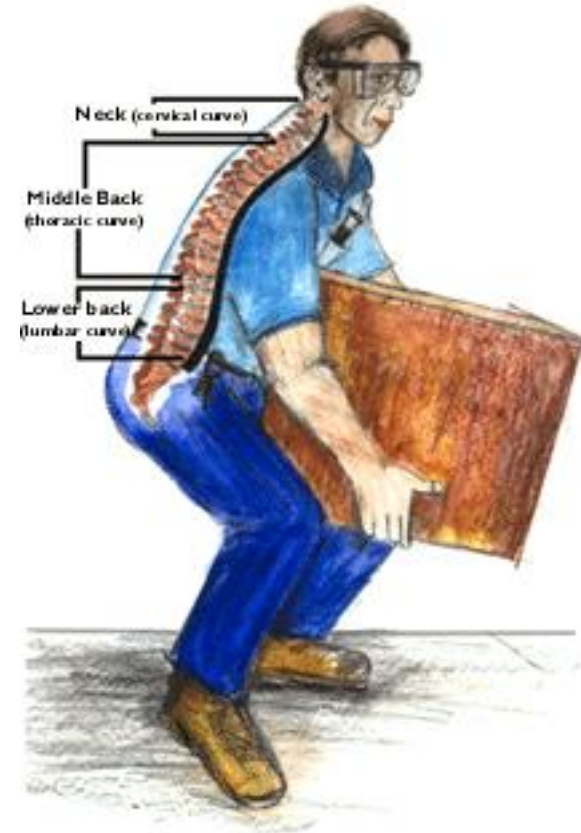


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Lifting Safety

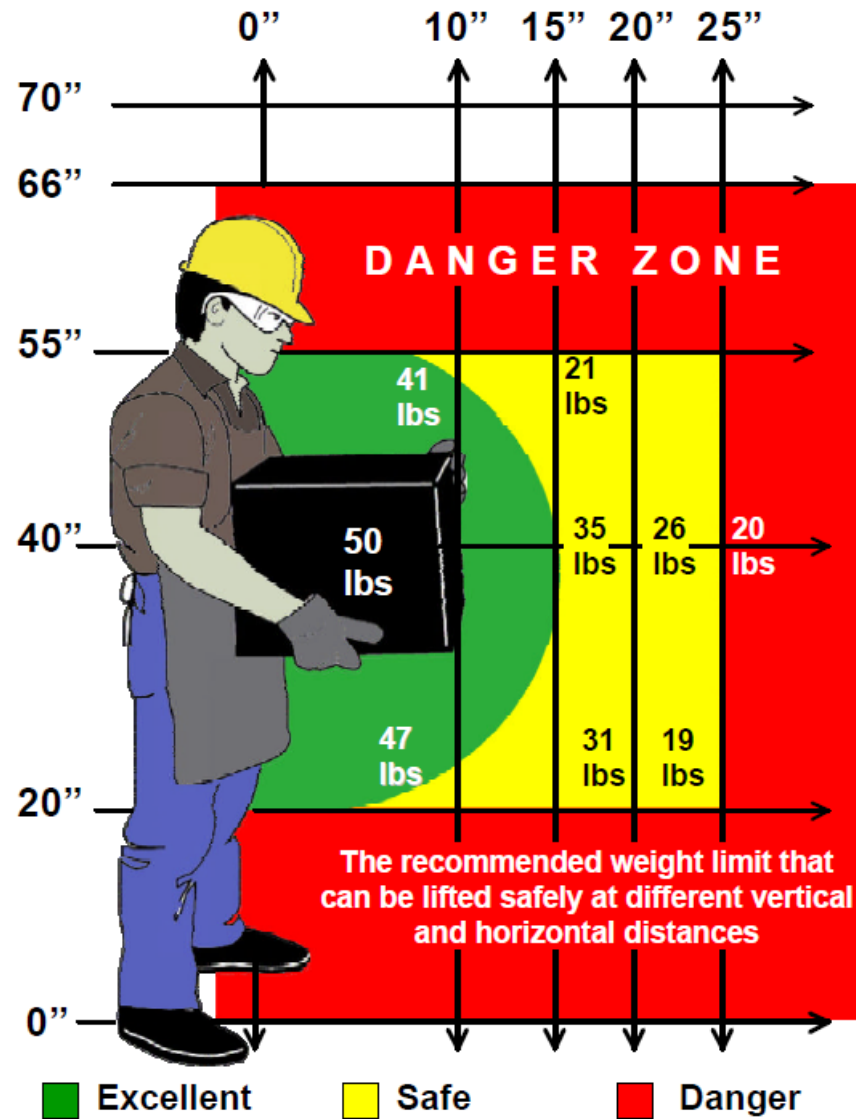
- **Large or Heavy Loads.** If a load is too heavy to lift alone, ask for help. Pick one person to coach the lift — this way you lift and lower at the same time.
- **Overhead Loads.** If a load is above your shoulders, use a step stool to elevate yourself until the load is at least chest level— preferably waist height. Pull the object close to your body and then lift. Remember to maintain your curves — use your arms and legs to do the work.



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Danger Zone



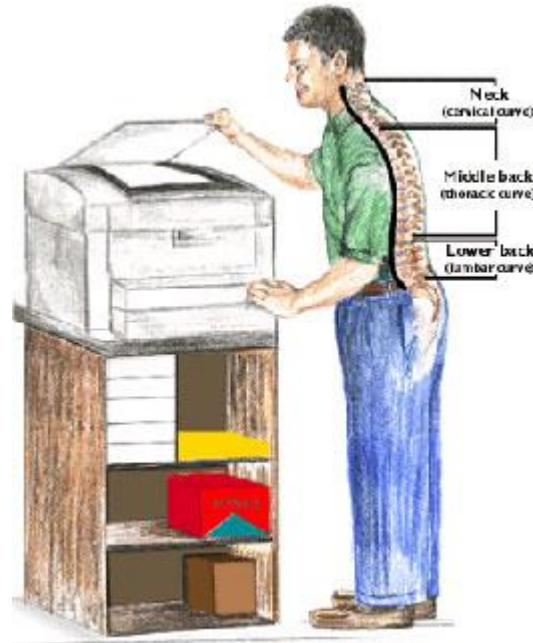
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Maintaining a Healthy Back

Remember - Maintain Your Curves!

- **Three Curves of Your Back:** Your back is composed of three natural curves that form an S-shape. When your three natural curves are properly aligned, your ears, shoulders, and hips are in a straight line. Without support from strong, flexible muscles, your back loses its three natural curves. Poor posture can lead to pain and serious injury.



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Preventing Back Injury

- The best way to prevent back injuries is to develop habits that reduce the strain placed on the back. There are some basic things you can do to help:
- Avoid Lifting and Bending Whenever You Can!
- Place objects up off the floor. If you can set something down on a table or other elevated surface instead of on the floor, do it so you won't have to reach down to pick it up again.
- Raise / lower shelves. The best zone for lifting is between your shoulders and your waist. Put heavier objects on shelves at waist level, lighter objects on lower or higher shelves.
- Use carts and dollies to move objects, instead of carrying them yourself. (Remember that it is better on your back to push carts than it is to pull them.)
- Use cranes, hoists, lift tables, and other lift-assist devices whenever you can.

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Before You Lift

Plan Ahead

- Know what you are lifting and how you will lift it.
- Be aware of the weight of the object.
- Determine whether or not it's safe to lift on your own.
- Make sure the work area is flat, dry and clear of debris.

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Before You Lift

Check Your Pathway

- Make sure the lift pathway is clear.
- Remove any tripping hazards or debris.
- Check for any wet or slick surfaces.

Use Ergonomic Equipment

- Use lift assists, forklift, dolly, cart, hand truck or hoist.
- Make sure you are trained before using the equipment.

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Before You Lift

Get Help When Needed

- When lifting awkward or heavy loads, utilize a two person lift.
- Make sure you lift at the same time and keep the load level.

Wear Proper PPE

- Wear proper required protective shoes and gloves.

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Proper Rest

The best position for resting the back muscles is lying on your back on your living room floor with a pillow under your knees and a rolled up towel under your neck. You can also lie on your side in the fetal position— bend the knees to reduce strain on the low back and put a pillow between your knees, and under your head and neck to keep them level.

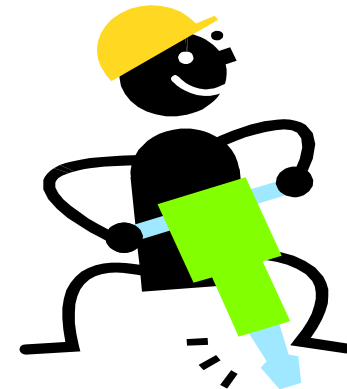
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Whole Body and Hand/Arm Vibrations

- Whole-body vibration is experienced in any work condition that involves sitting, standing, or lying on a vibrating surface. Excessive levels and durations of exposure to whole-body vibrations may contribute to back pain and performance problems.
- If you spend a considerable amount of your work day on a vibrating seat or floor and experience any of the following signs or symptoms contact your Supervisor.
 - Blurred vision
 - Decrease in manual coordination Drowsiness (even with proper rest)
 - Low back pain
 - Insomnia
 - Headaches or upset stomach

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Employee Involvement

1. Promptly report signs and symptoms of workplace muscular skeletal disorders (WMSD) hazards
2. Offer feedback on the effectiveness of ergonomics controls
3. Share recommendations about appropriate ways to control WMSD hazards

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Questions?

Katelyn Kelly

EHS Consultant

Triumvirate Environmental

kkelly@newhaven.edu

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