



**CONSTRUCTION SAFETY  
EDUCATION PROGRAM  
#21**

# BACK CARE



This education program provides a guideline for back injury prevention. It is intended to give contractors and workers practical information relating to back care.

This education program contains general information. For specific regulatory requirements, please consult the appropriate regulation adopted under the Workplace Safety and Health Act and Workers Compensation Board.



## **INTRODUCTION:**

Of all the job demands you place on your body, your back bears the brunt. Lower-back pain and injuries from manual lifting are some of the most common.

In this program you will learn:

- Correct Posture
- Proper Workplace Ergonomics
- Safe Material Handling
- Preplan Lifting
- Stretching Program

## **BACK CARE**

Nearly 25% of the lost-time injuries in construction are related to the back. More than half of these injuries result from lifting excessive weight or lifting incorrectly.

To prevent injuries, three factors are necessary:

1. proper posture
2. correct lifting techniques
3. regular exercise.

## **POSTURE**

Correct posture is not an erect, military pose. It means maintaining the naturally occurring curves in your spine.

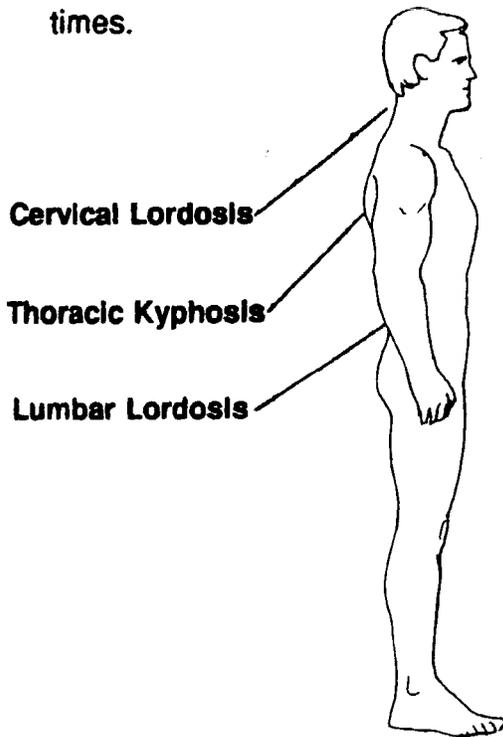
You have two inward curves - at the neck and low back - and one outward curve - at the upper back.

Keeping your spine aligned in this manner reduces everyday stresses on your back and minimizes the effects of the normal aging process on the spine.

When working in a crouched, bent, or stooping position for a prolonged period, take regular breaks.

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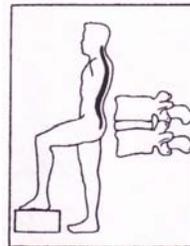
### Correct Posture



You have two inward curves (lordosis), one each at the neck and low back, and one outward curve (kyphosis) at the upper back.

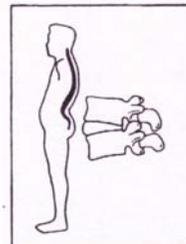
### Normal

Prolonged standing often causes an increased curve in your back. Elevating one foot on a stool or any other object (a phone book or brick will do) will take stress off the lower spine.



### Sway Back

An increased curve in your lower back will jam the vertebrae together (sway back). If held too long, the position will cause lower back muscle and ligaments to tighten and lead to lower back pain.



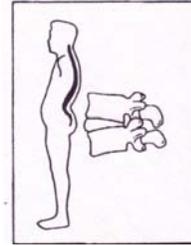
### **Work Overhead**

When working overhead in an arched position for prolonged periods, take regular breaks by returning to stable footing.

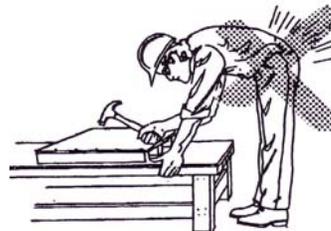


### **Flat Back**

Too little curve (flat back) will put extra pressure on the front of your discs. This may contribute to disc problems and pain.



**For Bench Work, the right height is vital.**



There are other ways of reducing your back pain:

If you are lifting:

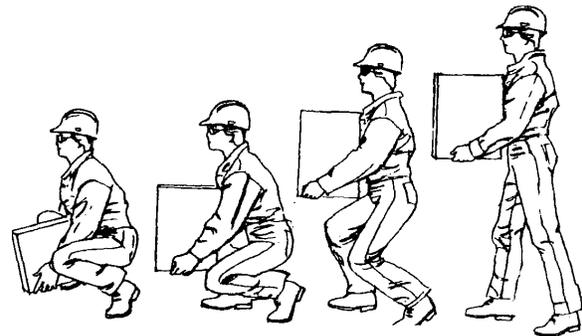
- Bend your knees.
- Place feet apart for good balance.
- Lift slowly and smoothly.
- Keep the object as close to your body as possible.
- When you need to do the same task for a long period of time, try to change your posture as often as possible.
- Get mechanical assistance for heavy loads.
- Push, rather than pull a load.
- Share the load with a partner.

When lifting loads use a two-handed grip where practical and maintain a straight back with your head up.

When repetitively handling objects, turn your body by moving your feet and getting into a stable position. Be aware of these risk factors that increase the likelihood of a musculoskeletal injury:

- Use of excessive force
- Highly repetitive movements
- Awkward and/or static postures
- Manual handling of heavy loads
- Poor tool, equipment, or workplace design
- Poor work organization (lack of task variety, excessive work pace, etc.)
- Cold temperatures
- Vibration

## **MATERIALS HANDLING**



### **THERE ARE SOME THINGS TO CONSIDER WHEN IT COMES TO THE HEALTH OF YOUR BACK:**

Maintain a natural posture. You'll notice your lower back curves naturally when standing straight. Do your best to maintain this posture while lifting, lowering, or moving. This position assures the greatest spinal and back stability.

Hug that load. Holding a load close to your belly and body reduces the strain placed on the muscles of your back and trunk. If required, wear protective clothing to prevent sharp objects from causing injury.

Flex your abs. Contracting your abdominal muscles or bracing when lifting, lowering, or moving improves your spinal stability. Even slight abdominal contractions can greatly reduce your likelihood of getting injured.

Don't do the twist. Twisting decreases the stability of your back and increases your likelihood of injury. To turn, pivot with your feet rather than twisting your body.

Your back can manage most lifts -- if you lift correctly.

Avoid lifting above shoulder height. This causes the back to arch, placing heavy stress on the small joints of the spine.

Do not catch falling objects. Your muscles may not have time to coordinate properly to protect the spine.

Push rather than pull. Pushing allows you to maintain the normal curves in your back.

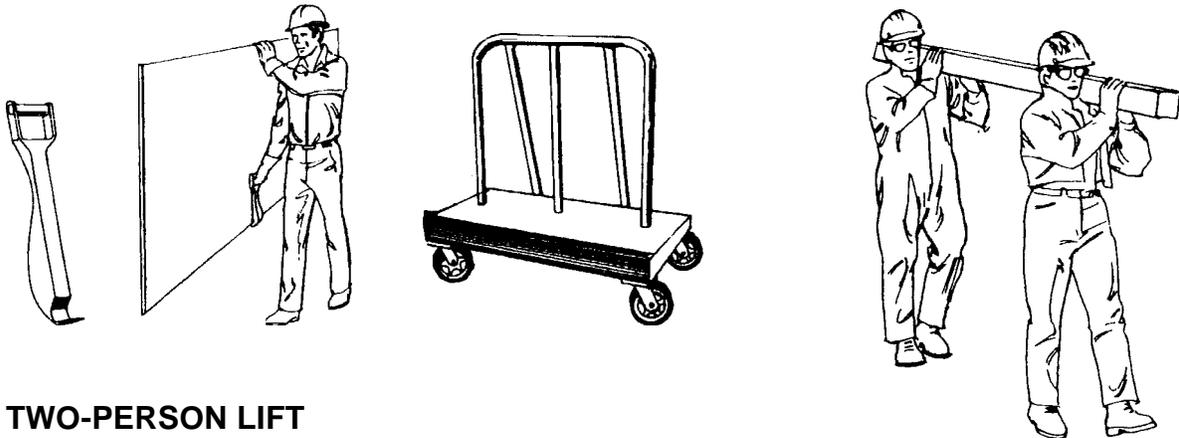
## **WEIGHT TRANSFER**

Pull the object toward you while transferring your weight to the lift side.

Lift only to the level required.

Shift your weight to your other leg while pushing the object into position.

**For long carries, use carrying handles. Better yet, if surface is smooth and hard use a drywall cart:**



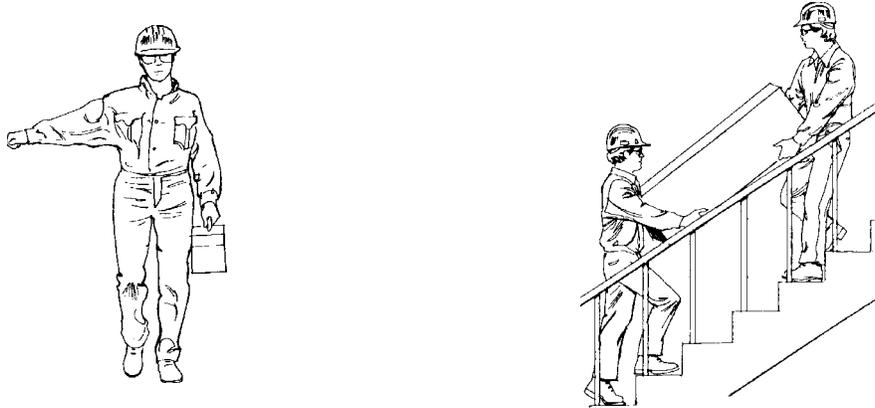
## **TWO-PERSON LIFT**

Lifters should be of similar height. Before starting they should decide on lifting strategy and who will take charge.

For a two-person lift of a long load, the lifter who takes charge must see that the load is carried on the same side, with a clear line of vision. Begin by lifting the load from ground to waist height. Then lift the load from waist to shoulder.

## **CARRYING ON STAIRS**

Use your stomach muscles to help support and protect your back. If possible, the tallest and/or strongest person should be at the bottom of the load.



## **BALANCE**

Avoid one-handed carrying if possible. Try to distribute the weight evenly on each side. If you can't avoid one-handed carrying, such as with a single pail, hold the free arm either straight out or on your hip as a counterbalance.

## **PREPLANNING PAYS OFF**

A lot of unloading problems can be eliminated by having a plan. For example, your purchase orders for each shipment should tell the shipper what the packing order is, so that the things to be unloaded last at your end will be loaded on the truck first. It will make your job easier during unloading.

Other questions to consider when making your plans:

- What is the best way to unload the truck?
- Are enough workers available to assist in handling the load?
- Is the load in a condition which makes it a safety hazard?

## **EVERYONE KNOWS BETTER**

We all know that we should take care and use proper techniques when lifting or doing physical work. We also know we shouldn't overexert ourselves. Do the right things for yourself:

- Reduce the weight of the load.
- Get help, have a "team" of workers share the work.
- Store materials at or above hip height-this reduces the need for bending.
- Use carts, ropes, forklifts, and other tools to assist you.
- Minimize the distance needed to carry items-plan your storage and movements properly.
- Transfer the weight of the load to stronger parts of your body using handgrips, straps, or belts.
- Reduce twisting of your body: keep loads in front of you; turn by moving your feet, not your body.
- Don't swing and throw heavy loads.
- Minimize bending to lift or shift a load-and don't bend to the side when carrying material.

## **MOST IMPORTANT**

The best way to lift and reduce the strain on your back is to use the "squat" technique. Bending at the knees with your back straight and your head up allows you to transfer more of the weight to your legs.

## **PLANNING EACH MOVE**

Materials should be moved only when necessary. When you plan to move, ship, or receive materials consider all parts of the operation:

- How will it be transported?
- Are the workers experienced enough?
- Do you have enough workers to do the job right?
- Is the vehicle operator skilled enough for the job at hand?
- Is the package or load sizes appropriate?

Save your back and increase job efficiency by using the right tool for the right job. When manual assistance is required at any stage in the job, ensure that there are enough workers to share the work. By improving your handling procedures your safety record will improve.

## **EXERCISE**

Construction work strengthens some muscles while others become shorter and weaker, creating a muscle imbalance. A regular exercise program can help to prevent this from happening.

A good exercise program should consist of four basic parts:

1. warm-up
2. main workout
3. strength and stretch
4. cool-down.

**BACK CARE**  
**REVIEW QUESTIONS**

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

**PART 1 – FILL IN THE BLANKS WITH THE CORRECT ANSWERS**

1. Correct posture means that you are maintaining your spine's natural \_\_\_\_\_ .
2. One way to prevent back injury is to maintain \_\_\_\_\_ .
3. When performing a 2-person lift, both lifters should be of similar \_\_\_\_\_ .
4. If your work involves mainly sitting at a desk, you should try to take a break at least every \_\_\_\_\_ minutes.
5. One risk factor that can increase the likelihood of a back injury is \_\_\_\_\_ .