

## Back Safety and Proper Lifting Techniques



### BACK INJURIES -- NATION'S #1 WORKPLACE SAFETY PROBLEM

- Preventing back injuries is a major workplace safety challenge. According to the Bureau of Labor Statistics, more than one million workers suffer back injuries each year, and back injuries account for one of every five workplace injuries or illnesses. Further, one-fourth of all compensation indemnity claims involve back injuries, costing industry billions of dollars on top of the pain and suffering borne by employees.



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- Moreover, though lifting, placing, carrying, holding and lowering are involved in manual materials handling (the principal cause of compensable work injuries) the BLS survey shows that four out of five of these injuries were to the lower back, and that three out of four occurred while the employee was lifting.



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- No approach has been found for eliminating back injuries caused by lifting, though it is felt that a substantial portion can be prevented by an effective control program and ergonomic design of work tasks.



ERGONOMICS

## Back Safety and Proper Lifting Techniques

Strength testing of existing workers, which one study showed can prevent up to one-third of work-related injuries by discouraging the assignment of workers to jobs that exceed their strength capabilities.

Training employees to utilize lifting techniques that place minimum stress on the lower back.



Physical conditioning or stretching programs to reduce the risk of muscle strain.

## Suggested Engineering Controls Include:

A reduction in the size or weight of the object lifted. The parameters include maximum allowable weights for a given set of task requirements; the compactness of a package; the presence of handles, and the stability of the package being handled.

Adjusting the height of a pallet or shelf. Lifting which occurs below knee height or above shoulder height is more strenuous than lifting between these limits. Obstructions which prevent an employee's body contact with the object being lifted also generally increase the risk of injury.

Installation of mechanical aids such as pneumatic lifts, conveyors, and/or automated materials handling equipment.

In a recent study it was determined that up to one-third of compensable back injuries could be prevented through better job design (ergonomics).

Other factors include frequency of lifting, duration of lifting activities, and type of lifting, as well as individual variables such as age, sex, body size, state of health, and general physical fitness.



## Basic Guidelines for Lifting and Object Safely

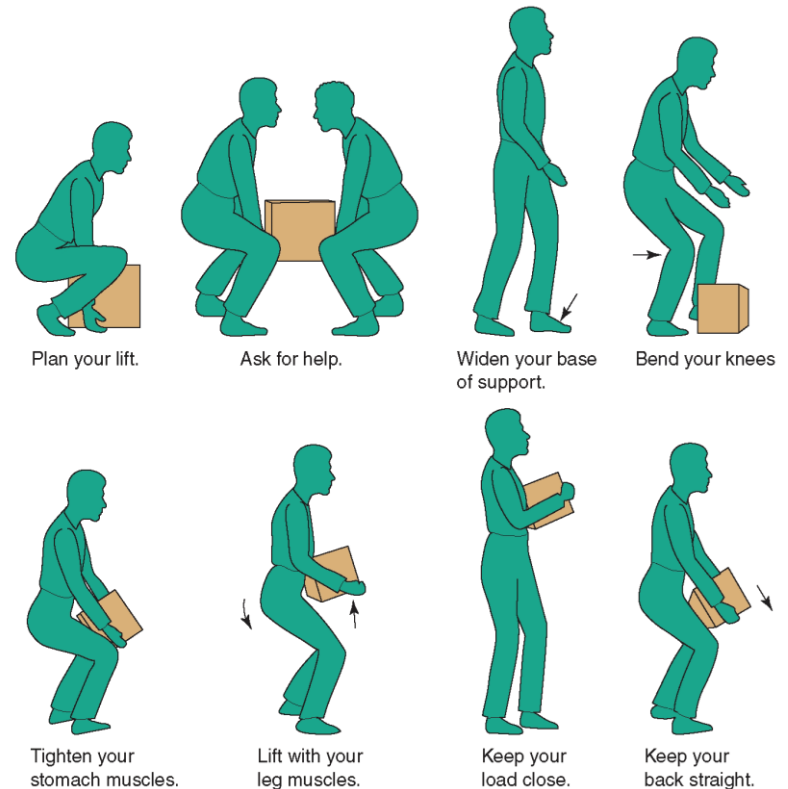
First, assess the weight of the object (read packaging label, personal knowledge, product technical specs, etc.).

Second, assess the shape and orientation of the object to be lifted. Keep in mind, objects with oversized, unbalanced or awkward orientations/shapes may require extra precautions/planning.

Identify the contents: Can the contents of the packaging shift during the lift or transport?

Although there is a general guideline allowing objects weighing up to 50 pounds to be manually lifted, you must also evaluate its size, shape and orientation **AS WELL AS YOUR PERSONAL PHYSICAL ABILITIES!**

Don't be afraid to ask for help! Any load that is too heavy or awkward in shape or size you should ask for someone to assist you.



**IF THE OBJECT CAN BE MANUALLY LIFTED – USE PROPER LIFTING TECHNIQUES**

First, ensure the desired path of travel is clear of obstructions.

When ready to lift, stand close to the object with your feet spread shoulder-width apart.

Squat, bending your knees and hips, while keeping your back in proper alignment.

Contract your stomach muscles and lift with your leg muscles – **NEVER** lift with your back muscles!



## Proper Lifting Techniques (cont).

Hold the load close so you can see over it and maintain control.

Always face the direction of travel.

To make changes in direction, aim toes/feet in the desired direction to make slight adjustments in direction.

**DO NOT TWIST AT THE WAIST!**

For team lifts, discuss the lift beforehand and maintain clear communication throughout...discuss when to lift, walk, change direction and set the load down.

If necessary, utilize an appropriate lifting device/aid such as a dolly, pallet jack, forklift, hoist, crane, etc.





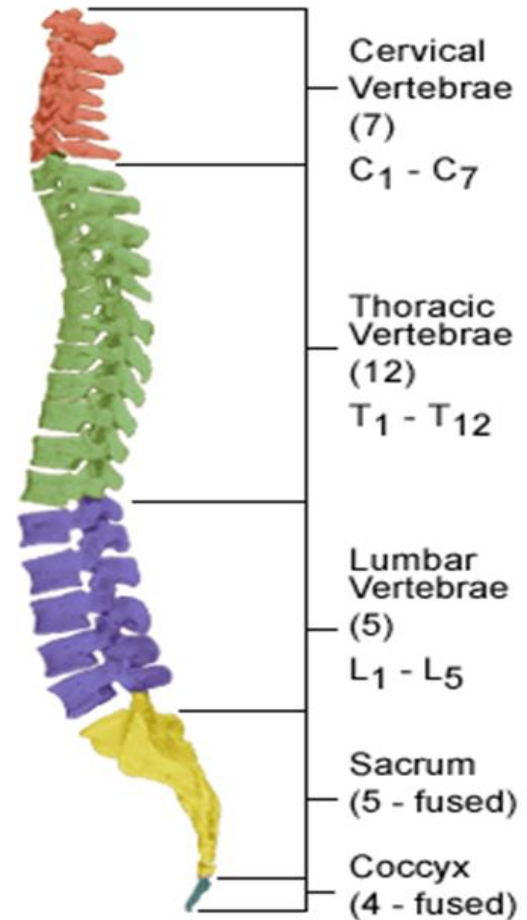
## Understanding The Mechanics

When standing correctly, the human spine has a natural “S-curve.”

The wrong posture can increase strain on the back muscles and may bend the spine into positions that will disrupt the natural “S-curve.”

Added pressure can cause surrounding muscles to overcompensate leading to strain or other injuries.

### Spinal Column with Vertebrae





**CAUTION:** Serious back injuries can occur while handling compressed gas cylinders.

Cylinders may weigh from 140 – 220 pounds.

Never attempt to remove a cylinder from a cascade system by hand. Cascade racks are also configured in such a way as to make it hazardous and inappropriate for two or more people to remove a cylinder by hand.

CRS Cascade racks are also configured with push handles .

Never pull the racks as they are top heavy and could tip over and crush you or cause you to strain a muscle in your back.

Always use lifting equipment.

## Awkward Equipment

They are many items of Code Red Safety that you could hurt your back if you lift improperly.



The equipment you pick up even if it's the lightest picked up incorrectly can cause debilitating back injuries. So before you lift make a plan and ask for help if needed. Don't become a statistic.

## Pre-Start Stretching and Warm-Up Exercise Before Work

- Stretching in the morning is a great way to "awaken" your muscles and get them ready for the day. Stretching loosens up your body while increasing blood flow to your muscles. Incorporating morning stretches into your daily routine is a positive way to begin each day. Learn an easy and effective morning stretch exercise program.



### Benefits of Stretching for the Body

- Flexibility. Stretching improves flexibility. ...
- Posture. Stretching is also beneficial to improve your posture. ...
- Injury Prevention. ...
- Increased Nutrients and Reduced Soreness. ...
- Calmed Mind. ...
- Release Tension. ...
- Increase Energy. ...
- Stretching is not a warmup activity.

**Before starting this, or any other exercise program, check in with your doctor to ensure that exercise is safe for you to do.**