

# LIFTING BASICS

## *Techniques For Safe Lifting*

Safe lifting is always important—but it's *critical* when lifting is a part of your job or everyday activities. If you've ever "thrown out" your back while doing a seemingly simple lift—moving a crate, lifting a piece of furniture, carrying a file box to the office—you know firsthand the importance of safe lifting. Safe lifting means keeping your back aligned while you lift, maintaining your center of balance, and letting the strong muscles in your legs do the actual lifting. By using the following techniques, you can learn how to lift safely and save your back from accidental strain and injury.

### The Safe Way To Lift

Before you lift anything, think about the load you'll be lifting. Ask yourself: "Can I lift it alone?" "Do I need mechanical help?" "Is it too awkward for one person to handle, or should I ask a coworker for help?" If the load is manageable, follow these tips for safe lifting:



#### 1. Tuck Your Pelvis

By tightening your stomach muscles you can tuck your pelvis which will help your back stay in balance while you lift.



#### 2. Bend Your Knees

Bend at your knees instead of at your waist. This helps you keep your center of balance and lets the strong muscles in your legs do the lifting.



#### 3. "Hug" The Load

Try to hold the object you're lifting as close to your body as possible, as you gradually straighten your legs to a standing position.



#### 4. Avoid Twisting

Twisting can overload your spine and lead to serious injury. Make sure your feet, knees, and torso are pointed in the same direction when lifting.

### Tips To Remember

In addition to these techniques, remember to make sure that your footing is firm when lifting and that your path is clear. And be sure to use the same safe techniques when you set your load down. It takes no more time to do a safe lift than it does to do an unsafe lift, so why not play it safe and lift it right?



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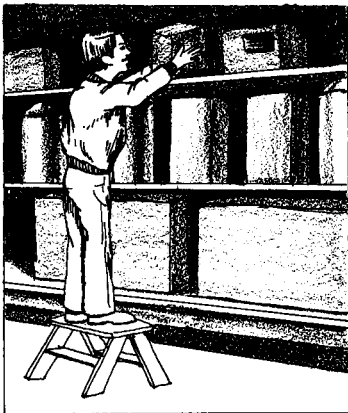
# LIFTING AWKWARD LOADS

## *Safe Lifting In Special Situations*

Most people whose jobs require lifting are familiar with the “safe” lift—bending your knees, hugging the load, and letting the strong muscles in your legs do the actual lifting. This standard way of lifting is safe, but in many situations, it’s impractical. When the load you have to lift is awkward, or is in a hard-to-reach area, a standard lift can be difficult to perform. The following tips can help you lift safely in situations where the standard lift can’t be used.

### Odd-sized Loads

Long objects that are relatively light can be awkward to lift and carry. When lifting and carrying pipes, lumber, or other long, light loads don’t “hug” the load close to your body. Instead, support it on your shoulder, keeping the front end of the object higher than the rear. If the load is long or heavy enough to require two people, each of you should shoulder it on the same side and keep the object level. (Be sure to keep in step



**If you have to lift an object that’s above shoulder-level, use a stepstool or ladder to avoid over-reaching.**



**If a load is hard to reach, stand with feet at shoulder distance apart, slightly bend your knees, and start to squat, bending at your hip joints, not at your waist. (The movement is the same one you make when you lower yourself into a chair.)**

while walking.) Some over-sized loads may be light enough to carry, but can block your vision. In those situations, it’s best to use mechanical help or ask a coworker for a hand.

### Hard-To-Reach Loads

**Overhead loads can be difficult to lift. If you have to lift an object that’s above shoulder-level, use a**

stepstool or ladder to avoid over-reaching. Test the weight of the load before removing it from its shelf. If it’s under 25 pounds or so, slide it toward you, and hug it close to your body as you descend. If possible, hand it down to a waiting coworker.

**Reaching into a bin, container, or other storage area to lift an object makes the standard lift next to impossible. In these situations, stand with feet at shoulder distance apart, slightly bend your knees, and start to squat, bending at your hip joints, not at your waist. (The movement is the same one you make when you lower yourself into a chair.) Slide the load as close to your body as you can and raise yourself using your leg and hip muscles. Tighten your abdominal muscles as you lift, and if possible, rest your knees against the side of the container for additional support.**

### Tips To Remember

Whenever possible, use the standard lift. But, if a load is awkward, use the preceding tips to help you lift it safely. Avoid extending your upper body to lift a load—you’ll not only lose your center of balance, you’ll also risk injuring your back. Finally, use your safety sense—if a load is too awkward or hard-to-reach to lift it safely—get help!

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# THE MECHANICS OF LIFTING

## *How Your Back Works*

You may know that back injuries are the most common type of industrial accident. That's because no matter what our jobs, we are constantly using our backs—to support our bodies, to bend, sit, twist, stand, even to lie down. All of these activities put stress on our backs, but at no time are our backs more vulnerable to injury than when we're lifting. Understanding how your back works while lifting can help you avoid unnecessary strain and potential injury.

### Back Basics


Your back is made up of moveable bones (called vertebrae) and shock-absorbers (called discs) between each vertebra. These structures are supported by ligaments and muscles that help keep the back aligned in three balanced curves. (You know your back is aligned correctly when your ears, shoulders, and hips are in a straight line.) When your back's three curves are not in balance, there is a greater likelihood of both back pain and injury.

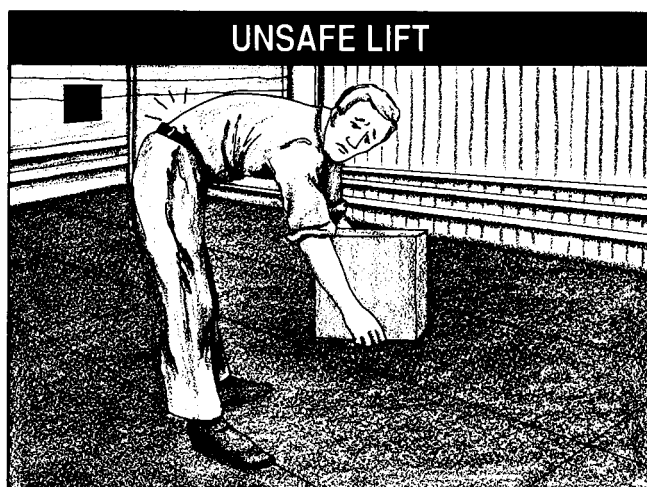
### Lifting Mechanics

When you lift, it's important to keep your back in balance. If you bend at your waist and extend your

upper body to lift an object, you upset your back's alignment and your center of balance. You force your spine to support the weight of your body *and* the weight of the object you're lifting. This situation is called "overload." You can avoid overloading your back by using good lifting techniques. For example, when you bend at the knees and hug the object close to you as you lift, you keep your back in alignment and let the stronger muscles in your thighs do the actual "lifting." You do not have to extend your upper body and are able to maintain your center of balance.

### Safe Lifting

Safe lifting means protecting your back (and yourself!) while you lift. Before you lift anything, think about the lift—Can you lift it alone? Do you need help? Is the load too big or too awkward? When you do lift, be sure to bend at your knees, hug the load close to your body, and raise yourself up with the strong muscles in your thighs. Remember never to twist while lifting—instead, move one foot at a time in the direction where you want to go and then turn with your leg muscles. Above all, safe lifting means keeping your back in balance and avoiding overload. When you know how your back works, it's easier to understand how you can protect it. 



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If you bend at the knees and hug the object close to you, your back stays balanced and the muscles in your legs do the lifting.

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