



## Safe Lifting to Prevent Back Injuries

The lower back is subject to injury when lifting a heavy load, twisting, or sudden movement. These motions can cause muscles or ligaments to stretch or develop microscopic tears. Over time, poor posture or repetitive stress can also lead to muscle strain or other soft tissue problems. To help avoid a lifetime of pain, it is important to keep safe lifting techniques in mind whenever you lift an object.

Every time you lift do so in a conscious manner and focus on the task at hand. Establish a secure grip on the object and *avoid reaching, bending, and twisting motions whenever possible*. If you must bend down to grasp an item from the floor or low shelf, bend at the knees, not at the waist, and follow these important tips.

### **Keep the load as close as possible:**

The further the load is from the center line of your body, the greater the strain that is placed on your back. The pressure on your lower back can be seven to ten times the weight you lift. Get as close to the load as you can. If necessary, squat down to lift the item and pull it between your legs. This gets it closer to the center of your body and helps prevent the need to bend at the waist. Repeated squatting can be very tiring. In addition to lifting the load, you are also lifting most of your body weight. This reduces a person's ability to lift in this manner, so consider using mechanical aids for repetitive lifting tasks.

### **Avoid picking up heavy objects placed below your knees or above your shoulders:**

When storing items on shelves or workbenches, place heavy objects above knee level but below shoulder level to avoid having to squat down or reach for the item. If you suspect the load is too heavy to be lifted comfortably, be sure to ask for assistance, use a mechanical aid, or break the load down into its lighter parts.

### **Keep your back straight and maintain the natural arch in your lower back:**

Don't bend at the waist when reaching to lift an object. Keep the natural arch in your lower back when lifting. This helps to distribute the load evenly over the surface of spinal disks and is less likely to cause the disks to be pinched, possibly resulting in an injury. Bending from the hips, rather than the waist, is also acceptable if you can maintain the arch in your back.

**Tighten your stomach muscles:**

Tightening your stomach muscles for most tasks is a good way to develop core strength. This technique also helps prevent your spine from twisting when lifting. Suppose you lift a load and need to place it off to one side. Keep your stomach muscles tight and turn your body completely by moving your feet. After repeated lifts, you may forget to move your feet and start to twist from your waist, which can contribute to serious injuries. You can overcome the tendency to twist if you place the load at least one step away from where it is lifted. If you wear a back support belt, wear it low on your trunk, and remember to loosen the belt when you are not lifting.

**Stay in good physical condition:**

A pot belly or excess weight puts extra strain on your lower back, especially when lifting a load and bending at the waist. A protruding stomach adds weight to the load and keeps the object away from the center line of the body. The farther away the load is from your center, the more pressure and strain on your lower back.

**Stretch and loosen up before work:**

It is important to take a few minutes to stretch and warm up before embarking on early morning manual handling tasks. Research has shown that trunk flexibility and mobility are significantly lower in the morning than later in the day. Cold, stiff muscles can result in increased and more severe back injuries during the morning hours. Just as athletes warm up before a game or event, take time to warm up when you start your workday.

For more information on back injury prevention, please consult the Director of Loss Control for the Comp Alliance, Robert Blaisdell at [rblaisdell@wrightinsurance.com](mailto:rblaisdell@wrightinsurance.com). Also, view the Safety Source video on safe lifting (SS1015DE).