

Back Injuries and Lifting

The Mayo Clinic estimates approximately 80% of all Americans will suffer lower back pain over the course of their lifetime. There is a multitude of ways you can injure your back in the workplace including heavy lifting, static body positioning, bending, twisting, pushing, pulling, and reaching in awkward areas. Back injuries can be easily aggravated and produce ongoing symptoms that sometimes plague us for a lifetime. Identifying the hazards associated with lifting items, potential sources of back injuries, and the procedures to avoid back injuries will ensure your safety in the workplace.

Back injury risk factors

Back injury risk factors can be divided into two categories: Controllable and uncontrollable. Uncontrollable factors include age, sex, spinal defects, or degenerative spinal disease (e.g., osteoporosis or arthritis). Controllable factors include body positioning and mechanics, physical health, weight, and stress levels. By monitoring and addressing the controllable factors, you will effectively be able to prevent potential back injuries.

Did you know?

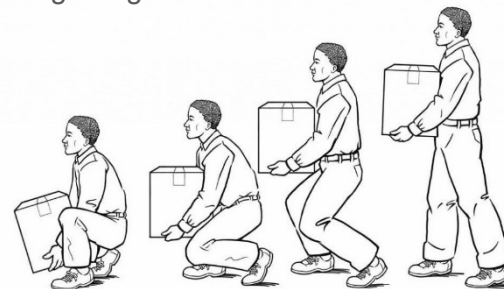
Back belts, in theory, are intended to reduce the forces on the spine, increase intra-abdominal pressure, stiffen the spine, and reduce loads during lifting. However, there is no scientific evidence proving they are beneficial. Using a back belt often gives people a false sense of strength, leading them to believe they can lift heavier objects, often resulting in a higher chance of a back injury. It's important that you know your limits and do not rely on a back belt to support your back while lifting objects.



Tips for preventing back injuries

If your job requires you to move heavy materials, tools, and other items, you should first consider what material handling equipment could be used to avoid lifting (e.g., dollies, carts, or pallet jacks). As a general guideline, do not lift items weighing more than 50 pounds or are unsure can be lifted safely without help from a coworker or equipment. If you must lift or carry heavy items, follow these tips below to keep yourself safe:

- ❑ **Keep a wide base** of support. Your feet should be shoulder-width apart, with one foot slightly ahead of the other (karate stance).
- ❑ **Squat down**, bending at your hips and knees only. If needed, put one knee on the floor and your other knee in front of you bent at a right angle.



- ❑ **Maintain good posture.** Look straight ahead, and keep your back straight, chest out, and shoulders back. This helps keep your upper back straight while having a slight arch in your lower back.
- ❑ **Slowly lift** the object by straightening your hips and knees, **not** your back. Keep your back straight, and **do not twist** as you lift.
- ❑ **Hold** the object close to your body, at the level of your belly button.
- ❑ **Use your feet** to change direction, taking small steps.
- ❑ **Lead with your hips** as you change direction. Keep your shoulders in line with your hips as you move.
- ❑ **Set down** the object carefully, squatting with the knees and hips only.

Learn More: Visit the Occupational Safety and Health Administration's (OSHA) [website](#) for more information and complete the [Back Injury and Lifting training](#) course.

Report all injuries [online](#) or call 847.491.5582.

For Additional Information

Contact Environmental Health & Safety at ehs@northwestern.edu

Do you or your team have a safety story you'd like to share? Contact Environmental Health and Safety for details.