



Back Injury Prevention Safety Training Program



Goal

This program provides facts about back pain and ways to prevent it.

Objective

The objective of this program is to inform employees about ways to protect their backs using proper body mechanics, lifestyle changes, and lifting techniques.

Introduction

A strong back allows people to perform daily tasks with relative ease. Unfortunately, the back is not resilient. Activities such as heavy lifting, repetitive movements, and sitting at a desk all day can take a toll on the back. Once the back is injured, it is never as strong as it was before. Prevention is the key to protecting the back from injury.

Body Mechanics

Body mechanics is a term used to describe the

ways people move as they go about their daily lives. Learning proper body mechanics – the right way to move and position the body for different activities – can prevent injuries.

The natural position (or neutral position) of the back is an “S” curve. Learning to maintain a straight line from the midline of the ears to the shoulders, down to the hips, and through the knees and ankles keeps the back in its natural position. Think of good posture as a plumb line from the ears to the knees: stand tall, pull in the stomach, and tighten the buttocks to maintain the back’s natural “S” curve. The goal is to keep the back in its neutral position throughout the day and night, whether standing, sitting, sleeping, reaching, pulling, or pushing.

Employees who sit

For employees who spend a large part of their day sitting, extra weight is placed on the spine. Slouching places even more pressure on the

back. Here are some ways to lessen the force on the back while sitting:

- **Use adjustable chairs.**
Provide employees with chairs that offer adequate lumbar support, adjusts to their height, and promotes hip and pelvis alignment.
- **Provide adjustable work surfaces.**
Adjustable workstations prevent over-reaching, increase blood flow, and release pressure on the back.
- **Take frequent micro-breaks.**
Short, frequent breaks about every 20-30 minutes allow employees time to stretch their muscles and relieve stress on the back.



Employees who stand

For employees whose jobs require long periods of standing, placing one foot then another on a footrest can prevent a swayback condition and take the stress off of the back. Alternate feet frequently and adjust the work surface height to keep from bending or slumping while working.

Arranging work areas and storage rooms

When arranging a work area or the company storage room, consider each object carefully to avoid reaching overhead or bending. Consider how often the object is used and its weight. The best lifting zone is between the shoulders and waist. Place heavy and frequently used objects near waist level to reduce bending and twisting when reaching for the object. Place lighter objects higher or lower. Use dollies or carts to move heavy objects rather than carrying them.

Pushing versus pulling

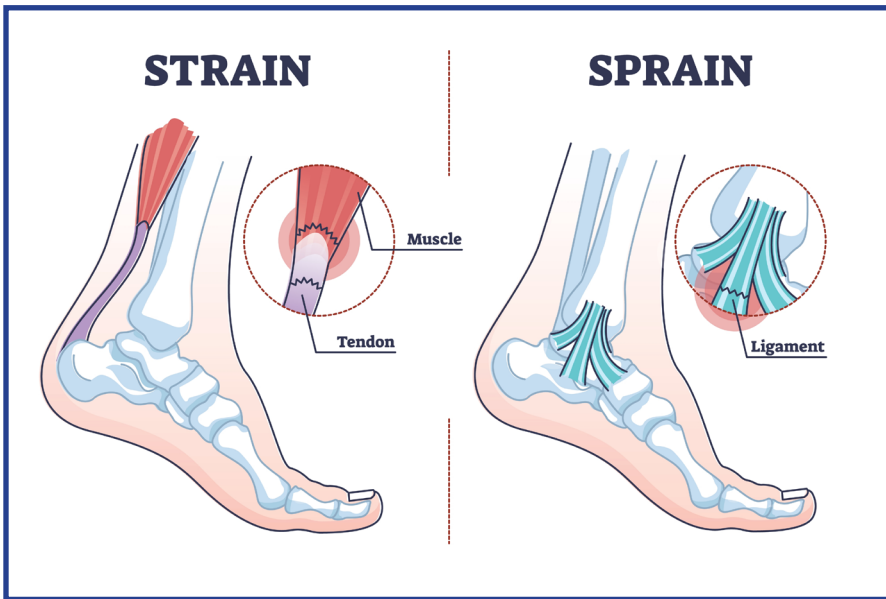
Pushing an object is better for the back than pulling it. Pushing allows employees to see over the load and use their legs instead of their backs. When pushing, keep the object as close as possible to provide more control and direction.

Sprains and Strains

Sprains and strains both mean something has stretched beyond its limits. The symptoms of sprains and strains are sudden and sharp pain at the injury site, often followed by swelling or bruising. But sprains and strains are not the same things.

A sprain is an injury to a ligament. Ligaments are bands of fibrous tissue that connect bones to bones at joints. Sprains usually happen when a person falls, twists, or is hit in a way that forces the body out of its normal position. A sprained ankle is a common example of a ligament injury. Common causes of sprains are twisting or pivoting suddenly or falling and landing incorrectly.

A strain is an injury to a muscle or a tendon. Tendons are the fibrous tissue that connects



muscles to bones. In a workplace setting, strains are often caused by heavy lifting, doing the same motions repeatedly or sitting in an awkward position for long periods.

Regular exercise can strengthen muscles and allow them to work harder and longer to prevent injury, which is important since muscles are the spine's workhorses. Tips for preventing sprains and strains include:

- **Stay in shape.**
Being overweight, inactive, or in poor physical condition makes injury more likely.
- **Warm up.**
Stretch before lifting or performing any intense physical activity.
- **Alternate tasks.**
Chronic overuse of a joint can lead to pulled ligaments, chronic inflammation, or irritation of a muscle tendon.

Lift Properly

According to the [Bureau of Labor Statistics](#), back injuries account for one of every five workplace injuries. Eighty percent of these

injuries occur to the lower back. Fortunately, many of these injuries are preventable with these proper lifting techniques:

- **Size up the load.**
Check to ensure the load is stable and balanced. Test the weight by moving it with a foot. If it does not move, ask for help or use a cart, dolly, or another moving device.
- **Plan the job.**
Consider all possibilities. Is the path clear? What is the weight of the load? How much stress will it place on the back? Is there traffic, a tripping hazard, a doorway, or a stairway? Avoid carrying an object that requires two hands to hold on a flight of stairs. Use the elevator. Plan a rest stop, if needed.
- **Establish a base of support.**
Use a wide, balanced stance. Keep feet firm and shoulder-width apart. This stance provides stability and helps to secure the load.
- **Lift with the legs, not the back.**
Bend the knees, keep the heels off of the floor, and get as close to the object as possible when preparing to lift. Slowly stand using the strength in the legs. (Never bend forward at the waist with the legs straight when lifting, which places strain on the lower back muscles.)
- **Get a good grip.**
Use the palms to get an adequate hold on the object so no adjustments to the grip are needed later. Use gloves to help maintain a good grip, but keep in mind that gloves can de-sensitize the fingers making it hard to feel the object.

- **Lift gradually.**

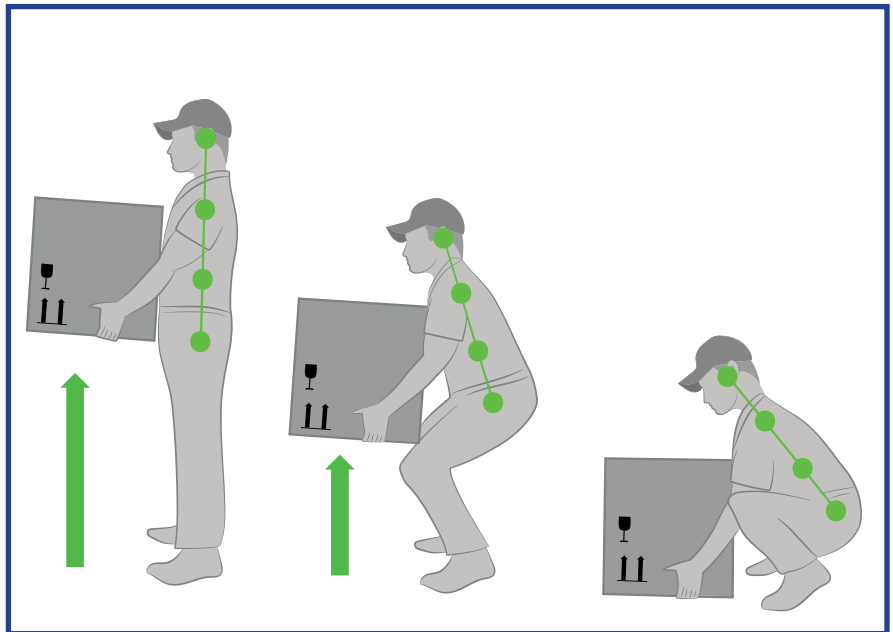
Lift slowly without using jerky motions. Fast, jerky motions put stress on the lower back muscles and increase the chances of sprains and strains.

- **Keep the load close.**

Carry the load close to prevent the lower back from arching. Keep the stomach muscles tight and the head and shoulders up. The closer the load remains to the spine the less force is placed on the back.

- **Pivot with the feet.**

Never twist when lifting or lowering the object. Move the feet in the direction of the lift. This eliminates the need to rotate at the waist.



- **Try something different.**

Welcome new recipes, new sports, meditation, or low-impact aerobics. Trying something new is a great way for employees to expand and improve their fitness routines.

- **Get 6-8 hours of sleep.**

Sleeping is important to maintain physical and mental health. Most people need between 6-8 hours of sleep per day. Even while asleep, injuries to the back can occur unless good back posture is maintained. To sleep properly:

- **Use a firm mattress.**

[Research](#) suggests that sleeping on a firm mattress promotes proper spinal alignment and quality sleep. Inserting a sheet of plywood between the mattress and box springs can provide additional support.

- **Avoid sleeping on your stomach.**

Sleeping on the stomach can cause the back to sway.

Healthy Lifestyle

Some simple lifestyle changes can also help protect the back from injury. Maintaining a healthy weight, eating a balanced diet, making time for regular exercise, and getting adequate sleep can help strengthen and care for the back.

Encourage employees to be realistic when attempting to change their lifestyles. Small changes over time are better than none. Examples include:

- **Commit to daily walking.**

Consider walking around the block daily as opposed to running five miles.

- **Decrease food portions.**

Cutting down on food portions rather than going on a liquid or strict diet will provide better long-term results.

- **Use pillows to align the body.**
Side sleepers who use a pillow between their legs or back sleepers who place a pillow under their knees help preserve the natural “S” curve of the spine. This helps eliminate back stress and pain.

Summary

Lifting cannot be avoided, but it is important to know the body’s limitations and the proper techniques to protect the back against strains and sprains. The best way to prevent back injuries is to use good body mechanics while standing, sitting, pushing, pulling, and sleeping. Lifestyle changes such as healthy eating and regular exercise can strengthen and protect the back. Avoid common lifting mistakes and use proper lifting techniques.



Review

1. Body mechanics is the proper way to move and position the body for different activities to prevent injuries.
 - a. True
 - b. False
2. When storing objects, store the heaviest objects on the top shelf.
 - a. True
 - b. False
3. It is important to sleep on a firm mattress.
 - a. True
 - b. False
4. Sitting in the correct posture increases the weight on the spine more than standing.
 - a. True
 - b. False
5. The back is resilient and repairs itself quickly.
 - a. True
 - b. False

Answers
1. True; 2. False (Store heavy objects near waist height.); 3. True; 4. True; 5. False (Once injured, the back will never be as strong.)



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