# **BODY MECHANICS AND ERGONOMICS**

## Safety Meeting Topic



## · · · A Big Problem

Did you know that in the United States, the #1 workplace injury type is over-exertion injuries? These are issues like sprains, strains, poor lifting, and other types of injuries caused by overexertion. Can you believe that?! Out of all the potential ways to get hurt, the most common is also one of the most preventable! Today, we'll look at preventing these injuries by recognizing risk factors and focusing on early intervention.

## What are musculoskeletal injuries?

Musculoskeletal injury (MSI) is a broad term that's used to describe injuries involving the following:

- Muscles
- Nerves
- Blood Vessels
- Spinal Discs
- Tendons
- Bursa
- Joints
- Ligaments

### ••• The Bad News

Studies have shown that, unfortunately, the vast majority of injuries from lifting, pushing, pulling, repetitive motion, and other movements are caused by unsafe acts. This includes:

- Using poor body mechanics such as lifting with the back rather than the knees
- Overexertion such as lifting heavy objects alone rather than using equipment or asking for help
- Doing the same motion repetitively, putting the same strain on the body over and over

### ••• The Good News - MSI's are Preventable

Luckily, these injuries are highly preventable. Here are some tips you can follow that will help keep you in good shape:

- Listen to your body! There are no awards for weight-lifting at work. If an object feels too heavy, it probably is.
- This is awkward.... Are you lifting an awkwardly shaped object? Maybe it's something big or just difficult and unbalanced to carry. Use a cart or dolly for these objects, even if they aren't heavy. Awkward loads often cause uncomfortable positioning, which leads to injury.
- Pushing vs. pulling: Pushing is almost always better than pulling because it is less work for the muscles and allows for better visibility.
- No sudden movements: The initial force to move a load requires the most effort. Use gradual effort to start and stop, whether carrying or pushing/pulling.

REMEMBER, WORK SMARTER RATHER THAN HARDER!

### Better Body Mechanics

Clearly, proper body mechanics are critical. But what counts as good body mechanics?

- Plan ahead: It may seem tedious to plan how you will move materials, but this alone can help save you years of back pain. Find the most straight-forward way and the safest route before you start.
- Position your feet to create a strong base
- Contract your abdominal muscles and hinge at the knees and hips rather than bending the back
- Get a firm and comfortable grip
- Left to a good height and keep your back tall
- Walk carefully through a well-planned path
- Let the load down smoothly, slowly, and with controlled motion. Then position the object.



## ••• Early Intervention

If you want to reduce your chance of injury, you need to recognize the warning signs your body gives you. Early intervention means that when you notice signs and symptoms of early injury, you take steps to give your body a break, a stretch, and the care it needs. Early signs and symptoms include:

- Muscle fatigue and discomfort
- Tingling or numbness in the hands and fingers
- Swelling or inflammation in the joints
- Muscle stiffness or weakness
- Range of motion loss
- Discomfort when making certain movements

### Follow-Up Questions

- 1. What is the #1 workplace injury in the United States?
- 2. Are musculoskeletal injuries preventable?
- 3. How can you reduce your chances of an MSI in your day-to-day work?