

# BACK INJURY PREVENTION TIPS

## SAFETY TOOL BOX TALK

### **GET AS CLOSE TO THE LOAD AS POSSIBLE**

The further the load is from the center line of your body, the greater the strain imposed on your back. If need be, squat down to lift the load 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.

### **AVOID PICKING UP HEAVY OBJECTS PLACED BELOW YOUR KNEES**

Try to see that heavy objects are placed and stored above knee level and below shoulder level. If you suspect the load is too heavy to be lifted comfortably, do not chance it. The most common cause of back injury is overloading.

### **KEEP YOUR BACK STRAIGHT**

This means don't bend at the waist when reaching to lift an object. Keep the natural arch in your lower back, which distributes the load evenly over the surface of spinal disks, and is less stressful than if the disk is pinched between vertebrae.

### **GLUE YOUR HAND TO YOUR THIGH**

If you carry a load in one hand, such as when carrying a tool box, place your free hand on the outside of your thigh and mentally "glue" it into position. This will help you maintain correct back alignment rather than lifting and tilting to one side. When carrying a heavy load, side bending can be just as stressful to the spine as bending forward.

### **TIGHTEN YOUR STOMACH MUSCLES**

This technique helps prevent your spine from twisting. If you lift a load and need to place it off to one side, turn by moving your feet. After repeated lifts you might find yourself getting a bit sloppy and forgetting to move your feet. You can overcome this tendency if the place you set the load down is at least one step away from where it is lifted.

### **STAY IN GOOD PHYSICAL CONDITION**

A protruding stomach is an extra load carried away from the center line of the body, and prevents you from keeping a lifted object close-the number one rule for back care. When you bend at the waist to lift, due to the leverage principal, the load is up to 10 times heavier than its actual weight. A "pot belly" puts extra, stressful weight on the spine.

### **STRETCH AND LOOSEN UP BEFORE WORK**

Research has shown that trunk flexibility and mobility is significantly lower in the morning than later in the day, increasing the number and severity of back strains at this time. A few minutes of

stretching can warm up cold stiff muscles and tendons and help you avoid an injury. All professional athletes know this-"industrial athletes" should too!

### **MIXER MAN**

The mixer man should have all his bag goods as close as possible to the mixer so he doesn't have to carry the things around and keep the level of the bags you're lifting between your shoulders and your knuckles if they are hanging at your side. When the stack gets low have the forklift driver to put the pallet on a stack of empty pallets to bring the level up.

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# LIFT IT TWICE

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Most of you have heard the general rules of safe lifting. Remember to get a firm grip on the load, keep it close, bend at the knees, use your legs to lift the load, and keep your spine in the natural position (with an arch in your lower back). These principles always apply and should be incorporated into every lift - if possible! Given the enormous number of risky lifting situations that you are faced with at your place of work, you may not be able to apply these principles every time. This is why you must always remember to LIFT IT TWICE! What?!

The act of lifting is the same as any other movement that you can learn to do better with practice. As you know, the more you practice a skill the better you become at doing it. But preparing to master a skill normally involves mental as well as physical training. Consider bowling, golf, skiing or sharpshooting. You think carefully about the movements you're going to make before you do them. This is the only way to get them right - at least until they become second nature. Most of you know the proper way to physically lift an item, but how many of you are aware that you need to lift the item TWICE?

1. Your first lift is a mental lift. Think about the lift prior to actually doing it:

- How am I going to lift the item? Can I do it myself or should I get some help?
- How heavy is the item? Do I need to use mechanical assistance?
- Where am I taking the item being lifted? Is it a difficult path or a distance to go?
- What hazards may hamper the lift or obstruct the travel path?
- Eliminate those hazards before you lift the item.

2. The second lift is the actual physical lift. Here is where you carry out your plan.

- Use proper body mechanics and techniques while going through the motions.
- Most important: keep the load as close to your body as possible.

Next time someone tells you to lift twice remember: Two lifts means less risk of a back strain.

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# WHAT IS YOUR BACK IQ?

## SAFETY TOOL BOX TALK

**Q:** What's the most important lifting rule to remember?

**A:** Keep The Load Close!

**Q:** If you don't hold a load close to your body, how much heavier is the "experienced" weight than the actual weight?

**A:** Ten times as heavy! The back operates as a simple lever, with the fulcrum in the lower back. Back muscles serve as the power arm; the load being lifted is the weight arm, and a 10-1 lever ratio exists in the lower back. The further away you hold the load, the "heavier" it is.

**Q:** Why never twist with a load?

**A:** Lumbar (lower back) vertebrae, disks and joints are under the most vertical pressure when lifting a load. Twisting with a load creates a "shearing" effect on these tissues.

**Q:** Which muscles are most important for keeping the spine in its strong S-shaped curve?

**A:** Abdominal muscles, which work in cooperation with back muscles to support your spine. The trouble is, abdominals tend to weaken over time. It helps to tighten them during a heavy lift, but more importantly, keep them in good shape.

**Q:** How can stress in your life effect back pain?

**A:** Whether you're aware of it or not, emotional stress can tighten muscles. Often, fatigued back muscles are the most effected and the first to feel it.

**Q:** What time of the day are back strains most likely to happen?

**A:** In the morning, or at the beginning of a work shift, when muscles aren't "warmed up." Trends also show an increase following the lunch hour, perhaps because blood circulation is in the stomach, instead of the large muscles, and because people may be sleepy and inattentive then.

**Q:** How does keeping flexible help prevent back and muscle strains?

**A:** Muscles tend to shorten when not used to their full capacity. Flexible muscles are less likely to be strained and injured than "tight" muscles, when sudden or heavy power is required. Pre-work stretching programs have been very successful in preventing back and muscle strains.

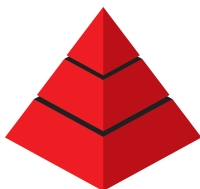
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# BACK TO THE BASICS

## SAFETY TOOL BOX TALK

You stand a far better chance of remaining fit and pain-free if you'll stick with the basics in lifting and handling materials. Many painful injuries happen to construction workers because they forget several basic manual material handling suggestions.

Here are a few pointers about lifting and handling:

- First, think of your tender toes, in case something heavy drops. Always keep those toes of yours under protective steel cover; wear safety shoes.
- Think of your hands. Wear good tough gloves when you handle anything rough, sharp or splintery.
- Before you heave-ho, be sure you've got a secure grip and solid footing.
- Keep the load close to your body, to minimize the strain. Lift smoothly - don't jerk as you lift.
- See that fingers and toes stay in the clear when lifting and handling.
- Don't twist your body when carrying a load; pivot with your feet instead of your spine.
- When a load is too heavy or awkward to handle alone, be quick to ask for help.
- Plan your path of execution and make sure it is free of debris and obstacles.
- Push rather than pull.
- Use equipment (dollies, carts, two-wheelers, hydraulic/electrical hoists or lifts) to move loads whenever possible.
- Make sure work levels are at waist height when standing and elbow height when sitting whenever possible.
- If you have to work in one position for a long period of time, take stretching breaks.

Play it safe and smart. Stick with the basics in all of your lifting and handling of materials and equipment.



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