

APPENDIX X: TRAINING GUIDE - SAFE LIFTING/BACK INJURY PREVENTION

Effective dissemination of safety information is an integral part of the Injury and Illness Prevention Program. This document was created to facilitate worker safety training. Training must be completed before the use of any tool or piece of equipment, exposure to any hazardous conditions, and/or when new hazards are identified.

In Preparation for this meeting (items needed):

- Training Documentation Form
- Prepare to demonstrate proper lifting techniques.
- Consider the lifts workers must complete. Be prepared to review lifts requiring two workers or mechanical lifting devices.
- Prepare to demonstrate stretches that employees should perform to prepare for and compensate for work they have to do.

Introduction

Many lifting injuries can be prevented by reducing the weight and number of lifts as much as possible, and by learning how to use appropriate lifting techniques when it is necessary to lift and carry objects.

Use forklifts, hoists, carts, dollies, and other types of lifting equipment when you have to lift or move heavy or bulky objects. If you must lift or move objects by hand, use of proper lifting techniques can save you a great deal of discomfort.

Before lifting an object, assess the situation by asking yourself the following questions:

- Can you lift this load safely, or is it a two-person lift?
- How far will you have to carry the load?
- Is the path clear of clutter, cords, slippery areas, overhangs, stairs, curbs and uneven surfaces?
- Will you encounter closed doors that need to be opened?
- Once the load is lifted, will it block your view?
- Can the load be broken down into smaller parts?
- Would gloves improve your grip or protect your hands?

Size up the load

- Test the weight by lifting one of the corners. If it is too heavy or is shaped awkwardly, stop.
- Consider asking for help from fellow workers, or break down the load into smaller parts.
- Try to use a mechanical lift or a hand truck.

Discussion Topic: What objects do you often carry at your workplace? Can these objects be carried in a safer manner?

The Art of Lifting

There is really no “right way” to lift. However, there are more and less demanding ways to lift. The key to working safely is to figure out how to lift in the least demanding way possible when you have to move materials or tools. Here are some guidelines to reduce your risk exposure when lifting:



Keep It Close and Keep the Curves! The closer a load is kept to your power zone, the easier it is to keep the natural curves of your back. When the spine is in its natural curves, the vertebra, discs, ligaments and muscles are in their strongest and most supportive position.



Staggered Stance: Lifting with the feet close together and in line with each other makes it more difficult for you to use your legs to help with the lift. Staggering your stance encourages the legs to become involved and reduces the demands on your back. Simply stepping toward a load (with a staggered stance) moves the center of gravity closer to the load and minimizes the demands of the lift. If you feel your weight shifting forward onto your forward leg, you have successfully transferred this weight demand from your back to your stronger legs.

Build a Bridge: In most cases, the demands of any lift are determined by the position of the lifter’s upper body during the lift. Many people lift by bending over at the waist, leaving their upper body hanging like a “one-sided bridge”. This places all the demands of the lift onto the lower back. This load can be reduced by “building a bridge” to support the weight of the upper body. To do this, place an arm on your leg or a nearby stationary object. If you need both of your arms to manage the object you are lifting, step forward toward the load with one leg and create a “bridge” with your legs to reduce the workload on your back.



Feet First: Moving your feet first gets you closer to the load and reduces the amount you have to reach. The farther you reach, the more you have to lift your upper body as well as the load. Turning with your feet first (pivoting) also helps reduce the risk of twisting while you lift.

Discussion Topic: Ask for volunteers to demonstrate the concepts of “Keep it Close and Keep the Curves”, “Staggered Stance”, “Build a Bridge”, and “Feet First”.

Prepare and Compensate

Lifting and carrying loads can be hard work. Like athletes, workers can avoid injuries or discomfort by preparing the body for work. Muscles generate more force when warm and full of oxygen. Stretching and moving around prior to work helps pump blood into your muscles. Blood warms up muscles and brings in oxygen, allowing your muscles “to breathe”. This can be particularly effective at the beginning of the workday and after breaks.



Compensating for work demands simply means letting the body recover from work in an efficient manner. Performing periodic stretches can minimize accumulation of fatigue throughout the day. Stretches can “apologize” to the body for working it so hard.

Discussion

- Do you prepare and compensate before and after lifting and carrying heavy loads? Demonstrate some simple stretches that can help the employees prepare and compensate before and after a lift.

Use Mechanical Lifting Devices Whenever Possible

The best way to avoid a back injury is to reduce the number of lifts you have to do as much as possible. Hand trucks, pushcarts and forklifts are great engineering controls that reduce your exposure to lifting hazards. If you use a forklift, make sure you have training and are authorized to operate one.

Using hand trucks and pushcarts

- Push rather than pull. It is easier and safer to push than to pull. You can use your body weight to assist when pushing.
- Use powered carts when available.
- Keep close and lock your arms. Stay close to the load, try not to lean over and keep the curves of your back when pushing or pulling.
- Use both hands. Carts are easier to push and control using both hands.
- Use tie-downs, if necessary, to secure the load.

Discussion

- What devices are available to you in your workplace to reduce your exposure to lifting hazards? Are these devices enough or is there a need for additional devices?

Key Takeaway Points

- Evaluate the lifts you must do and determine if they can be safely done alone. If not, ask for help or get a mechanical lifting device.
- Remember there is no “right” or “wrong” way to lift. There are less or more demanding ways.
- Follow these four guidelines to reduce the demands of the lifts you must complete:
 - Keep it close and keep the curves
 - Staggered stance
 - Build a bridge
 - Feet first
- When using carts, push rather than pull whenever possible. Use both hands and stay close to the load.