

## **BACK INJURY PREVENTION EMPLOYEE TRAINING**

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation. Featured are:

**INTRODUCTION:** A brief description of the program and the subject that it addresses.

**PROGRAM OUTLINE:** Summarizes the program content. If the program outline is discussed before the video is presented, the entire program will be more meaningful and successful.

**PREPARING FOR AND CONDUCTING THE PRESENTATION:** These sections will help you set up the training environment, help you relate the program to site-specific incidents, and provide program objectives for focusing your presentation.

**REVIEW QUESTIONS AND ANSWERS:** Questions may be copied and given to participants to document how well they understood the information that was presented. Answers to the review questions are provided separately.

**ATTENDANCE RECORD:** Document the date of your presentation as well as identify the program participants. The attendance record may be copied as needed.

### **INTRODUCTION**

No matter what type of work you do, you or one of your co-workers will suffer from back pain at some point. In fact, backache is second only to the common cold as the leading cause of lost workdays in the U.S. While it may seem that back injuries are inevitable, there are several things you can do to prevent them or ease their discomfort.

This video demonstrates exercises and safe lifting procedures that will help viewers to avoid painful back injuries. Topics include workplace ergonomics, posture, lift preparation, special lifting precautions and how to respond to back pain.

### ***PROGRAM OUTLINE***

#### **BACKGROUND**

- Backaches and back injuries cost Americans roughly \$30 billion each year in lost wages and productivity.
- More than 14 million Americans aged 30 to 55 years old suffer from back pain. About 6 million must see a physician as a result.
- The back is a complicated structure and we depend on it to do a huge amount of work every day.

#### **STRUCTURE OF THE BACK**

- The back consists of vertebrae, muscles, ligaments, nerve roots and the spinal column itself. All of these components need to be properly aligned and flexible in order to work in harmony.
- The spinal column is actually a series of individual bones that are stacked like blocks with discs in between.
- This column of vertebrae must not only bear the weight of your body, but also must be able to stretch and twist in any direction.
- Most of us not only fail to keep our backs in good condition, but we also abuse our backs and force them to do things that they weren't designed to do.

#### **THE IMPORTANCE OF EXERCISE**

- Back experts agree that one of the best ways to avoid and treat back pain is to exercise. A daily routine of simple exercises such as crunches and stretching will keep your back and the rest of your body flexible, strong and well-conditioned.

- Doctors recommend a program of regular exercise that combines aerobics, flexibility and strength exercises at least three times a week.
- Exercising your back, neck and shoulders is easy, regardless of your occupation. Check with your physician before starting any exercise program.
- Stop any exercise that causes pain or discomfort. If the discomfort is excessive or long lasting, see your doctor.

### **ERGONOMICS**

- Ergonomics is the science of matching the equipment to the job. If you work at a computer, you can improve your work station ergonomics.
- Choose a firm back chair that offers support to the lumbar area of the spine. When a properly designed support cushion is placed between the chair and your lower back, it helps to maintain correct posture.
- Sit straight without slouching and make sure you do not have to stretch forward to reach the keys or read the screen.
- Your chair and keyboard should be positioned so that your thighs and forearms are level or sloping slightly down away from the body. The wrists should be straight and level, not bent far down or way back.

### **FLEXIBILITY EXERCISES**

Exercise 1: Stand erect. Turn your head slowly as far as possible to the right. Return to the normal center position and relax. Turn your head slowly as far as possible to the left. Return to normal center position and relax.

Exercise 2: Stand erect. Try to touch your chin to your chest slowly. Raise your head backwards slowly, looking up at the ceiling.

Exercise 3: Stand erect. Try to touch your left ear to your left shoulder. Return to the normal center position and relax. Try to touch your right ear to your right shoulder. Return to normal center position and relax. Keep your shoulders level; do not bring them up to your ear.

Exercise 4: Stand erect. Raise both shoulders backward as far as possible and hold. Then relax.

Exercise 5: While sitting in your chair, bend forward and if you are able touch your hands to the floor.

Exercise 6: Grasp your leg at the chin and slowly pull it up to your chest. Repeat this with the other leg. If you have knee pain, place your hands behind your thighs and slowly pull.

Exercise 7: Sit up straight, place your hands behind your head and move your elbows backwards to pinch your shoulder blades together.

Exercise 8: Stretch your arms behind your back.

Exercise 9: Interlace your fingers with your palms facing away from you body. Straighten your arms and lift them toward the ceiling.

Exercise 10: Stand upright, place your hands on your hips and bend backwards. Do this six times. Arching your back this way will help reduce lower back pain.

### **POSTURE**

- When walking, stand straight and don't slouch.
- Don't tuck the telephone between your shoulder and ear in order to type and talk on the phone at the same time. This is very aggravating for your neck, shoulders and arms.

- When driving, use a firm seat with a padded pillow or special seat support. Sit close to the wheel with your knees bent.
- On long trips, stop every hour or two and walk to relieve tension and relax your muscles.
- Try to avoid fatigue caused by work that requires long periods of standing. Flex your hips and knees by placing a foot on a stool or bench.
- If you're working in a stooped position for prolonged periods, interrupt your posture on a regular basis by standing upright and doing the arched back exercise.

### **PREPARING TO LIFT**

- Try to avoid lifting loads that are below your knees or above your shoulder height. If you have to reach up to grasp the load, use a step or bench.
- Avoid bending over to lift heavy objects. This places strain on low back muscles.
- Sudden, jerky movements while lifting are very bad for your back. If you have a job that requires heavy or repetitive lifting, you can wear a special back support device.
- When preparing to lift, wear clothing and footwear suitable for the job. If you wear high heels, change into more suitable footwear such as training or walking shoes.
- Wear protective clothing and footwear if you are carrying materials that could be dangerous if spilled or dropped.
- Clear the work area of obstructions and anything that may cause you to slip, such as grease, water or other fluids.
- Make sure you have a clear path to your destination and that your vision won't be blocked by the load you are carrying.
- Check the load for nails or anything else that could injure you. If there is an information panel on the load, it may tell you the weight of the load and its contents.
- Move the load around to check that you have the capacity to lift it. If you have any doubts about your ability to lift an object, get help.

### **PROPER LIFTING TECHNIQUES**

- Lifting and handling loads correctly requires good balance and avoiding unnecessary bending, twisting or reaching. Think of the whole operation, not just the lift. Where are you heading? What will happen to the load when you reach your destination?
- Make sure the load is balanced and even. Bring the load as close to your body as possible before you lift.
- Separate your feet and put one foot slightly in front of the other. This achieves balance and a stable base while allowing for even distribution of weight.
- Bend your knees to a comfortable degree. Get a secure grip on the load with your whole hand, if possible.
- Use your legs to lift the load. Lift the load straight up slowly. Avoid fast, jerky movements.
- Pull the load close into your body.
- Setting the load down is just as important as picking it up. Using your legs and back muscles, comfortably lower the load by bending your knees.
- Never lift or carry a load above your head or at the side of your body. Don't twist your body while carrying a load.

- Some items by design encourage poor lifting techniques. Remember to approach every lift in the same way, regardless of the shape and appearance of the load.

### **TEAM LIFTING**

- Team lifting can be used to reduce the risk of back injury. Make sure there are enough people for the job.
- The team members should have similar physical capacity and height, and they must know their responsibilities during the lift.
- Appoint a team leader who is familiar with team lifting. Coordinate and carefully plan the lift.
- The team must be trained in team lifting and should rehearse the lift. They should also know what to do in case of an emergency.

### **MECHANICAL LIFTING DEVICES**

- Mechanical lifting devices such as hand trucks and pallet trucks are designed to make lifting and moving objects easier. They also help you avoid back injuries, so use them whenever possible.
- When using a hand truck, make sure the load is secured correctly. Also make sure your arms are fully extended and that your path is clear.
- Pallet trucks are designed to move stacked goods on pallets only. Always pull the pallet truck so that it trails behind you and allows for a clear line of vision.

### **SPECIAL PRECAUTIONS**

- Factors such as size, stability, surface texture and temperature can affect the difficulty of the lift. Also some loads require special tools or have special straps or grips for grasping. You need to take these factors into account when planning to move a load.
- Other hazards include chemicals, sharp edges and shifting contents. Be sure you know what you are moving and have the correct protective clothing and equipment.
- Climate, lighting, amount of space, floor surfaces, housekeeping and debris are also important factors. Slippery surfaces are dangerous and good lighting is necessary.
- Your capacity to lift is affected by size, sex, disability, age, level of physical fitness and other factors. The key is to work within your limitations and get help if needed.

### **RESPONDING TO BACK PAIN**

- Going to bed for long periods of time to cure a backache won't help. Regardless of how much pain you are in, it is important to get moving and use correct posture and body movement.
- Check with a doctor if you have any doubt. Most people that suffer from back pain will recover completely without surgical treatment.
- Contact your physician immediately if back pain is accompanied by leg numbness or weakness, if pain lasts for more than three or four days, if you have fever or chills or if a recent fall or accident has brought on back pain.
- Remember the more you use your legs, the less you use your back. If you have any questions, don't hesitate to ask your supervisor.

## **PREPARE FOR THE SAFETY MEETING OR TRAINING SESSION**

Review each section of this Leader's Guide as well as the videotape. Here are a few suggestions for using the program:

Make everyone aware of the importance the company places on health and safety and how each person must be an active member of the safety team.

Introduce the videotape program. Play the videotape without interruption. Review the program content by presenting the information in the program outline.

Copy the review questions included in this Leader's Guide and ask each participant to complete them.

Copy the attendance record as needed and have each participant sign the form. Maintain the attendance record and each participant's test paper as written documentation of the training performed.

### **Here are some suggestions for preparing your videotape equipment and the room or area you use:**

Check the room or area for quietness, adequate ventilation and temperature, lighting and unobstructed access.

Check the seating arrangement and the audiovisual equipment to ensure that all participants will be able to see and hear the videotape program.

Place or secure extension cords to prevent them from becoming a tripping hazard.

## **CONDUCTING THE PRESENTATION**

Begin the meeting by welcoming the participants. Introduce yourself and give each person the opportunity to become acquainted if there are new people joining the training session.

Explain that the primary purpose of the program is show viewers how they can prevent painful back injuries.

Introduce the videotape program. Play the videotape without interruption. Review the program content by presenting the information in the program outline.

Lead discussions about job tasks at your facility that may involve back pain and what employees can do to prevent spinal injuries. Use the review questions to check how well the program participants understood the information.

After watching the videotape program, the viewer will be able to explain the following:

- Various exercises that can ease discomfort and strengthen the back;
- How to lift properly as well as prepare for the lift;
- Posture and ergonomics as they relate to back pain;
- How team lifting and mechanical lifting devices can assist with heavy objects.

**BACK INJURY PREVENTION EMPLOYEE TRAINING**  
**REVIEW QUESTIONS**

Name \_\_\_\_\_ Date \_\_\_\_\_

*The following questions are provided to check how well you understand the information presented during this program.*

1. Backaches are the second leading cause of lost workdays in the U.S.
  - a. true
  - b. false
  
2. \_\_\_\_\_ is the science of matching work equipment to the job.
  - a. Economics
  - b. Ergonomics
  - c. Physical Therapy
  - d. Lumbar Flexion
  
3. It is not as important to set a load down correctly as it is to lift it correctly.
  - a. true
  - b. false
  
4. Which of the following affects your ability to lift a load safely?
  - a. the size of the load
  - b. your level of physical fitness
  - c. lighting in the work area
  - d. all of the above
  
5. Resting in bed for long periods of time is effective in curing a recurring backache.
  - a. true
  - b. false
  
6. How can you determine if a load is within your lifting capacity?
  - a. refer to the information panel on the load if available
  - b. move the load around to see how heavy it is
  - c. attempt to lift the load to check the strain on our back
  - d. both a and b
  - e. both a and c
  
7. More than 90% of people that suffer from back pain will recover completely without surgical treatment.
  - a. true
  - b. false

***ANSWERS TO THE REVIEW QUESTIONS***

1. a

2. b

3. b

4. d

5. b

6. d

7. a