

WSN ERGONOMIC SAFETY TALK #2

Back Care and Lifting

What is a safety talk?

This safety talk is one of a series of brief meetings held on regular basis with workers and their supervisors to discuss problems and concerns about health and safety. All safety talks involve an informal presentation on a specific subject to the group by a person chosen to lead the session, followed by a discussion of the topic, how it fits into your workplace and what it means to the people who work there.

This document consists of the information with which the person who's delivering the safety talk needs to be familiar, followed by a Presentation Guide which can be used during the actual safety talk.

Background information

Why back care matters

Back pain is a major cause of lost workdays and represents (on average) nearly a quarter of lost-time injuries and half of all compensation costs, both long-term and short-term.

Your back is not like other tools that you can replace when they're damaged. Once you have injured your back, it will affect both your work life and your home life. Prevention of back pain costs much less than the treatment of back pain and can have a major impact on the general quality of life of many workers.

There are 33 vertebrae in your back that are separated by discs and held together by ligaments. The back has many different muscles to hold all the vertebrae together. Three curves make up your back – cervical (neck), thoracic (mid-back) and lumbar (lower back)). Unless you are standing in a natural position, with your ears, shoulders and hips all aligned, your spine is under some type of stress.

Almost everyone has suffered back pain at some time. Common causes include but are not limited to sitting improperly, heavy lifting, falls, motor vehicle incidents and whole body vibration. To understand how often the back is used, just think that every time you bend, your back lifts approximately 70% of your body weight even when you aren't lifting anything.

If you don't set up and maintain a regular exercise program, with some emphasis on back and abdominal strengthening and stabilization, the wear and tear can worsen and cause back problems even earlier. Without a regular exercise program, a simple activity such as reaching for the phone can trigger a back problem.

Research indicates that workers are much less likely to suffer an injury if they have been trained to recognize high-risk tasks and have the knowledge necessary to modify the task or ask for the task to be modified. This is why a Musculoskeletal Disorder Prevention Program (Ergonomic Program) is so important.

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Lifting safely

Here are some important tips regarding lifting:

1. Start by assessing the shape and size of the load. If you think you will be unable to do it on your own, ask for help. (A two-person lift is preferable for weight distribution and manoeuvring capabilities.)
2. Make sure the load is free or loose and able to be moved.
3. Check the travel route to make sure it is free of obstacles, debris and any slip or trip hazards.
4. Keep the load close to your body.
5. Do not twist while handling the load, as this will place extreme strain on your back.
6. Make sure you have firm footing, a wide stance, good grip and keep your arms straight.
7. Bend your knees as much as possible. If the load is large, you may have to stand slightly over it to start the lift.
8. Tighten your abdominal muscles and try to tuck your chin into your chest.
9. Initiate the lift with your body weight and lift with your legs, as they are a larger and stronger muscle group.
10. If you are unable to use a smooth and slow lifting approach, use momentum to help bring the load closer to your body.

General advice about lifting

1. If tools are required to help with the lift, make sure they are in good working order before you use them.
2. Use proper-fitting and appropriate hand protection whenever possible.
3. Do not use a tight grip when lifting, as this causes more stress and fatigue in your wrist and forearm muscles and tendons.

Specific lifting advice

1. For small compact loads: Bend with your knees, keep your back straight and lift with your legs.
2. For large loads: Maintain the natural curve in your spine as much as possible, stick your behind out and tighten your abdominal muscles. This will enhance the natural curve in your lower back and keep your back muscles strong.
3. For a two-person lift: Make sure there is clear communication and coordination between you and the other lifter. It's a good idea to simulate the lift before attempting the task.

Hazards when lifting

There are many hazards that need to be considered when lifting.

General hazards:

- Type of material being lifted
- Environmental conditions
- Posture and technique
- Individual characteristics

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Material hazards:

- Weight
- Shape
- Size
- Surface irregularities
- Absent or inappropriate handles

Postural hazards:

- Imbalance
- Repetition
- Duration
- Poor posture
- Poor movement
- Distance

Individual hazards:

- General health, including age
- Height
- Size
- Flexibility
- Strength
- Weight
- Pre-existing musculoskeletal problems or injuries
- Motivation
- Stress

General ergonomic concerns

It is important to remember that it is not necessarily the weight of the load that causes the injuries, but rather the frequency and duration of handling. If the load is heavy, the frequency and duration of the lift will have to decrease. The human body is made for a variety of tasks, so it's important to have variety in the tasks you do to prevent repetitive stress and keep your body active and flexible.

After you have been sitting or stooping for a long period of time you should not lift immediately, as this puts a great deal of stress on your back muscles, ligaments and tendons. It is recommended that you stand straight for a couple minutes to allow the natural curve in your back to realign. It is also important to make sure you prepare for lifting by warming up your muscles.

Pre-shift stretching

When beginning an on-site stretching program, some key points need to be followed:

1. Keep the stretches simple and make sure they are well designed so that they don't cause harm to workers.
2. Workers with existing muscle, ligament or tendon injuries should not perform the stretches without first discussing them with their health care provider.
3. Remember to instruct workers to breathe when they are stretching.
4. All workers need to be well instructed on how to perform the stretch properly.

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5. It is best if a leader is appointed (usually part of the management team) to lead the stretches.
6. There is evidence to show that more frequent short stretching breaks (2-3 minutes in length) are better than one long one (10-15 minutes).

Some Basic Back Stretches

Upper back & side stretch

(also helps stretch your arms, hands, fingers and shoulders)

Sit or stand tall with your back straight (do not arch your back). Make sure your abdominal muscles are tight and tucked in. Interlace your fingers and your arms over your head, keeping the elbows straight. Extend your arms as far back as you can. To stretch your sides, slowly lean to the left and then to the right.

Middle & upper back stretch

Extend your left arm in front of your body. Place your right hand underneath your left elbow and pull toward your body. Keep the left arm extended.

Standing back bends

Place your hands in the small of your back and slowly bend backwards until you feel a gentle stretch in your trunk. Remember that stretching should not cause any pain.

Middle back stretch

Stand with your hands on your hips, keeping a slight bend in your knees. Gently twist your torso at the waist until the stretch is felt.

Hamstrings stretch

Stand behind a chair, hold the back of it with both hands, or place both hands on the front of wall. Bend forward from the hips, keeping the back straight at all times – do not make a 'hump' with any part of your back or shoulders at any time. When the upper body is parallel to floor, hold this position.

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Presentation guide

Why back care matters

- Back pain accounts for nearly a quarter of lost-time injuries and half of all compensation costs (both long-term and short-term).
- Your back is not like other tools that you can replace when they're damaged. Once you have injured your back, it will affect both your work life and your home life.
- Prevention of back pain costs much less than the treatment of back pain, and can have a major impact on the general quality of life of many workers.
- Unless you are standing in a natural position, with your ears, shoulders and hips all aligned, your spine is under some type of stress.
- Almost everyone has suffered back pain at some time. Common causes include but are not limited to sitting improperly, heavy lifting, falls, motor vehicle incidents and whole body vibration.
- To understand how often the back is used, just think that every time you bend, your back lifts approximately 70% of your body weight even when you aren't lifting anything.
- If you don't set up and maintain a regular exercise program, with some emphasis on back and abdominal strengthening and stabilization, the wear and tear can worsen and cause back problems even earlier.
- Workers are much less likely to suffer an injury if they have been trained to recognize high-risk tasks and have the knowledge necessary to modify the task or ask for the task to be modified. This is why a Musculoskeletal Disorder Prevention Program (Ergonomic Program) is so important.

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- Pre-existing musculoskeletal problems or injuries
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