

# WSN ERGONOMIC SAFETY TALK #3

## Gloves

### **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 worry about hands?**

There are 27 bones in each hand and wrist. Most of the muscles that operate the hand are in the forearm. Blood vessels and nerves pass through a small tunnel at the base of your hand that's known as the "carpal tunnel". When injuries happen to the hand, the thumb and pointer finger are the most commonly injured fingers. That's why wearing the proper type and size of glove is important.

### **Gloves**

Many workers still don't wear gloves. This may be because they don't fully understand the importance of hand and arm protection, or because the gloves are uncomfortable when working. This is where ergonomics comes in. Gloves must fit well and allow for comfortable finger and wrist movement. If gloves are uncomfortable to wear, it is usually because they don't fit properly. Comfortable gloves will help ensure that the worker makes a conscious effort to wear them.

Properly fitting gloves are important not only for comfort but for safety. Poorly fitting gloves increase the amount of force required by the muscles because they have to work harder to compensate for the loose or tight glove. Tight gloves can cause pressure on the hands, limit your dexterity and increase perspiration, leading to fatigue and related injuries. Loose gloves reduce your grip strength, impair your dexterity and productivity and can create other safety hazards, such as if they slip off your hands while you're working. The "one-size-fits all" approach to gloves doesn't work when you're dealing with a physically diverse work force.

Gloves are just as important as any other piece of personal protective equipment. Gloves with grips can help prevent repetitive-type injuries such as tendonitis by requiring less force from the fingers to do the task. Arm-hand vibration is another factor that needs to be considered when selecting the proper style of glove. Some gloves are made specifically for reducing the effects of vibration on the hands and arms.

The most common gloves worn in forestry work are the heavy, thick work-type gloves. Commonly used for piling lumber on the boardway. Veneer mills have had thinner leather gloves used by operators splicing and handling veneer. These protect the worker from splinters during the handling of veneer while allowing for good grip. Various

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types of gloves for different tasks are an important consideration. With a high percentage of women in the veneer/plywood workforce, it has been important to ensure the appropriate size and type of glove for their unique needs.

Wearing the right type of glove everyday will protect you. Companies sometimes choose lower-quality gloves to cut costs. But in the end this may cost them more money, as the lower-quality gloves often don't offer the same level of protection and are made of less durable materials.

Companies can ensure that everyone has the appropriate glove for the work they do by making a list of departments in operation, then breaking down the tasks done by these departments and determining the correct type of glove to be worn for each task.

For example, in a veneer operation the worker who is handling the veneer may need fingerless-type gloves, while a maintenance worker in the same department needs an entirely different type of glove. Even within the maintenance department there will be variations depending on the task. For example, handling saws would require a different type of glove than welding.

### **How to select a glove:**

When selecting a type of glove, here are some key questions to ask:

- How often will the task or tasks be done, and for how long?
- What degree of dexterity will be required?
- What hazards will the worker be exposed to while doing the work? (For example, factors such as temperature, chemicals being handled, overall resistance, and whether a cuff is needed.)
- If the worker is using a tool, what type of surface does it have? (For example, a slippery surface requires a textured glove so that you can maintain a good grip.)

To make sure the glove you choose is a proper fit:

- Extend your hand out flat.
- Measure your hand with a tailor's tape. Measure around the hand just below the knuckles and fingers, but above the thumb.
- Measure your dominant hand, as it is generally a bit larger.

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### Presentation guide

#### General Information

- Gloves provide arm and hand protection. Many workers don't wear gloves because they're uncomfortable to wear or use when working.
- Poorly fitting gloves increase the amount of force required from the forearms and hands.
- Tight fitting gloves can cause pressure on the hands, limit dexterity and increase perspiration, leading to fatigue and related injuries.
- Loose-fitting gloves reduce grip strength, impair dexterity and productivity and can cause other safety hazards (they can slip off your hands while you're working).
- Wearing proper fitting gloves everyday will protect you. If the gloves fit properly, wearing them will become second nature.
- The work force is becoming more diverse, with more women working in the forestry sector. Companies need to ensure that the proper size of glove is selected for these workers. One size does not fit all workers.
- Gloves can prevent repetitive-type injuries such as tendonitis by requiring less force from the fingers to do the task.
- If the task involves arm-hand vibration, this must also be considered when purchasing the glove. Some gloves are designed to reduce the effects of arm-hand vibration.

#### Common Gloves

- The most commonly-worn gloves in forestry are the heavy, thick work-types gloves. These are most commonly seen for piling lumber on the boardway.
- Veneer mills have thinner leather gloves used by operators for splicing and handling veneer. These types of gloves protect the worker from slivers during the handling of veneer while allowing for good grip.
- There are various types of gloves on the market and it's important that the proper glove is chosen for the type of work.

#### Quality and Type

- Companies sometimes choose lower-quality gloves to cut costs. But this may cost them more money in the end, as the lower-quality gloves often don't offer the same level of protection and are made of less durable materials.
- To determine the type of glove needed in a department, a simple job task analysis can be performed. By determining the type of jobs and tasks performed, the proper glove can be chosen.
  - Veneer workers may need fingerless-type gloves.
  - Maintenance workers may need two or three different types depending on the job being done (i.e. handling saws versus welding).

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- What hazards will the worker be exposed to while doing the work? (For example, factors such as temperature, chemicals being handled, overall resistance, and whether a cuff is needed.)
- If the worker is using a tool, what type of surface does it have? (For example, a slippery surface requires a textured glove so that you can maintain a good grip.)

To make sure the glove you choose is a proper fit:

- Extend your hand out flat.
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- Measure your dominant hand, as it is generally a bit larger.

Each glove manufacturer's sizes may be slightly different, but here is a general outline for the sizing of gloves:

<b>Women's sizes</b>			<b>Men's Sizes</b>	
	<i>inches</i>	<i>cm</i>	<i>inches</i>	<i>cm</i>
<b>X-small</b>	6	15		
<b>Small</b>	6½	17	7	18
<b>Medium</b>	7	18	7½ - 8	20
<b>Large</b>	7½	19	9½ - 10	25
<b>X-large</b>	8	20	10½ - 11	30

# WSN ERGONOMIC SAFETY TALK #1

## Gloves

### 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.

#### Lifting safely

Important tips about lifting:

1. Start by assessing the shape and size of the load. If you think you will be unable to lift it on your own, ask for help.
2. Make sure the load is free or loose and able to be moved.
3. Check the travel route to make sure it's 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.

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General advice about lifting:

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

Specific lifting advice:

- For small compact loads: Bend with your knees, keep your back straight and lift with your legs.
- 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.
- 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

General hazards:

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

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

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- Pre-existing musculoskeletal problems or injuries
- Motivation
- Stress

It's important to remember that it isn't necessarily the weight of the load that causes the injuries, but rather the frequency and duration of handling.

### **Pre-shift stretching**

- Workers with existing muscle or tendon injuries should not perform the stretches without first discussing them with their health care provider.
- Remember to breathe when you're stretching.
- More frequent short stretching breaks (2-3 minutes in length) are better than one long one (10-15 minutes).

#### 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.