

ERGONOMIC SAFETY TALK #5:

Safety Boots

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 feet?

There are 26 bones in each foot. The foot and ankle have the important function of supporting your entire body weight and providing leverage when you're walking. Feet should always be treated with care; even a minor injury can cause extreme pain, injury or lost time on a job. That's why it's extremely important to ensure that you wear proper-fitting safety footwear. It can protect you from rolling objects, punctures, chemicals, slips, twisted ankles and electric shock.

If you have ever had back, leg or foot pain, or have come home from work and are glad to put your feet up, you may be wearing footwear that doesn't fit right. Improperly fitted footwear can cause you to work slowly, make mistakes and eventually injure yourself. That's why it's important to deal with any foot discomfort as soon as it arises.

When addressing ergonomic issues in the workplace, we look at ensuring that workstations, tools and jobs suit the worker. If the workstation poses ergonomic problems for the worker, then the concerns are addressed. If your footwear doesn't fit you correctly, that's an ergonomic problem that needs to be dealt with.

How to get the proper fit

Proper fit is important. Making sure you have the correct type of boot – and that you're wearing it correctly – is just as important. If you are wearing boots that are 6 to 8 inches high, make sure you lace the boot up all the way in order to support the ankle joint. Sprained ankles are often seen when the worker does not lace the boot up fully. Dangling laces and open tongues on footwear can also be a safety hazard, which is another reason your footwear should be laced all the way up.

Footwear's anti-static (or static dissipative) qualities, which reduce the accumulation of static electricity and the chance of igniting flammable material, can be altered or rendered ineffective when insoles are added. It's important to ensure that you are not changing the safety qualities of your footwear when an insole is required. It's also important that you bring along any insoles, orthotic supports and the types of sock you are planning to wear when trying on footwear, as these will change the way the footwear fits your feet. It's also a good idea to try on footwear towards the end of the day, when your feet are swollen. Remember that the toe cap of safety footwear will not stretch.

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Wear and Maintenance

Proper maintenance of safety boots helps to extend their life and the protection they provide you. When there are signs of wear, the protection level will diminish. Heels and soles that are worn out may not provide proper traction and increase the risk of a slip and fall. Footwear with worn-out uppers will not provide the same support to ankles as newer footwear. In the case of an incident, worn-out toecaps may not provide the same level of protection. It's important to regularly inspect your footwear for signs of wear and tear, keeping in mind the type of work you are doing. *Replace footwear as needed.*



Buying Tips

The first priority is to make sure you are purchasing the proper type of protection for the work you do. If you have any questions, ask an experienced sales clerk. Check the footwear for the proper CSA tags (see below). Always try on the footwear before you purchase it. Don't pay too much attention to the designated size of the boots – each piece of footwear will fit slightly different. If you have one foot that is slightly larger than the other, it's important to base the comfort and size on the larger foot. Do not buy shoes that will change the shape of your foot. Make sure they are comfortable and yet provide all the necessary safety features.

Footwear should fit so that your toes are about 1.25 cm (a half-inch) from the front of the protective cap when you are standing with the footwear fully laced. The toe cap should allow for your toes to move around. Pain and fatigue often occur when your shoes are too narrow or shallow. Boots should fit snugly around the ankle and foot, but they should also be comfortable. Your heels should not slip up and down the back, as this will decrease the amount of support, increase instability and may also cause blisters.





Slip-resistant soles (such as Vibram soles) are another important feature because of the increased risk of slips and falls in all forestry sectors depending on the weather and the time of year. These types of soles on work boots have been able to reduce many slip/fall injuries. It's important to research the type of sole your footwear has before you purchase them.

Make sure there is an exchange/return policy when purchasing your footwear. Put them on at home, wear them around and make sure they are truly comfortable, because you will be spending a lot of time in them. If they aren't comfortable, bring them back and either exchange or return them. It's important to have boots that make your feet feel good at the end of the day.

CSA Markings on Safety Footwear		
Marking	Criteria	Use
	Green triangle footwear has sole puncture protection with a Grade 1 protective toe (withstand impact comparable to a 50 lb (22.7 kg) weight dropped from .6 m (2 ft).	Any industrial or heavy work environment, including construction, where sharp objects such as nails are present.
	Yellow triangle footwear has sole puncture protection and Grade 2 protective toe (withstand impact of a	Light industrial work environments that need both puncture and toe protection.

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	50 lb. (22.7 kg) weight from .4 m (1.3 ft).	
	White rectangle with orange Greek letter "omega" footwear has soles that provide resistance to electric shock.	Any industrial environment where contact with live electrical conductors could occur. (REMEMBER: Electric shock resistance is greatly reduced by wet conditions and with wear)
	Yellow Rectangle with green letters "SD" and grounding symbol indicates soles that are static dissipative.	Any industrial environment where a static discharge can be a hazard for workers or equipment.
	Red rectangle with black letter "C" and grounding symbol indicates that are electrically conductive.	For any industrial environment where static discharge may create a hazard for workers of explosion.
	White label with green fir tree symbol indicates chainsaw protective footwear.	For forestry workers and others who work with or around hand-held chainsaws and other cutting tools.
<p>Note: Labels are on the tongue of the right shoe at ankle height. They may also appear at ankle height on the shoe itself (for electrical protection footwear)</p> <p>From: "Z195.1-02 Guideline on Selection, Care and Use of Protective Footwear", Canadian Standards Association, 2002.</p>		

Other ergonomic safety talks and associated resources

OFSWA posts monthly ergonomic safety meeting talks on its website, www.ofswa.on.ca. Further ergonomic resources such as one-page tip sheets on specific ergonomic hazards in forestry, ergonomic best practices from industry and physical demands analysis (PDA) forms for numerous pieces of forestry equipment are available by clicking "Information" and selecting "Ergonomics".

OFSWA also provides a half-day training program, *Ergonomic Injury Prevention*, which includes a detailed ergonomic review of a number of common forest industry occupations. For more information on these products and services, contact OFSWA's Consultant Trainer/Ergonomist at 807-343-1784 or email ergonomics@ofswa.on.ca.

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Presentation guide

General Information

- Foot and ankle have the important function of supporting your entire body and providing leverage when walking
- Minor injuries can cause extreme pain, injury or lost time on a job – it is very important to ensure that you have proper-fitting safety footwear
- Proper footwear can protect you from rolling objects, punctures, chemicals, slips, twisted ankles and electric shock
- Improper footwear can cause you to work slowly, make mistakes and eventually injure yourself. That's why it's important to deal with any foot discomfort as soon as it arises

Proper Fit

- Boots that are 6-8 inches high should be fully laced up to support the ankle joint
- Sprained ankles are often a result of half-laced boots
- It's important to ensure that there are no dangling laces or open tongues, as these are a safety hazard
- Make sure you are not changing the safety features of the footwear when an insole is required. Anti-static (or static dissipative) qualities can be altered or rendered ineffective when insoles are added
- Bring along any insoles, orthotic supports and the type of socks you are planning to wear when trying on footwear, as all of these will change the way the footwear fits your foot
- It is ideal to try on footwear at the end of the day, as your foot will be swollen and you will ensure a proper fit – toe caps of safety footwear will not stretch

Wear and Maintenance

- Footwear generally lasts between 6 months to one year
- If there are signs of wear, the level of protection will diminish – heels and soles that are worn out may not provide the proper traction, increasing the risk of a slip and fall
- Worn-out uppers on footwear will not provide the same amount of support as newer ones
- Worn-out toe caps may not provide the same level of protection if something is dropped or falls on your toes
- It is important to regularly inspect your safety footwear for any wear and tear and replace as needed, bearing in mind the type of work you are doing

Buying Tips

- The first priority is to ensure you are buying the correct footwear for the job you are doing. If there are any questions, ask an experienced salesclerk
- Check for proper CSA tags on the right side of the boot
- Always try on the footwear before you purchase it to ensure comfort
- Do not pay too much attention to the size of the footwear – each piece of footwear will fit slightly different

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- If you know one foot is larger than the other, always buy the footwear that feels most comfortable for the larger foot
- Do not buy footwear that will change the shape of your foot. Make sure they are comfortable and yet provide all the necessary safety features. Poorly fitting footwear (either too narrow or shallow) will cause pain and fatigue
- Boots should fit snugly around the ankle and foot, but they should also be comfortable
- Your heels should not slip up and down as this can cause blisters, decrease the amount of support and increase stability
- There should be a distance from your toes to the front of the protective cap of approximately 1.25 cm (half-inch) when you are standing up and your footwear is properly laced up
- The toe cap should allow for your toes to move around – remember, it will not stretch
- Ensuring work boots have slip-resistant soles are another feature that should be considered. Depending on the season you are working, as well as the weather and ground conditions, this will be very important
- Always try on your footwear at home and wear it around the house to ensure you are comfortable in them – you will be spending a great deal of time in them
- If they are not comfortable, bring them back and either exchange them or return them

It is important to have footwear that makes you feel good at the end of the day!