Foot Protection PPE Compliance Game Plan

6 things to do to prevent foot injuries and OHS violations

***

- **96,000+** foot and ankle injuries resulted in lost workday injuries in the U.S. in 2018 (NIH)
- **1 of every 10** disabling workplace injuries in Canada is a foot injury (Pedorthic Association of Canada)
- **$27,628** is the average final workers comp settlement for a foot injury, including $15,762 in medical costs and $11,866 in indemnity payments (NIH)

Foot injuries are very common and very expensive. Risks are especially high in the mining, transportation/warehouse, utilities and construction sectors. Slips, trips and falls are the most common cause of foot injuries. Common types of foot injury include:

- Crushing;
- Sprains;
- Strains and musculoskeletal disorders;
- Lacerations and abrasions;
- Burns from hot, molten or chemical substances;
- Punctures; and
- Electrical shock.

In addition to preventing most foot injuries, requiring workers to use appropriate footwear and PPE is key to ensuring compliance with OHS regulations. Here's a look at OHS foot protection requirements and a 6-step game plan for complying with them.

Step 1. Perform Foot Injury Hazard Assessment

The first step in the compliance process is to have a qualified person identify and assess potential foot injury hazards at your site. In BC and Yukon, the hazard assessment must be done in consultation with the workplace JHSC or health and safety representative. Operations posing high risk of foot injury include:

- Operation of chainsaws and other power tools;
- Arc welding and other hot work;
- Servicing of electrical equipment;
- Handling of hazardous chemicals and molten substances;
- Heavy lifting;
- Structural firefighting;
- Jobs requiring workers to remain on their feet for prolonged periods; and
- Work on wet and uneven surfaces.

Step 2: Try to Engineer Away Foot Hazards

Canada OHS laws follow the so-called hierarchy of controls approach to managing hazards, at the top of which is total hazard elimination via substitution, engineering and/or work design solutions. **Example:** Eliminating tasks that pose foot hazards or physically eliminating the hazard itself, like installing a physical barrier to shield workers from flying or falling materials that can result in a foot injury. If substitution or engineering controls aren't reasonably practicable, employers must use administrative or work controls to manage the hazard. PPE is the safety measure of last resort.

Step 3: Ensure Workers Have and Use the Required Safety Footwear

Other than metatarsal guards strapped to work shoes to protect the instep area from impact and compression, PPE against foot injury is essentially the shoes workers wear'how they're designed, what they're made of and which safety protections they come with. Examples:

- Safety-toed shoes or boots that protect against falling, crushing or rolling hazards;
- Shoes made of electrically conductive materials to prevent the buildup of static electricity for use work in areas with electrical hazards or potentially explosive atmospheres;
- Steel, aluminum or plastic toe guards protecting the toes from impact and compression hazards;
- Rubber overshoes used for concrete work and areas containing flood risks;
- Shoes with slip-resistant soles are required for use on wet or slippery surfaces;
- Studded treads and overshoes for work on ice or snow-covered walking surfaces; and
- Leggings that protect the lower legs and feet from heat hazards such as molten metal or welding sparks.

Unlike certain other kinds of PPE and protective equipment, employers don't actually have to pay for and provide required safety footwear. Their only obligation under OHS laws is to ensure that employers **have** and properly use the required safety footwear. **Exception:** Employers may have to provide some forms of required protective equipment that's external or affixed to safety footwear, such as toe guards or leggings, at no cost to workers. In Manitoba, employers must also provide workers protective footwear when the worker's feet may be endangered by a hot, corrosive or toxic substance.

Step 4: Ensure Safety Footwear Meets CSA Z195

If safety footwear is necessary to guard against foot injury hazards, you must ensure that the footwear workers use meet the standards specified in the OHS regulations. In most jurisdictions that's some version of CSA Standard Z195, *Protective Footwear.* But there are variations:

Jurisdiction(s)	Required Standard for Safety Footwear
Federal	CSA Z195
Alberta	• CSA Z195-02, or ASTM Standard F2413-05 • Firefighting: CSA Z195-02, NFPA Standard 1971 for Structural Fire Fighting, 2007, or NFPA Standard 1977, Protective Clothing and Equipment for Wildland Fire Fighting, 2005
British Columbia	CSA Z195-M92, ANSI Standard Z41-1991, British Safety Institution (BSI) Standard BS EN 345:1993, or BSI Standard BS EN 346:1993
Manitoba	CSA Z195.1-16, or CSA Z195-14 (R 2019)
New Brunswick	• CSA Z195-14 (R 2019), or alternative standard offering at least equivalent protection • Structural firefighting: NFPA 1974, 1992 edition, or CSA Z195-M92 standard for Grade 1 footwear, with sole puncture protection and electric shock resistant soles
Newfoundland	CSA Z195
Nova Scotia	• Latest version of CSA Z195 • Structural firefighting: Latest version of NFPA 1971, or standard for Grade 1 footwear, with sole puncture protection and electric shock resistant soles in latest version of CSA Z195
Ontario	Not specified
PEI	CSA Z195-14, or alternative standard offering at least equivalent protection
Qu□bec	• CSA-Z195-14 • Use of chainsaw at construction site: CSA Z 195 Class 1, footwear that meets user recommendations, protective gaiters that meet with Part 9 of EN Standard 381-9, ISO Standard 17249, or ISO Standard 20345 that has protective gaiters that meet Part 9 of EN Standard 3819
Saskatchewan	Not specified
NWT/Nunavut	Not specified
Yukon	CSA Z195-02, ii. ANSI Z41, or similar standards acceptable to YWCHSB

Explanation: The CSA Standard sets out:

- Design and performance requirements for safety footwear;
- Test methods for ensuring compliance with the above requirements; and
- Requirements for marking and labelling of safety footwear enabling users to determine which types of safety footwear to use in which circumstances.

Step 5. Ensure Proper Use & Maintenance of Foot

Protection

As employer, you're responsible for ensuring that workers properly use and maintain the foot protection they're required to wear. So, establish clear safety rules and policies requiring that workers, among other things, to:

- Ensure that their safety foot protection is comfortable and fits properly;
- Ensure that foot protection doesn't create any safety hazards, for example, by posing a trip hazard;
- Inspect their safety footwear before each use for cracks, holes, separation of materials, broken buckles or laces, embedded items in the soles that could present trip or electrical hazards (if the embedded item is made of metal);
- Follow manufacturer's recommendations for cleaning and maintenance; and
- Replace any footwear that's defective or so worn out as to render the protection provided ineffective.

Step 6: Train Workers in Foot Protection Rules

Every worker required to use foot protection must, before first use, receive training and instruction from a supervisor or other qualified person covering, at a minimum:

- How the protection works;
- Why the worker has to wear it;
- Any limitations in the protection the equipment provides;
- How to properly use, maintain, inspect and store the equipment; and
- How to carry out the applicable safe work procedures for operations requiring use of the equipment.

Be sure to verify that workers understand and are capable of applying their training and keep written records documenting the training provided, who furnished it and the date and time of training.