

Before you begin

Gather company policies on personal protective equipment (PPE), especially those policies that address foot protection. Make a list of potential hazards in your workplace that could cause foot injuries and any accident reports involving foot injuries. Obtain copies of any foot related injuries (accident reports) that have occurred at your workplace in the past and be prepared to discuss those incidents at the end of this safety talk. Gather examples of approved footwear that must be worn in your company. Be prepared to lead the discussion with employees around the potential for foot injuries in your workplace and the appropriate footwear needed to protect against foot injuries.



Introduction

According to the Bureau of Labor Statistics (BLS) there were over 47,000-foot injuries involving days away from work in 2018. Many foot injuries can be prevented by wearing proper footwear.

The Occupational Safety and Health Administration (OSHA) regulation [1910.136](#) requires protective footwear to be worn when working in areas where there is a danger of foot injuries due to falling or rolling objects, objects piercing the sole, or when exposed to electrical hazards such as static-discharge or electric shock.

Wearing proper footwear may prevent other types of injuries as well. For example, wearing improper footwear can cause or contribute to slip, trip, and fall related injuries. The American Society for Testing and Materials (ASTM) F2412 "Standard Test Methods for Foot Protection" and ASTM F2413, "Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear," cover safety footwear.

Definitions

Impact resistance: protection from direct impact of falling object.

Puncture resistance: a resistant plate positioned between the insole and outsole to prevent puncture.

Slip resistance: rubber soles and tread patterns that provide better grip on wet or oily floors.

Discussion

There are many types of safety footwear available and each is designed to provide protection against specific hazards. Types of footwear may include:

Impact resistance

Hazard: Any work zone that has heavy equipment or where objects may fall or rollover an individual's feet while in the work area.

Footwear: Safety toe shoes/boots and in some cases boots with metatarsal impact protection.

Electrical resistance non-conductive or static dissipative

Hazard: Wherever an individual works with high voltage electrical current, sensitive electronics, or volatile chemicals.

Footwear: There are a variety of electrical rated footwear that can protect against electrical current and static electric charges.

Puncture resistant bottoms

Hazard: Any jobs where sharp objects on the walking or working surface may cause injury to the worker's feet. These objects may be nails in building material or other sharp material.

Footwear: Puncture resistant footwear designed to reduce the possibility of injury caused by sharp objects that can penetrate the bottom assembly of the footwear.

Slip resistance

Hazard: Any work surface subject to accumulation of slippery materials such as oils, water, and other liquids like ice, or highly polished finish. Slips and falls are the second leading cause of workplace injuries in the nation. They are the single most common reason for visits to the emergency room. Slips and falls are the number two cause of accidental death and disability. Seventy percent of slips and falls occur on level ground.

Footwear: Slip resistant shoes/boots designed for the specific conditions in the workplace. No shoe is 100% slip proof. Manufacturers can design a sole to increase slip resistance for many surfaces but not all. When considering a slip resistant safety shoe, contemplate the flooring materials and contaminants you will expose the shoe to and whether the shoe has been tested for the conditions that will be present in your facility.

Conclusion

Foot injuries are one of the most common injuries in the workplace. Many of these injuries can be prevented by wearing the appropriate footwear for the workplace conditions. It is important to understand all the potential hazards in your workplace and select footwear designed to provide protection from those hazards.

Use this opportunity to review your company's policy on PPE and specifically foot protection. Review any foot related injury reports from the past. Discuss how the accident occurred and how it could have been prevented, including proper footwear. Have samples of available footwear used in your facility on display to be used for the group activity below.

Group activity

Gather examples of all the various types of protective footwear that may be used throughout your facility. Ask each person in the group to identify a potential hazard within your operation that could cause a foot injury and then select the appropriate footwear for that hazard from the display and explain why and how it provides protection from the hazard.

Resources

[NIOSH, Personal Protective Equipment Information \(PPE-Info\)](#)

[EHS Safety News America, OSHA & ASTM Protective Footwear Requirements](#)

[Occupational Health & Safety Magazine, A Guide to Safety Footwear Regulations](#)