

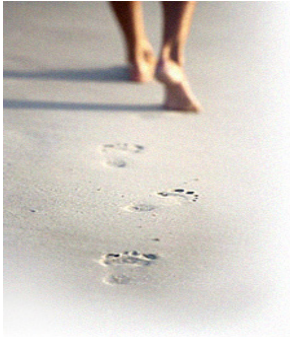


Safety Systems Hawaii, Inc.

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Website Safety Topic

Foot Protection – The Forgotten Safety Issue



Over the weekend, Tom went to the beach. It was a wonderful day, and he enjoyed his excursion without a thought to his new construction job starting on Monday. While at the beach, Tom slipped a little and stubbed his toe on a rock. Not thinking much of the incident, Tom continued enjoying the sun, sand and surf.

Monday arrives, and Tom is getting ready to put on his steel-toe boots. However, he notices a bit of discomfort as his ingrown toenail had been aggravated by bumping the rock at the beach. It caused his big toe to swell up a bit. Tom ignores it and pushes his foot into the boot then rushes off to beat the traffic.

Many people view foot problems as unimportant and do not think of how a “sore foot” can actually affect the whole day as well as safety on the job. Two major categories of work-related foot injuries make up for 35 percent of all foot related issues at work. Easily recognized are injuries from punctures, crushing, sprains and lacerations. Also recognized are slips, trips and falls which do not always result in a foot injury, but it is the lax attention paid to foot safety that plays a very high role in their occurrences.

Corns, calluses, fungal infections, blisters, sweaty or tired feet, even ingrown toenails, all play part in health and safety at the workplace. Although none of these are even considered as occupational injuries, they can and do affect a worker’s performance. Discomfort, pain and fatigue cause distraction for everyone, and a worker who is experiencing pain from an ingrown toenail will be less alert; more likely to act unsafely, potentially causing an accident.

Common Foot Problems

Although Tom did bump his toe at the beach, the real issue was the ingrown toenail. By getting bumped, this caused the toenail to split a little under the skin. Not knowing this, Tom continued with his weekend and then prepared for his new job on Monday. But that cracked, ingrown toenail had gotten a bit infected during the elapsed time, and started to swell up.

Tom’s first mistake was not checking on his toenail. Most people know the discomfort of an ingrown toenail, which in extreme cases must be seen by a doctor to cut or even remove the toenail.

Other common foot problems can cause discomfort or pain for many people...

- Blisters, caused by poorly fitted footwear.
- Calluses and Corns rubbing against footwear.
- Rheumatism and arthritis.
- Malformations of toes, scrunched toes.
- Fallen arches (flat feet).
- Athlete’s foot or other fungal infections.



There are no solid statistics on these kinds of foot problems. Surveys and non-scientific polls suggest that two out of every three workers suffer from some form of foot problem. These workers range from blue collar to white collar, and even include people in the entertainment and sports industries.



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How the Job Contributes



Foot problems happen on and off the job. Still, there is no denying that some work-related factors can contribute to a chronic situation. Anyone working as a cashier can tell you that standing for long periods of time causes them to tire quickly and makes their feet sore. The human foot, designed for movement and mobility, gets highly fatigued by keeping an upright stance for long periods, day after day. This can lead to permanent damage, causing the joints in the foot to become misaligned. Fallen arches are commonplace in people who stand all day. They also find out they suffer rheumatism and arthritis later in life.

Flooring also contributes to foot fatigue, especially on tender feet. Hard floors like concrete are the most uncomfortable surfaces to work on. When the human foot steps onto a hard floor, it has the impact similar to the pounding of a hammer on the heel. Plus, slick surfaces are well known hazards for slips and falls, which can lead to sprained ankles or broken feet.

Common foot injuries at the workplace also include...

- Crushed or broken feet which get caught between objects or cracks. Can also result from fallen objects and moving vehicles.
- Punctures caused by loose nails, sharp objects and broken glass.
- Cuts and lacerations, or even severed toes by unguarded machinery.
- Burns from heat or chemicals.
- Electrical shock from static electricity or an electrical source.



Solutions to the Problems

First, everyone must understand that there is no place where people are immune to foot injury. Tom found that out firsthand when he stubbed his toe at the beach. However, recognizing an injury for what it is, be it work-related or otherwise, is the first step to avoiding further or even worse foot problems.

Employers can help by reducing the relevant hazards at the workplace. Where employees stand for elongated periods, place anti-fatigue mats to help cushion the feet from the hard flooring. Encouraging workers to move around also helps with tired feet. Feet are made for mobility, so movement actually helps the foot to stretch and contract in a natural way. Footrests are also helpful, allowing the standing worker to shift weight from one leg to another. It also helps to reduce stress on the lower legs. Allowing an employee to “stand at will” is most favorable. Provide the use of a raised chair so employees may sit and rest their feet while they work.



Specialty floor mats also helps to remove other hazards. Anti-slip mats, when installed properly, drastically reduce the chances of a fall. However workers may complain of their feet burning and feeling sore. This is caused by the non-slip properties of the matting. A worker's shoes may suddenly grab onto the mat, making that person's feet slide around within the shoe. The friction of this movement results in heat which can lead to sweaty feet and other problems. Encourage the use of insoles, especially non-slip, resilient insoles. These can also help with arch support, and medicated insoles help to alleviate fungal infections.



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A Bit More Personal, Shoes and Footwear



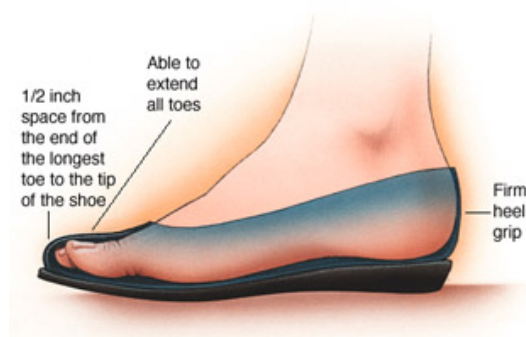
Footwear is perhaps the most important issue in helping to avoid fatigue or injury. Not only is it key for comfort, but it also affects a person's overall well-being. Ill-fitted or improper footwear can cause serious blisters as well as affect existing problems. Fashion sometimes sways a person's better judgment when it comes to what they wear on their feet. The bank teller who stands for a good portion of her day may be wearing high-heeled shoes; which will put pressure on the ball of her foot and the toes. Fatigue is almost always a result. The mail man may be more interested in the latest high-top sneaker with no arch support, which if worn consistently for a long period of time will contribute to tension and soreness—or even flat footedness and other chronic problems.

Employers cannot always dictate to someone what to do or how to wear their footgear, especially away from the workplace. What an employer *can* do is help educate their employees, making them aware how feet play an important role in their everyday lives – on and off the job. Formulate a training program related to the job, show examples of good and bad practices and what to do in case of an accident. Discuss options for existing situations to find solutions and always involve the employee. And finally, advice employees on proper foot protection as well as the key points in choosing the best footwear for the situation.

What is the Right Shoe for the Job?

When looking for good footwear, always try on your choices. Pay close attention to the following...

- The inner side of the shoe must be straight from the heel to the end of the big toe.
- When the foot is inserted, the heel must be gripped firmly by the shoe, not loose.
- The end of the shoe must have room for toe movement.
- Fastenings across the instep to prevent the foot from slipping while walking. This will help alleviate blistering and heat from friction.
- Look for a low, wide-based heel; flat shoes are highly suggested.
- Do not expect tight-fitting shoes to stretch with wear. Most materials used in shoe manufacture today do not stretch.
- Have both feet measured as they usually are slightly different and buy shoes to fit the larger foot.
- Buy shoes in the late afternoon when feet are more likely to be swollen to their maximum size.
- Lots of walking, running, or even standing on hard floors can be harsh on your feet even with good shoe soles. Consider using shock-absorbing insoles and look for shoes which will allow for this.



Protective footwear may be required for specific jobs. Employers and employees should keep in mind that any Personal Protective Equipment is designed to minimize exposure to potential occupational hazards, not to get rid of them entirely. Proper fit, use and care of protective footwear do help to reduce the instances of foot injury, but is not the cure-all to every situation. Some things to consider about protective footwear include...



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- Steel toe caps should cover the entire length of the toes, from their tips to beyond the natural bend of the foot. A soft pad covering the edge of the toecap helps with comfort. If the toecap cuts into the foot, either the size or the style of the footwear is incorrect.
- Soles should be chosen according to hazard types and flooring for the workplace they will be used in. There are many choices in thickness and materials to choose from throughout the market.
- The uppers of any foot gear should take into account the hazards of the workplace and the worker's foot itself.
- Steel mid-soles help to protect the footwear from penetration by sharp objects. However, it should be flexible enough to allow the ability of the foot to bend while moving.

It All Starts with Care

Footwear is indeed important, but will not solve any problems that already exist. Everyone can benefit from some simple steps in hygiene...

- Wash feet daily with soap and water, and dry them thoroughly. Pay particular attention to between the toes.
- Trim toenails straight across, but not too short. Do not trim the corners as that could lead to ingrown toenails.
- Wear clean socks or stockings every day. If feet sweat, try to change your socks at least one time during the day.
- Select footwear that "breathes". Leather and canvas uppers are the best, not synthetic materials.

If an existing problem persists and will not go away, always consult a doctor. Extreme cases of athlete's foot could lead to cracking and further infections. Corns and calluses left untreated will result in bunions and possible surgery. Ingrown toenails can create infections and extreme pain, as Tom is finding out.

On his first day of work, Tom was required to attend some safety training. Part of that training included Foot Fatigue Awareness. This triggered a train of thought, and Tom realized he may want to take a closer look at his bumped toe and that festering ingrown toenail. We may never know if Tom's awareness avoided a serious accident – but we do know he saw his doctor that afternoon and had his foot treated. He also bought some insoles for his boots, and makes it a point to change his socks every day at lunchtime.



Sources:

U.S. Department of Labor, OSHA regulations, 29 CFR
1910.136 - Occupational Foot Protection;
<http://www.osha.gov>
Patti Glick, RN, "The Footnurse";
<http://www.footnurse.com>
University of Wisconsin-Milwaukee, Environmental Health,
Safety & Risk Management;
<http://www.uwm.edu>
Andrew Mitchell, *Foot Safety Basics: A 10-Point Checklist*,
Occupational Hazards "Safety Zone";
<http://www.occupationalhazards.com>

Notes:

1. Tom is a fictional character used to demonstrate one of many possible scenarios experienced by workers across the country. In no way is the character intentionally based on any real person or situation. Any similarities to persons alive or deceased are purely coincidental.
2. This paper is **not** intended to substitute for professional medical advice given by a licensed physician. Always discuss any medical concerns with your doctor(s) before taking any action.

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