









# YOUR FEET, WORK SHOES, ERGONOMICS







### **OSHA REQUIREMENTS**

### General requirements: 29 CFR 1910.136(a)

• The employer shall ensure



that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.

### **OSHA REQUIREMENTS**

### <u>1910.132</u> - Personal Protective Equipment

### • 1910.132(h)(2)

The employer is not required to pay for non-specialty safety-toe protective footwear (including steel-toe shoes or steel-toe boots) and non-specialty prescription safety eyewear, provided that the employer permits su



provided that the employer permits such items to be worn off the job-site.

### **FOOTWEAR TESTING STANDARDS**

# Protective footwear must meet the requirements of:

- <u>ANSI Z41-1999</u>, "American National Standard for Personal Protection -- Protective Footwear"
- <u>ASTM F-2412-2005</u>, "Standard Test Methods for Foot Protection"
- <u>ASTM F-2413-2005</u>, "Standard Specification for Performance Requirements for Protective Footwear"

### ergonomics (ur-go-NOM-ix):

### The science of fitting the job to the employee

### Have you ever bought a pair of shoes that did not fit?

- Most likely, they made your feet hurt, and you ended up throwing them away, giving them away, returning them, or putting them in the back of the closet.
- Your shoes need to fit your feet. In the same way, your work station, tools, and job need to be designed to to fit you and the way you work.
- If they do not fit, they can keep you from doing your best work, and can even hurt you.





 Ergonomics, also known as human factors, is the scientific discipline that we use to seek understanding and improve the human interaction with products, equipment, environments and systems. Drawing upon human biology, psychology, engineering and design, ergonomics aims to develop and apply knowledge and techniques to optimize system performance, while protecting the health, safety and well-being of individuals involved. The attention of ergonomics extends across work, leisure, and other aspects of our lives.

### **HEAVY, HEAVY WORK SHOES**



- Heavy shoes localize the weight near the bottom of your foot. That puts the weight on the end of the longest lever of the body, meaning you have to exert even more force. More force equals more strain.
- Would you do 3,000 ankle lifts? That is what you would be doing by walking a mile in weighted shoes. Does that put it into perspective? The body is not designed for that additional stress. It will wear down and you could develop a serious repetitive stress injury from it.

### <u>PREVENTING BACK INJURIES</u> <u>WITH FOOTWEAR</u>

- Back injuries account for one-fourth of all compensation indemnity claims, costing employers billions of dollars per year, according to the Bureau of Labor Statistics
- 270,890 back injuries among workers in 2006, accounting for more than 22% of all work-related injuries that year



# FOOT AILMENTS.....

#### <u>Corns and Calluses</u>

Ill fitting shoes usually cause these common foot ailments. The best treatment is to wear well fitting, roomy shoes. If corns are especially painful there are pads available that will ease the pain. Never cut or shave corns. If they are unbearable your should see a physician for care.

#### • <u>Bunion</u>

This is an enlargement of the bone at the base of the big toes. It causes pain especially when walking. Wider shoes often help, but more aggressive treatment such as orthotics or even surgery may be necessary.

#### Plantar Fasciitis

This heel pain is caused by irritation of the ligament running along the bottom of the foot. Additional cushioning of the heel often relieves it, or with an arch insert that takes pressure off the heel. Running and walking shoes are often ideal for this condition.

### **Consider potential risks:**

- Before making the investment in work footwear, as an employee, examine the specific job and what that worker needs to be safe, successful and comfortable.
- Beyond just comfort, look for footwear that offers "standing tolerance".



### FEET.....

• .....as problems that begin here often spread to other areas – including the **back**. For those in manufacturing, warehousing and construction, the constant pressure of working long hours on a hard, unforgiving surface can contribute to a variety of problems – most notably, fatigue. The body needs to work harder to compensate for the lack of support, which makes the muscles tired and the body more exhausted. The effects are exacerbated when the worker has to exert force or complete a repetitive motion over a long period of time.

### ANTI FATIGUE MATS





- Mats can reduce some of the foot, knee and back strain associated with long standing periods, especially if your flooring does not have a vinyl cushion floor, but has ceramic tile, cement or wood
- Don't get a mat that is too soft, it may look good, but you will be constantly balancing on the mat, like the feeling of walking on sand for hours.

# Look for.....Before you buy...

- Anti-Fatigue Technology absorbs shock and returns energy for all-day comfort
- A Flexible Steel-Flex puncture-resistant plate that protects your foot
- Rubber outsole that is slip-, heat-, oiland abrasion-resistant
- 30 day comfort guarantee





## SLIPS.....



- Slips and falls are common causes of injury in the workplace.
- Footwear choice can help minimize this risk with anti-slip soles and specific sole tread designs and compounds, which determine the shoe's ability to maximize the coefficient of friction and expel fluids or contaminants.
- Micro-lug patterns (tiny lugs) with multiple leading edges can provide good slip resistance on smooth surfaces, while a "toothy" lug pattern is best for rugged outdoor conditions.



## **STRIPPING FLOORS.....**



- Stripping Boots & Replacement Soles
- These stripping boots reduce your risk of slipping while keeping your feet dry and away from harsh chemicals

### WHATS THE BEST FOOTWEAR CHOICE???

- ARE YOU IN COLD OR HOT WEATHER CLIMATES??
- DO YOU NEED PROTECTIVE TOE??
- ARE THERE NAILS & OTHER DEBRIS OFTEN
  SCATTERED ACROSS THE GROUND??
- WHATS YOUR ENVIRONMENT....
- THE FIELD IS NARROWED ONCE
  QUESTIONS ARE POSED.
- BE PROTECTED FROM THE VERY START.



DATA....



- 2010- 43,970 INJURIES WERE
  REPORTED FOR THE FOOT (EXCEPT TOE) CATEGORY
- 11,630 INJURIES FOR THE "TOE"
- MORE KNOWLEDGE LEADS TO
  BETTER SAFETY





### TYPES OF WORK SHOES.....

#### ICE/SNOW TRACTION AID

- INDUSTRIAL FOOTWEAR: (WATERPROOF, ALLOWS SWEAT INSIDE TO EVAPORATE, STEEL TOES, SLIP RESISTANT, REFLECTIVE)
- **WORK BOOTS:** (100% WATERPROOF, PROTECTS FROM CHEMICALS, STEEL TOE)
- <u>HIGH VISIBILTY BOOTS</u>: (HEEL & FOREFOOT RETRO REFLECTIVE LEATHER, LIGHTS UP WHEN IN CONTACT WITH HEADLIGHT BEAMS)
- SLIP RESISTANT BOOTS: HOSPITALITY, LIGHT INDUSTRIAL, WET/CHEMICAL & HEAVY INDUSTRIAL
- PROTECTIVE TOE-CAP SHOES: 572F HEAT RESISTANT, SLIP RESISTANT, SHOCK ABSORBERS, GEL PAD IN HEELS, SWEAT MANAGEMENT THRU ANTIBACTERIAL COVERINGS
- SERVICE FOOTWEAR: SLIP RESISTANT, DURABLE, GEL SETTINGS THAT PROVIDE CUSHION, ENERGY RETURN, INNER & OUTER SUPPORT

(CLOGS, LACE UPS, SLIP ONS).



### **SHOPPING CHEAT SHEET:**

- ERGONOMIC FOOTWEAR (ANATOMIC DESIGN): COMFORT FIT, LOWER INJURIES RISK, LESS FATIGUE, MORE PRODUCTIVITY.
- WATERPROOF FULL GRAIN LEATHER: BREATHABLE, FLEXIBLE AND DURABLE. EASY CARE, WATER AND STAIN RESISTANT.
- DRILEX LININGS: COMPLETELY BREATHABLE, SUPERIOR FOOT COOLING SYSTEM, QUICK DRYING, KNIT FOR BETTER FIT AND COMFORT, NON WRINKLING, ODOR AND MILDEW RESISTANT.
- <u>AIR TECHNOLOGY:</u>SHOCK ABSORBING, REDUCES IMPACT AND SPINAL COLUMN, WALKING ENERGY RETURN.
- <u>COMPOSITE TOE CAP:</u> 50% LIGHTER THAN STEEL, COMFORTABLE, THERMAL INSULATING, NON MAGNETIC, TOP RETURN.
- **<u>NITRILE RUBBER OUTSOLE:</u>** SLIP RESISTANT, OIL/GAS RESISTANT, ABRASION RESISTANT, DURABLE.
- <u>100% METAL FREE</u>: ON MAGNETIC, LOWER ELECTRICAL RISK, SOFT AND LIGHT CONSTRUCTION, ELECTRICAL HAZARD RATED ASTM F-2413-05.



## ILL-FITTING SHOES.....



As one grows older the shoe size changes. The foot becomes longer and wider, and the fat pads on the heels and balls of the feet decrease in size. It is important that whenever buying new shoes, you have your feet measured to ensure proper sizing and fit. The best shoe to wear is one with a wide boxy, toe and low heel. Shoes that lace can adapt to changes in the feet from swelling during the day. Shoes made of leather breath better and help wick moisture away from the feet.



# **SHOE BUYING TIP**





### WORK GREAT... FEEL GREAT



8, 9, 10 even 12-Hours on your feet never felt so good!!!!