Put Your Best Foot Forward

Hazards exist in every workplace in many different forms: sharp edges, falling objects, flying sparks, chemicals, noise and a myriad of other potentially dangerous situations. The Occupational Safety and Health Administration (OSHA) requires that employers protect their employees from workplace hazards that can cause injury.

Controlling a hazard at its source is the best way to protect employees. Depending on the hazard or workplace conditions, OSHA recommends the use of engineering or work practice controls to manage or eliminate hazards to the greatest extent possible. For example, building a barrier between the hazard and the employees is an engineering control; changing the way in which employees perform their work is a work practice control.

When engineering, work practice and administrative controls are not feasible or do not provide sufficient protection, employers must provide personal protective equipment (PPE) to their employees and ensure its use. Personal protective equipment, commonly referred to as “PPE”, is equipment worn to minimize exposure to a variety of hazards. Examples of PPE include such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs), hard hats, respirators and full body suits.

April is Foot Health Awareness month and is a great time to be mindful of foot and leg protection and review the policies and procedures currently in place at your workplace.

Foot and Leg Protection

Employees who face possible foot or leg injuries from falling or rolling objects or from crushing or penetrating materials should wear protective footwear. Also, employees whose work involves exposure to hot substances or corrosive or poisonous materials must have protective gear to cover exposed body parts, including legs and feet. If an employee’s feet may be exposed to electrical hazards, non-conductive footwear should be worn. On the other hand, workplace exposure to static electricity may necessitate the use of conductive footwear.

Examples of situations in which an employee should wear foot and/or leg protection include:

- When heavy objects such as barrels or tools might roll onto or fall on the employee’s feet;
- Working with sharp objects such as nails or spikes that could pierce the soles or uppers of ordinary shoes;
- Exposure to molten metal that might splash on feet or legs;
- Working on or around hot, wet or slippery surfaces; and
- Working when electrical hazards are present.

Safety footwear must meet ANSI minimum compression and impact performance standards in ANSI Z41-1991 (American National Standard for Personal Protection-Protective Footwear) or provide equivalent protection. Footwear purchased before July 5, 1994, must meet or provide equivalent protection to the earlier ANSI Standard (ANSI Z41.1-1967). All ANSI approved footwear has a protective toe and offers impact and compression protection. But the type and amount of protection is not always the same.

Different footwear protects in different ways. Check the product’s labeling or consult the manufacturer to make sure the footwear will protect the user from the hazards they face.
Foot and leg protection choices include the following:

- Leggings protect the lower legs and feet from heat hazards such as molten metal or welding sparks. Safety snaps allow leggings to be removed quickly.
- Metatarsal guards protect the instep area from impact and compression. Made of aluminum, steel, fiber or plastic, these guards may be strapped to the outside of shoes.
- Toe guards fit over the toes of regular shoes to protect the toes from impact and compression hazards. They may be made of steel, aluminum or plastic.
- Combination foot and shin guards protect the lower legs and feet, and may be used in combination with toe guards when greater protection is needed.
- Safety shoes have impact-resistant toes and heat-resistant soles that protect the feet against hot work surfaces common in roofing, paving and hot metal industries. The metal insoles of some safety shoes protect against puncture wounds. Safety shoes may also be designed to be electrically conductive to prevent the buildup of static electricity in areas with the potential for explosive atmospheres or nonconductive to protect workers from workplace electrical hazards.

Consider the following as you evaluate employees’ need for foot and leg PPE.

<table>
<thead>
<tr>
<th>SUGGESTED QUESTIONS</th>
<th>TYPICAL OPERATIONS OF CONCERN</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Might tools, heavy equipment or other objects roll, fall onto or strike your employees’ feet?</td>
<td>Construction, plumbing, smithing, building maintenance, trenching, utility work, grass cutting, etc.</td>
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<tr>
<td>Do your employees work with or near exposed electrical wiring or components?</td>
<td>Building maintenance; utility work; construction; wiring; work on or near communications, computer, or other high tech equipment; arc or resistance welding; etc.</td>
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<tr>
<td>Do your employees handle or work near employees who handle molten metal?</td>
<td>Welding, foundry work, casting, smithing, etc.</td>
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<td>Do your employees work with explosives or in explosive atmospheres?</td>
<td>Demolition, explosives manufacturing, grain milling, spray painting, abrasive blasting, work with highly flammable materials, etc.</td>
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**Occupational Health Resources**

**DHHS Launches Healthy People 2020**

**NIOSH Twitter Site Launched for Hearing Loss Prevention and Noise Control**
Follow NIOSH and the work-related hearing loss prevention community on Twitter ([http://twitter.com/NIOSHNoise](http://twitter.com/NIOSHNoise)) to stay connected. Tweets will address information related to occupational noise control and hearing loss prevention, including safety and health research, facts and statistics, news and updates, conferences, and publications. For more information, contact Heidi Hudson [HLHudson@cdc.gov](mailto:HLHudson@cdc.gov) or Mark Stephenson [MStephenson@cdc.gov](mailto:MStephenson@cdc.gov) or go to [cdc.gov/niosh/programs/hlp/](http://cdc.gov/niosh/programs/hlp/).

**Save the Date - National Manufacturing Sector Conference**
The National Occupational Research Agenda (NORA), Manufacturing Sector Council will host the National Manufacturing Sector Conference on Sept. 7-8, 2011, in Cincinnati, Ohio. For more information, contact Greg Lotz, NORA Manufacturing Program Manager, [wlotz@cdc.gov](mailto:wlotz@cdc.gov) or 513.533.8482 or Michael Baskett, NORA Program Coordinator, [mbaskett@cdc.gov](mailto:mbaskett@cdc.gov) or 513.533.8153.
Good health is good business. Healthy employees perform better. The health of employees is critical to business success. Investing in the health of the workforce is fundamental to a healthy bottom line for companies.

At any given time, one out of five workers reports having had a health-related impairment during the previous 30 days. Research has shown that taking steps to optimize control of the most common health-related conditions and risk factors generates a substantial return on investment for the employer. This has been demonstrated to be true for depression, asthma, migraine headaches, obesity, smoking, seasonal allergies, inflammatory arthritis and diabetes.

These recent success stories attest to the reality that health promotion reduces corporate medical costs and increases productivity:

- Over 18 months, General Electric’s fitness program members showed a 38 percent decrease in healthcare spending versus a 21 percent increase for non-members.
- Adolph Coors’ wellness program generated a cost savings of $1.4 million and reported a return on investment of up to $8.33 for every dollar spent.
- Medical claims for Steelcase were 55 percent lower for employees who used fitness services.
- A NASA study reported a 12.5 percent increase in productivity among exercisers versus non-exercisers. Those who exercised demonstrated sustained work efficiency through each shift, as well as enhanced performance, concentration and decision-making abilities.
- The Dallas Police Department noted a 39 percent increase in commendations after implementing a lifestyle health enhancement program for officers.

What prompted these companies to take a non-traditional approach to reducing health-related costs?

In the past, the total cost of poor health has been drastically underestimated by focusing solely on the direct cost of healthcare and medication. But approximately three quarters of the true total is due to losses in productivity, including not only lost time but “presenteeism,” where workers are on the job but not performing optimally. For each employee there is a continuum of suboptimal performance outcomes which range from “not doing well while working” to being permanently lost to the workforce.

In a Dow Chemical study, 65 percent of employees had at least one chronic medical condition which impacted their on-the-job productivity. Surprisingly, presenteeism accounted for the equivalent of 45-91 lost days per year, an effect 40 times greater than absence from work!

It has previously been assumed that these productivity losses were intangible and not measurable. Yet they are true major costs and far exceed medical and pharmacy claims in their impact on the organizational budget. A full and accurate assessment of total health costs is critical to the success of any effort to manage or contain them. With the advent of new assessment tools and techniques, productivity costs now can and must be measured! When combined, healthcare claims costs and health-related productivity costs yield a powerful business measure of the full cost of poor health.

Health and productivity management (HPM) is a systematic approach designed to quantify, evaluate and optimize a company’s investment in the health of its workforce. HPM addresses organizational health as a human capital investment versus a necessary cost to be reduced.
Traditional efforts to cut costs address only the financial transactions of healthcare, such as increasing deductibles and co-pays. These measures are ineffective because they only serve to shift, and not to reduce, total health-related costs. HPM invests in health-related outcomes through health enhancement programs to reduce the burden of illness and health risks. A healthier workforce will result in a substantial and measurable decrease in total cost.

The old “industrial medicine” model of workplace health management dealt only with limiting and repairing damage already done by occupational injuries and illnesses. Over the past half century, however, corporate health strategies have become much wider in scope and much more proactive. They now incorporate organizational health assessment, injury prevention, wellness and health promotion, ergonomics, and evidence-based management of disease, disability, absence and productivity. Occupational health now collaborates as a key player with Human Resources/Benefits in the design and implementation of integrated benefit programs aimed at maximizing healthcare value, productivity and organizational competitiveness, rather than simply saving on short-term direct costs.

Managing the health of employees is as important as managing any other organizational asset. Interventions must be targeted to a company’s profile of significant conditions and risks for maximum gain. The first step is to assess the total health picture for your organization and identify the sources of indirect costs due to lost productivity for health-related reasons.

Please contact IU Health Arnett Occupational Services for a set of web-based assessment tools and customized assistance in meeting the challenges of health and productivity management.

OSHA announced that it will not abandon its system for ensuring that electrical products used in the workplace are safe. The European Union requested that OSHA explore the possibility of adopting its system, known as Supplier’s Declaration of Conformity. Under the EU system, manufacturers declare that their products meet safety requirements before placing these products on the market, thus requiring EU governments to operate a post-market surveillance system to verify whether products are safety compliant after they already are on the market.

Currently, OSHA requires employers to use electrical devices tested and certified by independent testing companies known as Nationally Recognized Testing Laboratories. These companies conduct tests to determine whether products are safe before manufacturers or distributors place them on the market and employers use them in the workplace.

OSHA announced that it is withdrawing its proposed interpretation titled “Interpretation of OSHA’s Provisions for Feasible Administrative or Engineering Controls of Occupational Noise.” The interpretation would have clarified the term “feasible administrative or engineering controls” as used in OSHA’s noise standard. The proposed interpretation was published in the Federal Register Oct. 19, 2010.

“Hearing loss caused by excessive noise levels remains a serious occupational health problem in this country,” said OSHA Assistant Secretary David Michaels in a news release. “However, it is clear from the concerns raised about this proposal that addressing this problem requires much more public outreach and many more resources than we had originally anticipated. We are sensitive to the possible costs associated with improving worker protection and have decided to suspend work on this proposed modification while we study other approaches to abating workplace noise hazards.”

These efforts include conducting a thorough review of submitted comments and any other information OSHA receives on this issue; holding a meeting on preventing occupational hearing loss open to employers, workers, and noise control and public health professionals; consulting with experts from the National Institute for Occupational Safety and Health and the National Academy of Engineering; and initiating a vigorous effort to provide enhanced technical information and guidance on the many inexpensive, effective engineering controls for dangerous noise levels.
Alternative Sources of Omega-3 Fatty Acids

Omega-3 fatty acids are vital in supporting everyday health and may even be beneficial in reducing the risk of chronic diseases. With today's busy lifestyle though, it is often difficult to consume nutritious and well-balanced meals. In a previous article, we discussed the options and what to look for when dining out (Omega-3 Fatty Acids: Dining Out), but what can you do when you just cannot implement omega-3 rich fish into your diet?

There are a plethora of omega-3 fatty acid supplements on the market. Determining what is appropriate for you and your family though, can be quite frustrating. There are certain points to remember that can aid you with this process. Learning to read the supplement facts and figuring out what you are getting out of the product are vital to obtaining the right product.

In the supplement facts, you will find the serving size, and most of the time it will also include the number of capsules per serving and servings per container. Most of the calories in omega-3 fatty acid supplements will be from fat. Since omega-3 fatty acids are good fats, this is one time you will want a product with a high fat content. However, to truly understand the value of the product, you need to determine the amount and type of omega-3 fatty acids the product contains. To help you in determining this information and for more details about supplements, see Navigating the supplement aisle ... what to know when selecting an omega-3 supplement.

Other than fish and supplements, there are other ways to get your omega-3 fatty acids. Nuts, oils and fortified foods can be beneficial in increasing your omega-3 intake. As with the supplements though, you will want to pay close attention to the nutrition labels as not all fortified foods are created equal.

While oily fish are the best natural source of omega-3 fatty acids, there are other options available. If you read the labels and do a little research, you can find the best way to incorporate these vital fatty acids into the diets of you and your family.

**Key Points:**

Not all supplements are created equal, so you need to do a little research to determine the best one for you and your family.

Nuts, oils and fortified foods can be good alternative sources of omega-3 fatty acids.