



ASK THE LIBRARY ARCHIVE Safety at Work

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2011

What is a recommended safe speed for fork lift trucks in the plant? What I've seen about operating a fork lift states: "Observe posted speed limits". How does one determine the speed limit?

OSHA has [a letter of interpretation](#) on what is considered a safe speed for forklifts. They do not set a specific limit, because there are too many variables from location to location. Instead, they refer to ANSI B56.1, the [standard](#)* for low lift and high lift trucks. The standard has a formula to calculate stopping distances. It also makes reference to trucks not traveling faster than normal walking speed, which they estimate as 3.5 mph.

*Click the box by ANSI/ITSDF B56.1 and then click the download button.

According to the Centers for Disease Control, about 37,000 people in the United States go to the emergency room every year with injuries from nail guns. How can we prevent injuries when using these tools?

Whether you are a do-it-yourselfer or using a nail gun at work, there are precautions to keep in mind. [The Safety Movement Organization](#) has general tips on the safe use of nail guns. For workers, [OSHA](#) offers pneumatic nail gun safety tips. For selected articles on this topic, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

What is the Global Harmonized System (GHS), how is it to be applied, and what chemicals are covered?

OSHA offers *A Guide to The Globally [Harmonized System of Classification and Labelling of Chemicals \(GHS\)](#)* which covers all aspects of compliance, MSDS, physical hazards, environmental hazards, hazard communication and much more. In addition, for copies of selected documents on this topic, contact the Library library@nsc.org or 630-775-2199 with your fax number or mailing address.

Can we have some safety tips for our business travelers?

The [U.S. Department of State](#) maintains a list of countries where travel should be avoided or carefully considered. Other tips for international travel are supplied by a current [Risk Management](#) magazine article. Whether traveling in the U.S. or abroad, personal security is important. Practical tips from the [Department of Defense Education Activity, Office of Safety & Security](#) can be useful too.

We plan to implement a new shift schedule and want to help our workers adjust to the changes.

Strategies for coping with shift work are offered by the [National Sleep Foundation](#) and the [National Institute for Occupational Health & Safety](#) (NIOSH).

For additional articles on this topic, please contact the Library at library@nsc.org or by calling 630-775-2199 and providing us with your fax number or mailing address.

2010

What role can safety play in our company's sustainable development plan?

The safety professional's knowledge of environmental issues can help guide the company as it goes "green." For copies of selected articles on this topic please contact the Library with your fax number at 630-775-2199 or library@nsc.org

I have searched the OSHA regulations (29 CFR 1910) for the General Duty Clause, but I can't find it. Where is it?

The General Duty Clause, also known as Section 5(a)(1), requires an employer to furnish a workplace which is "free from recognized hazards that are causing death or serious physical harm to his employees. It appears in the [Occupational Safety & Health Act of 1970](#). For articles discussing the General Duty Clause in more detail, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

2009

We are reviewing our hearing conservation program. What should be included? What can you tell me about the proposed label changes?

For copies of selected articles, including a hearing conservation program checklist, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

The [National Institute for Occupational Safety & Health](#) has general information on noise and hearing loss prevention.

What is the "Heinrich's accident pyramid" referred to in [OSHA's Safety Management eTool](#)?

In 1931, H.W. Heinrich estimated that for every major workplace injury, there were about 29 minor injury accidents and 300 incidents that produce no injuries. This relationship, illustrated as a pyramid or triangle, demonstrates the importance of addressing near misses to prevent more serious accidents. Different versions of the pyramid have been created over the years. For more information on Heinrich and the validity of the safety pyramid, contact the Library with your fax number at library@nsc.org or 630-775-2199.

How can a near miss program help reduce accidents and injuries?

Tracking and investigating near miss (or near hit) incidents can identify situations with the potential for injuries before they occur. A near miss reporting program ([sample](#)) can get workers more involved in the safety program and help management demonstrate commitment. For selected articles on this topic, please contact the Library at library@nsc.org with your fax number.

What are the pros and cons of a safety incentive program?

For copies of a few selected articles on safety incentive programs – what works and what doesn't, please contact the Library with your fax number. You can reach us at library@nsc.org or call us at 630-775-2199.

As summer approaches teens will be looking for jobs. What should employers (and parents) know about safety regulations and injury prevention for young workers?

For many teens a summer job is their first exposure to the working world. Both [OSHA](#) and [NIOSH](#) have information on teen workers. To receive copies of selected articles on this topic, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

I have heard online access to the NFPA Codes is now free. Is this true?

The National Fire Protection Association (NFPA) now has a *read-only* version of their codes available at no charge. Start at [NFPA Online Access](#) read the introduction and scroll down to **To**

review NFPA's codes and standards online. Click on #1. **Visit NFPA's Document Information page.** You will find a list of all NFPA codes. Select the code of interest and follow the instructions to create a user profile which will then give you read-only access.

We're making plans for our safety program for the New Year. Is there a calendar of safety observances available?

The National Safety Council's communications department has compiled a list of safety observances such as Workplace Eye Safety Month, Poison Prevention Week and our own National Safety Month. The calendar, which includes links to the organization that sponsors each observance, is available at [http://www.nsc.org/news_resources/Resources/Documents/Safety%20Observances%202010\(revised\).pdf](http://www.nsc.org/news_resources/Resources/Documents/Safety%20Observances%202010(revised).pdf)

2008

How can we reduce injuries related to box cutters?

These hand knives, while useful, can be dangerous if used incorrectly. Training material is available through the [University of Vermont](#). For copies of selected articles from the NSC Library's collection, please contact us at library@nsc.org or (630) 775-2199 with your fax number.

2007

How can I help my workers avoid heat-related illnesses this summer?

The National Institute for Occupational Safety & Health offers a variety of materials for workers and employers to help cope with climbing temperatures. The [NIOSH](#) website also includes a heat stress calculator. For additional articles on heat stress in the workplace, please contact the Library at library@nsc.org or by calling 630-775-2199 with your fax number or mailing address.

What can my workers do to avoid being bitten by dogs?

Workers in a variety of occupations may come in contact with unfamiliar dogs. National Dog Bite Prevention Week is in May each year. The U.S. [Postal Service](#) offers a kit that addresses what workers and dog owners can do to prevent dog bites. Additional information is available from the U.S. [Humane Society](#).

Can listening to my iPod or MP3 player damage my hearing? What about using earbuds vs. earphones?

On average, output levels of earbud-style earphones are 5.5 decibels higher than over-the-ear earphones. The [National Hearing Conservation Association](#) has information that shows volume level and impact on hearing. For selected articles on the subject, please contact the Library with your fax number or mailing address at 1-800-621-7615 x2199 or library@nsc.org

My workers are a variety of shapes and sizes. What should I consider when selecting Personal Protective Equipment?

When it comes to PPE, one size doesn't necessarily fit all. PPE is available in different sizes and styles to protect workers whether they are large or small, male or female. The [OSHA](#) regulation states that if your workers have the right sized PPE, they are more likely to wear it. For additional articles on what to consider regarding PPE, please contact the Library at library@nsc.org or by calling 630-775-2199 with your fax number or mailing address.

Training requirements are scattered throughout the OSHA regulations. Where can I find requirements specific to my industry?

The length and complexity of OSHA standards may make it difficult to find all the references to training. [OSHA](#) has provided a document: *Training Requirements in OSHA Standards and*

Training Guidelines, Revised 1998 to help make it easier. [OSHA](#) also has a Training and Reference Materials Library that includes PowerPoint presentations and additional information. For information on specific training issues, please contact the Library at 630-775-2199 or library@nsc.org

We provide our workers with personal protective equipment, but we have trouble getting some of them to use it. What can we do?

Workers may resist PPE because they feel it is uncomfortable, inconvenient or unnecessary. Steps you can take to improve compliance include training, offering incentives, and seeking workers' participation in the selection process. If these steps fail, enforcement of the rules may be necessary. For some articles on motivating workers to use PPE, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

2006

What is the accident cost iceberg?

The iceberg is used as a metaphor to represent how the direct (or insured) costs of a work accident, such as medical expenses and insurance premiums, are only the tip of the iceberg. Below the surface are additional indirect (or uninsured costs), such as time lost investigating the accident, equipment repair costs or extra overtime costs. These costs can add up to much more than the direct costs. For articles on insured and uninsured costs and a worksheet that will help estimate how much incidents really cost your organization, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

Should we allow alcohol to be served at our company holiday party?

Offering workers alcohol at a company-sponsored event may open the employer to liability. The [U.S. Department of Labor](#) has a fact sheet to help employers decide. The [DOL](#) also offers employers tips on safe holiday celebrations whether or not they include alcohol.

The federal regulation on Powered Industrial Trucks (OSHA 1910.178) makes reference to ANSI B 56.1. Where can I get a current copy of B56.1?

The title of the B56.1 standard is *Safety Standard for Low Lift and High Lift Trucks*. Copies are free to download from the [Industrial Truck Standards Development Foundation](#). The ITSDF was formed to assume responsibility for certain standards developed by the American Society of Mechanical Engineers.

Are back belts effective in reducing back injuries?

The jury is still out. The National Institute for Occupational Safety & Health [National Institute for Occupational Safety & Health](#) conducted a study which found that there is no conclusive evidence guaranteeing that using back belts will prevent injuries. Back belts should not be considered a "magic bullet," but rather part of a back injury prevention program. For additional articles on this topic, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

I have heard a story about a welder who had his contact lens fused to his eye. Is this true? Is it safe for welders to wear contact lenses?

Different versions of the story about the welder have been around for at least 30 years. The story has never been substantiated. [OSHA](#) has written a letter saying that welding with contacts is usually acceptable. The [American Welding Society](#) offers a fact sheet with guidelines for welders who use contact lenses. For more information on this topic, please contact the Library Reference Desk at library@nsc.org or 630-775-2199 with your fax number.

Do workplace exercise and stretching programs help prevent injuries?

Some studies have shown that these programs can be beneficial. They report improvements in worker flexibility and savings in workers compensation costs. Others report that organizations have found no difference when comparing before and after implementing these types of exercise.

For articles discussing research on this topic, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

How do I select the appropriate gloves for my employees?

There is a glove for every hazard -- cuts, burns, chemicals, etc. With so many to choose from it can be hard to identify the right glove for the task. There are a number of quality articles that provide guidelines and suggestions on selecting gloves. For copies of these articles, please contact the Library at 630-775-2199 or library@nsc.org with your fax number or mailing address.

Should we allow our workers to customize their hard hats with stickers?

In most cases, the adhesive used on stickers or decals does not negatively affect the safety performance of the hard hat. However, placing too many stickers on a hat may make inspection of the hat for wear and damage difficult. Best practice is to use the hat as it was received from the manufacturer or to consult the manufacturer before making any modifications. For more information on this topic, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

How can I make my safety meetings more effective?

Good safety meetings don't just happen. They need preparation and participation. The Library collection includes articles with ideas for keeping your meetings fresh and productive. For copies of these articles, please contact the Library at 630-775-2199 or library@nsc.org with your fax number or mailing address.

Where can I find chemical safety information on the internet?

There are a number of websites that offer chemical safety information such as fact sheets, material safety data sheets and toxicological profiles. [Oklahoma State University](#) has compiled a directory of links. Their website also includes a glossary of frequently used MSDS terms and acronyms.

How do I select appropriate respirators for my employees?

There are a number of quality articles for suggestions on respirator selection, but there are also [National Institute for Occupational Safety & Health](#) guidance tools that help to determine the proper respirator for various applications. For more information, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

What is the importance of a Safety Committee?

A safety committee aids and advises both management and employees on matters of safety and health pertaining to plant or company operations. It performs essential monitoring, educational, investigative, and evaluative tasks. For articles on how to implement or make your Safety Committee more effective, please contact the Library at 630-775-2196 or library@nsc.org with your fax number or mailing address.

What is the safety hierarchy?

The safety hierarchy concept prioritizes hazard control measures in order of effectiveness and preference. While there are different versions of the hierarchy, most agree that eliminating the hazard is most desirable, followed by measures such as controlling the hazard by guards or enclosures, training workers about the hazard and providing personal protective equipment to shield workers from the hazard. A safety brief on the subject is available from [Triodyne](#). For additional articles, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

What is the definition of *world class safety* and how is it achieved?

There is no standard definition for *world class safety*, but research has shown that a company that has achieved world class status generally has a total recordable case rate of less than one. It also means having an established safety culture and safety management system that is balanced and well integrated with the company's overall management system. For selected articles on this

topic, please contact the library at 630-775-2196 or library@nsc.org with your fax number or mailing address.

2005

I'm hearing more and more about asthma in the workplace. What do I need to know about it?

Chronic diseases such as asthma can lead to increased business costs through lost time and lost productivity. An asthma management plan can help employers deal with the issue. The [National Institute for Occupational Safety & Health](#) has compiled a great deal of information at. For a copy of an article providing background and an outline of an asthma management program, please contact the Library with your fax number at library@nsc.org

Will computer-based training satisfy OSHA requirements?

In a letter of interpretation, [OSHA](#) states that while computer-based training can be a valuable part of a training program, it is generally not enough to meet requirements on its own. Current trends advocate a "blended" approach combining online training with more traditional classroom methods. For more information, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

Should I permit my employees to wear contact lenses on the job?

Concerns regarding chemical exposures and other hazards to the eye have caused safety professionals to question whether contact lenses are appropriate for use in the industrial environment. The [National Institute for Occupational Safety & Health](#) has recently altered its position, now recommending workers be permitted to wear contacts when working with hazardous chemicals. Also, the [American College of Occupational and Environmental Medicine](#) offers guidelines regarding other types of hazards here. Both stress that contact lenses in themselves do not offer protection to the eye, and that eye hazard evaluations of the workplace should be performed.

Do you work in a hot environment? What degree of heat should an employee work under and for how long?

The [National Institute for Occupational Safety & Health](#) offers some information and guidelines for workers and employers to follow as the temperatures climb. Included is a heat stress calculator. For additional articles on heat stress in the workplace, please contact the Library at library@nsc.org or by calling 630-775-2199 with your fax number or mailing address.

So, you're in Human Resources and are now in charge of safety. What do you need to know?

More and more, companies have Human Resources manage the safety function. Initially, this can be quite intimidating. [NSC](#) website offers help in this area. NSC also has two books that can be purchased: *"Basics of Safety and Health"* and *"Beyond Workers' Comp: A Human Resources Guide to Building Safety Into Your Organization."* For additional information on this topic, please contact the Library at 630-775-2199 or library@nsc.org with a fax number.

What is JSA?

JSA is Job Safety Analysis, also known as Job Hazard Analysis. JSA breaks job tasks down into step-by-step procedures for workers to follow. It identifies potential hazards and how to avoid them. Every JSA is unique. Worker participation in the JSA process, such as testing the steps, can help develop a more positive attitude toward safety. [OSHA](#) has information on JHA. For further information, please contact the Library at library@nsc.org or 630-775-2199 with a fax number.

What is the maximum weight a worker can safely lift?

Unfortunately, there's no easy magic number. There are many factors involved, such as the height and weight of the person, the dimensions and weight of the object, and the frequency or distance the object is lifted and/or carried. For an article comparing the use of biomechanical models, the Snook tables, the revised NIOSH lifting equation and the ACGIH Threshold Limit Values, please contact the Library with your fax number at library@nsc.org

What is nanotechnology and what are the safety and health implications?

Nanotechnology involves the manipulation of matter at nanometer length scales to produce new materials, structures and devices. A nanometer is one-billionth of a meter – for comparison, a grain of sand is about a million nanometers. Nanomaterials are already in use in electronic, cosmetic and pharmaceutical applications. The small scale of these particles raises concerns about inhalation exposures, ingestion or skin contact. For more information, please see the [National Institute for Occupational Safety & Health](#) website on nanotechnology and the United Kingdom [Health & Safety Executive's](#) bulletin.

What is NFPA 70E?

NFPA 70E–2004 is the new standard for electrical safety in the workplace from the National Fire Protection Association. It can be used in conjunction with the National Electrical Code's construction standard to give a better picture of how to protect employees who are exposed to shock and arc hazards. NFPA 70E can be purchased through [NFPA](#). For copies of current articles about NFPA 70E, please contact the Library at 630-775-2199 or library@nsc.org with your fax number or mailing address.

We would like our safety meetings to tie in to the different safety days, weeks or months. Is there a calendar of safety observances available?

The National Safety Council's Communications department has compiled a list of safety observances such as Workplace Eye Safety Month, Poison Prevention Week and the NSC's National Safety Month. The [calendar](#) includes links to the organization that sponsors each observance.

What happened to my SIC code? How do I find my new NAICS code?

Safety professionals often want to compare their establishment's occupational injury and illness rates with national averages for their industry. For years, the Standard Industry Classification, or SIC code, has been used to identify industries. Recently, the U.S., Canada and Mexico have adopted the new North American Industry Classification System, or NAICS. The NAICS reflects changes in our economy and technology. The U.S. [Census Bureau](#) offers conversion tables to translate SIC codes to NAICS codes. The [NAICS Association](#) offers keyword searching to locate new codes.

What is Six Sigma, and how does it apply to safety?

The goal of Six Sigma is to create nearly error –free performance by implementing principles and techniques designed to generate continuous improvement. Using some of the benchmarking techniques of Six Sigma can help identify safety areas with the greatest needs so efforts can be focused on them. For more information, please contact the Library at library@nsc.org or 630-775-2199 with your fax number.

My workers need reflective vests for a job. What color should I choose?

Currently, there are no regulations that give a definitive answer to this question. ANSI/ISEA-107-2004, *National Standard for High-Visibility Safety Apparel and Headwear*, calls for fluorescent red, fluorescent orange-red, or fluorescent yellow-green. Many groups and some states require yellow-green vests to make workers stand out, since traffic cones, traffic barrels and traffic barriers are fluorescent orange-red. For additional information, please contact the Library at 630-775-2199 or library@nsc.org with your fax number or mailing address.

Our employees would like to be able to wear personal headphones (aka Walkman's) on the warehouse floor. What do we need to know about the pros and cons before implementing a company policy?

While there are few documented physical injuries due to the use of personal radios/headsets, there is the *potential* for accidents or injuries. The additional contribution of the personal radio to an employee's daily dose of noise may also increase. Over time, the additional exposure could contribute to a compensable noise-induced permanent threshold shift for which the employer may be responsible. For articles related to this issue, please forward your fax number or mailing address to library@nsc.org

2004

What is safety certification?

Surveys show that not all people responsible for safety in a company have actual safety certification. However, certification can provide peer recognition, may translate into higher pay, and aid in job promotion. Certification generally requires that applicants have both education and experience, resulting in such titles as Certified Safety Professional (CSP) or Certified Industrial Hygienist (CIH). For a list of some of the most common safety-related certifications and where to obtain them, contact the Library at 630-775-2199 or library@nsc.org

How can I be sure that my workers will be able to evacuate safely if there's an emergency?

When emergencies happen, a good evacuation plan can be the difference between life and death. When creating a plan, you must consider the type of emergencies you are most likely to encounter, (fire, chemical spill, tornado, etc.) and determine the most appropriate response. [OSHA](#) has a number of tools for evacuation planning. For further information on emergency planning and evacuation, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

Do we need eyewash fountains? What factors are involved in selecting and placing them in our workplace?

OSHA 1910.151(c) states "where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use." For articles offering guidance on eyewash station equipment, location and maintenance, contact the Library with a fax number at library@nsc.org or 630-775-2199.

What is the story behind the NSC's Green Cross emblem?

The Green Cross for Safety was created in 1946 as part of a community fundraising campaign. The Green Cross was quickly accepted by the public as a symbol for safety, and became the official symbol of the National Safety Council in 1947. But the Green Cross wasn't the first emblem of the NSC. In 1913 the NSC created the Universal Safety symbol. A document dated 1929 describes it as "a white cross against a green circular field, encircled by the words 'Universal Safety.'" The cross is a cross of mercy. The color white represents "freedom from blemish or stain, nobility of aspirations and sincerity of purpose." Green signifies youth, strength and life.

Does working overtime or extended shifts result in more accidents?

This safety issue is still under debate. Some studies have shown that employees working overtime/extended shifts may experience more accidents or poor health. Other studies have found little or no effect. The [National Institute for Occupational Safety & Health](#) has a review of the literature entitled *Overtime and Extended Work Shifts* available at. For more information on safety and hours of work, contact the Reference Desk at library@nsc.org or 630-775-2199.

I only speak a little Spanish, and some of my workers only speak a little English. How can I effectively communicate safety to them?

The Bureau of Labor Statistics reports that in 2001, the fatality rate for all workers was 4.4 per 100,000, but the rate for Hispanic workers was 6.1. To help employers and workers, [OSHA](#) offers a number of bilingual publications, posters and links to other resources. For articles providing more information about this issue, please contact the Library at library@nsc.org or 630-775-2199.

We provide our workers with personal protective equipment, but we have trouble getting some of them to use it. What can we do?

Workers may resist PPE because they feel it is uncomfortable, inconvenient or unnecessary. Steps you can take to improve compliance include training, offering incentives, and seeking workers' participation in the selection process. If these steps fail, enforcement of the rules may be necessary. For some articles on motivating workers to use PPE, please contact the Library with your fax number at library@nsc.org or 630-775-2199.

My management is focused on productivity and the bottom line. How can I convince them that safety pays?

You might want to try talking to them in their own language – dollars and cents. It isn't what you earn, but what you save that counts. Some factors to consider include accident costs (direct and indirect), OSHA fines and penalties, and lost production. For a few articles that explain how you can make the case that safety impacts the bottom line, please contact the Library at library@nsc.org or 630-775-2199.

We have 1,000 employees at our plant. How many safety people we should have?

It depends. Various sources suggest ratios of safety specialists to employees ranging from 1 to 1,000, or 1 to 2,000. Sometimes the safety specialist may have help through an assistant or a safety committee. These ratios may be used as rules of thumb, but the correct answer depends on the nature of operations, workplace layout, and numerous other factors. Sources for this information are *Safety Management* by Grimaldi and Simonds (1989), and *Safety and Health Management Planning* by Ferry (1990). For more information on organizing and staffing the safety function, contact the Reference Desk at library@nsc.org or 630-775-2199.

Are shorts appropriate work attire?

OSHA regulates the wearing and use of personal protective equipment in hazardous workplace operations. However, they do not regulate the wearing of general work apparel. What to wear in the way of general work clothes can be determined by doing a hazard assessment of a work operation, and then deciding what general work apparel is appropriate for that operation. A company safety policy or rule can then be issued. [OSHA](#) discusses this issue in a particular letter of interpretation.

How do I write a company safety manual?

Whether you're starting from scratch, or updating a few sections of an existing manual, this can be a difficult and time-consuming task. The National Safety Council created a data sheet entitled *Writing, Publishing, and Administering Employee Safety Regulations*. To learn more about this data sheet, and other useful documents on writing a safety manual, contact the Library Reference Desk at library@nsc.org or 630-775-2199.