The Safety & Health Advisor

Fall 2024

ATLANTIC CHARTER INSURANCE COMPANY

Respiratory Protection Guidance

Respirators protect workers from inhalation of dangerous substances, such as chemicals and infectious particles. Selecting the right type of respiratory protection depends on many factors including environment, operations, processes, and materials used by a worker.

Respirators are considered a "last line of defense" and should only be used when engineering controls are not feasible or do not adequately control the exposure. Preferred control methods include substitution (e.g. water-based cleaner for solvent-based cleaner) and local exhaust ventilation.

There are two main types: air-purifying respirators (APRs) and supplied-air respirators (SARs). Each provides different levels of protection based on their design.

Certain types of particulates and gasses can be harmful to workers, even when not visible. The identification of hazards and their airborne concentrations should be determined through an assessment before selecting the correct respirator for the job by a safety professional or industrial hygienist. OSHA's eTool also provides guidance in choosing the correct respirator for the job as well as substances to watch for.

Highlights in this Issue

Types of hazards to watch for include:

- **Lead Based Products** – can become harmful when cutting, grinding, welding or working with lead-based products. This applies both to lead pipes and any products with lead- based paint. Exposure may lead to high blood pressure and damage to organs. Symptoms include headaches, stomach cramps, joint pain, fatigue or irritability.
- **Silica Dust** – is created when cutting through concrete. Silica dust can get kicked up quickly, which can cause many long term health problems including silicosis when fine dust particles are inhaled without protection.
- **Toxic Vapors** – are formed from glues, paints, cleaning products or other items. Inhalation of these vapors can lead to serious health problems such as asphyxia, airway inflammation, respiratory muscle dysfunction or a combination of illnesses.
- **Lack of Oxygen** – may occur while working in confined spaces. These areas can potentially run out of safe air quickly, which is why it may be necessary to bring your own with you while using a supplied-air respirator.

Airborne particulates effect not only the person performing the work, but also everyone in the surrounding environment. It's important to be conscious when performing job functions such as grinding, cutting, welding, painting, cleaning, etc. Areas should be marked clearly with signs or labels to alert visitors or other employees while performing work requiring respirator protection.

The Safety & Health Advisor

Fall 2024

In addition to knowing when to use this type of protection, it is also crucial to make sure everyone knows how to use it properly. Protection from airborne substances is only useful when worn correctly. Each type of respiratory protection is going to be a little different, so take the time to provide training to those who may have to utilize respirators.

Respirators should fit tightly to the worker's face to ensure that there are no air leaks through any openings. Annual fit testing helps ensure that employees are protected while using tight-fitting respirators in the workplace as they may change over time. These include filtering facepieces such as N95s, half and full-face respirators, air purifying respirators, and self-contained breathing apparatuses.

Regular maintenance should be performed on air-purifying respirators. Certain parts can be cleaned or replaced, while others will need to be completely discarded. Using dirty filters will make it harder for individuals to breathe and allow contaminated air particles to filter through. With this in mind, it is important to follow recommended maintenance steps for your equipment to keep employees protected.

*The National Institute for Occupational Safety and Health (NIOSH) is responsible for the evaluation and approval of respirators used in U.S. occupational settings. See more in the NIOSH Guide for proper selection and use of particulate respirators in accordance with regulation 29 CFR 1910.134 and OSHA's Respiratory Protection Standard - 1910 Subpart I.

Workplace Fire Prevention

October is Fire Prevention Month. This year's NFPA (National Fire Protection Association) theme is **"Smoke alarms: make them work for you!™."** This is a good time for organizations to review their fire procedures, including evacuation plans. The review should begin with your current fire prevention practices. Many practices can be applied to the home environment as well.

Organizations that have a Safety or Joint Loss Management committee may want those individuals to facilitate an employee education or awareness campaign on this topic or participate in facility safety inspections to include fire prevention and fire response.

First, the work environment needs to be evaluated for potential fire risks. Those risks will vary depending on whether you are a manufacturer, warehouse, healthcare facility, restaurant, office or a construction site. Understanding the setting can help with identification of risks and the implementation of fire prevention measures to address them.

Some common fire hazards in the workplace may include:

- Cooking areas (i.e., kitchens, kitchenettes)
- Smoking materials
- Open flames (i.e., candles/incense)
- Electrical hazards (i.e., wiring/overloaded electrical outlets, damaged extension cords, appliances and equipment)
- Accumulation of combustible materials (i.e., papers, boxes, oily rags)
- Improper handling and storage of combustible/flammable liquids or gases
- Space Heaters – *see the information link below*

  https://www.nfpa.org/downloadable-resources/safety-tip-sheets/electric-portable-space-heater-safety
- Hot work hazards (i.e., cutting, welding) – *May also require a permit and trained fire watch*

The Safety & Health Advisor

Fall 2024

OSHA Standard 1910.39 – Fire Prevention Plans: While only required for employers in specific circumstances, it may be a good resource for employers to review during workplace evaluation. The recommended items include the following:

- List all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard;
- Procedures to control accumulations of flammable and combustible waste materials;
- Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials;
- The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires; and those responsible for the control of fuel source hazards.

OSHA provides a safety and health topics webpage about fire safety at:
https://www.osha.gov/SLTC/firesafety/

The NFPA also provides some free resource material (including educational tips) at:
https://www.nfpa.org/Public-Education

New Hampshire AED Direct Purchase Opportunity

The NH Division of Fire Standards and Training & Emergency Services (NHFST & EMS) has established four contracts to provide *reduced pricing* to state, municipal and non-profit organizations in New Hampshire for the purchase of Automated External Defibrillator's (AED's) until June 30, 2026. Products include Defibtech, Philips and Zoll. Fixed location packages (price range $1,064-$1,661) and portable/mobile packages (price range $969-$1,505) are available.

A portable/mobile package includes an AED, battery, adult defib pads, carrying case, CPR accessory kit, AED instructions and minimum 5-year warranty. The fixed location package includes the above items plus an AED wall cabinet, wall sign and decal.

In addition, LifeSavers, Inc. (Defibtech vendor) and Rescue One Training for Life, Inc. (Philips and Zoll vendor) **extended their NH contract pricing** to **ALL interested parties** located in New Hampshire. There are no additional discounts for multiple AED purchases. Current NH AED laws provide individual and organization liability protection for ownership and use of AED devices. State AED registration is required with the NH Department of Safety. For more information, determination of qualification or assistance with AED-related questions, please contact: Bill Wood, Coordinator, NH Statewide AED Program at (603) 223-4228 or by email to William.H.Wood@dos.nh.gov.

OSHA's Severe Injury Report Dashboard

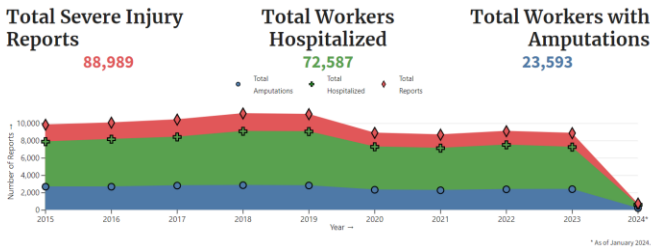
Effective September 4, 2024, the Occupational Safety and Health Administration (OSHA) unveiled an online tool allowing the public to access severe injury reports, injury trends over time, geographic trends, and trends specific to each employer.

The Safety & Health Advisor

Fall 2024

According to OSHA's press release, the online interactive dashboard provides "users the ability to search its severe injury report database and view trends related to workplace injuries occurring in states covered by federal OSHA."

OSHA's Severe Injury Report (SIR) Dashboard allows the public to search and download data by year, industry NAICS code, state, establishment name (i.e., employer), and Occupational Injury and Illness Classification System codes. The dashboard includes information on all severe injuries reported by employers covered under federal OSHA from 2015 through the end of 2023 (it excludes any information for OSHA State Plan States). OSHA defines a severe injury as "an amputation, in-patient hospitalization, or loss of an eye."



"OSHA hopes providing this dashboard will encourage workers and employers to explore this data, learn about how severe injuries happen in their industry and use OSHA's resources available to help prevent injuries at their workplace," the agency says in this new video. Employers should carefully review information at the time to ensure whether it meets the aforementioned criteria for reporting a severe injury. For example, an employee visit to an Emergency Room for observation or treatment does **not** constitute formal in-patient admission to a hospital so it would **not** need to be reported to OSHA.

Warehouse Ergonomics

In July 2023, the Department of Labor announced a National Emphasis Program aimed at reducing and preventing workplace hazards in warehouses and distribution centers due to higher than normal injury rates. During this three-year program, OSHA is conducting safety inspections targeting specific hazards including ergonomic hazards.

The agency notes that warehousing and logistics have double the injury rates of other industries. Although OSHA does not have ergonomics regulations, the agency is including those practices as part of the inspections. Therefore, it's important to prioritize warehouse ergonomics in your operations.

Ergonomics is the science of designing and arranging the work environment to fit the worker, not the other way around. Proper ergonomics can help prevent workplace injuries (and workers' compensation claims), reduce fatigue, enhance worker well-being, and lead to increased productivity.

Warehouse order pickers often may need to reach and bend to access items in the warehouse. Awkward body postures as well as lifting heavy/bulky items can lead to fatigue and musculoskeletal injuries. Ergonomic practices address this issue by promoting correct posture and reducing physical strain.

Below are some risk factors that can lead to discomfort, injury, or long-term health issues for warehouse workers:

- Repetitive motions, such as lifting, bending, or twisting, can cause musculoskeletal strains over time.
- Awkward postures, like excessive forward reaching or working in tight spaces where there is no room to turn your feet to avoid twisting at the waist.
- Heavy lifting without proper mechanical handling equipment such are stackers or lift trucks.
- Inadequate lighting, which can lead to eye strain and make it difficult to read pick labels.

Specialized equipment including adjustable pallet racking systems, ergonomic pallet jacks, conveyor systems, and lift-assist devices are a few examples of ergonomic solutions. Newer technologies for warehousing are using more automation, radio-frequency identification (RFID) tracking systems, and ergonomic software applications to make operations

more efficient and reduce the physical demands on workers as well.

The layout of warehouses and distribution centers also needs to include proper aisle width for pedestrians and forklift traffic, adequate lighting, emergency exits, ventilation, and temperature control for a comfortable environment.

Here are few additional examples of ergonomics in the warehouse:

- Designing pick locations (shelving and rack heights) so that the fastest moving items are placed between waist and shoulder height to reduce bending and reaching
- Using adjustable packing tables and chairs to accommodate various body statures
- Providing equipment including ergonomic pallet jacks and forklifts
- Supplying anti-fatigue mats to reduce discomfort for packers at standing workstations
- Providing automatic labeling and taping machinery and/or ergonomically designed hand tools
- Training employees thoroughly on ergonomic principles and safe work practices

Here are several resource links for more information on more ergonomics solutions in warehousing operations:

https://www.dir.ca.gov/DOSH/dosh_publications/mmh.pdf

https://www.osha.gov/warehousing/hazards-solutions

https://www.bcsp.org/about/bcsp-news/three-ways-to-involve-workers-in-your-ergonomics-program/

https://www.ehstoday.com/industrial-hygiene/article/21916191/warehouse-ergonomics-tips-and-techniques-to-decrease-injury-risk

National Protect Your Hearing Month

October is National Protect Your Hearing Month (NPYHM). Over 40 million adults in the United States experience some form of noise-induced hearing damage, which often occurs in both workplace and recreational settings. According to the U.S. Center for Disease Control (CDC), an estimated 22 million workers – roughly a quarter of the workforce – are exposed to hazardous levels of noise on the job each year.

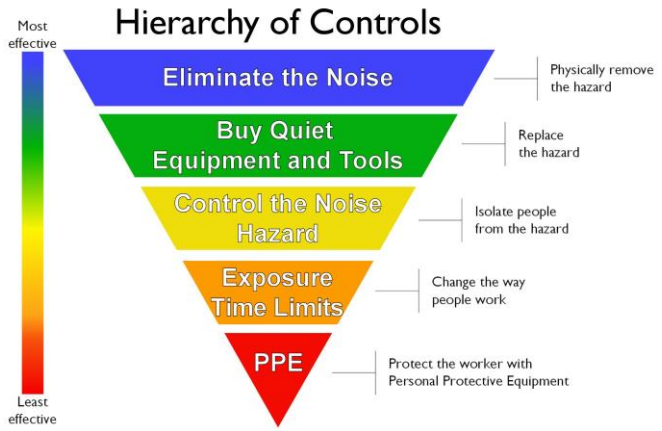
Noise-induced hearing loss happens when sounds are too loud for too long, damaging the hair cells in the inner ear. This type of hearing loss is permanent because these cells do not regenerate. NPYHM emphasizes the need to take preventive measures, such as lowering volume levels, using ear protection, and being mindful of exposure to loud environments.

Protecting your hearing is crucial because once hearing loss occurs, it cannot be reversed. Activities like attending concerts, using power tools, or even listening to music with headphones at high volume can cause damage. From a work environment standpoint, industries dependent upon heavy machinery as the biggest culprits (construction, with its jackhammers and drills, may come to mind). Or manufacturing, with its presses and grinders. Noise hazards, however, are not limited to those industries. Warehouses, transportation centers, call centers, and many more environments can subject workers to loud noises.

The Hierarchy of Controls should be used when planning your mitigation efforts (see below). As a reminder, the higher the control falls in the hierarchy, the more effective it is. Personal protective equipment (PPE), while important, is always the last line of defense.

- **Elimination** is the most effective option in the Hierarchy of Controls but typically the most difficult to implement. If there is a viable way to work without it, do it.
- **Substitution** involves replacing noisy machines or tools with quieter versions.

- **Engineering Controls** are meant to isolate workers from the noise. One example is enclosing a noisy machine with a sound-absorbing barrier.
- **Administrative Controls** are the incorporation of policies and procedures. These can include rotating workers to different jobs to keep them from constant exposure, conducting regular hearing tests of workers, and providing them with training on the proper use of PPE.



Personal Protective Equipment (PPE) is hearing protection that comes in several forms. Consider each of the following and check the Noise Reduction Rating (NRR) on the package to ensure the option meets your needs. The Hearing Protection Calculator can be used to estimate the sound level at the ear when wearing hearing protection.

- Molded earplugs – These are made of silicone, rubber, or plastic, are designed to be worn multiple times, and must be cleaned frequently. They come in multiple sizes.
- Custom molded earplugs – These are made of plastic, usually designed from the wearer's wax insert mold, and are also designed to be worn multiple times.
- Self-molded earplugs – Typically made of plastic foam and designed for single- or multi-use, these are formed by the wearer before inserting in the ear. They are designed to expand and conform to the shape of the wearer's ear canal.
- Earmuffs – There are worn over the head, covering the outer ear. They are designed to be used many times but provide less noise protection. Earplugs and earmuffs can be combined for additional protection, if needed.

To calculate the total level of protection, add five (5) dBA to the NRR of the higher-rated device. For example, if you're wearing earplugs with an NRR of 26 and earmuffs with an NRR of 30, the combined NRR would be 35 dBA.

Contemplate all levels of the Hierarchy of Controls to help protect the hearing of your workers. Hearing loss cannot be reversed, but it can be prevented. Take time this October to consider the noise hazards at your workplace and the ways in which you can address them.

If you need assistance in evaluating your ergonomics or safety and health program, please contact Neal Freedman, John Cotnam, Mark Hickox or Colin Trombley from Atlantic Charter's Safety and Health Department at (617) 488-6500.