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National Institutes of Health Office of Research Services Division of Occupational Health and Safety

Providing a safe and healthy environment for employees, patients and visitors.

“Safe science and good science go hand-in-hand.”

The articles in this Newsletter are intended to provide general summary information to the National Institutes of Health (NIH) community. They are not intended to take the place of either the written law or regulations. It is not NIH's intention to provide specific advice to readers of this Newsletter, but rather general information to help better understand how to prevent or reduce workplace injuries and illnesses.

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Housekeeping — Keep it clean

It is said that dirt is only misplaced matter, but if that is true, it is vitally important where that matter is placed. For example, dirt and scraps piled on a ramp could result in a pedestrian or forklift accident. Broken skids, loose pipe and banding, or cardboard boxes could block an exit or a fire alarm. A grease or oil spill in an aisle is obviously a hazard that requires immediate attention.

Housekeeping is a part of everyone's job. According to OSHA, "All places of employment, passageways, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition." (1910.22). This includes floors, and, in order to facilitate housekeeping operations, the workplace is to be free of hazards such as protruding nails, splinters, holes, or loose boards.

Housekeeping is an essential requirement to ensure that any work area remains safe.

In offices, good housekeeping not only keeps the workplace clean and reduces hazards, it also presents a more professional, attractive, and favorable impression to clients, customers, vendors, and others who visit our workplace.

Poor housekeeping presents fire hazards, slip, trip, and fall hazards, and the hazard of not being able to find something at the precise time you need it the most.



Good housekeeping practices can be built into our work habits so that we automatically keep our work areas neat, clean, and free of articles not being used. Use the following tips to incorporate such good housekeeping practices into your routine:

- Clean up a little bit every day. Whether you are working at a desk or at a piece of equipment, cleaning up as you go is easier than confronting a mountain of accumulated mess.
- Keep walking surfaces clear of debris, objects, or materials. Pick up loose objects, even small ones. These can create a slipping hazard too.
- Never place boxes, supplies, or other materials on the floor or on top of cabinets. Store them in approved storage areas.
- Throw garbage away immediately, and recycle paper and containers as soon as you are finished with them.
- Follow your company's policy about keeping food in the workplace. Food can attract pests and you may work in an area where food should not be eaten due to chemicals used in the area.
- If you need to file paperwork, create a good filing system so that documents are out of the way and not under a pile of paper when you need them.
- Keep tool drawers and file drawers closed when not in use to avoid injuries or tripping hazards.

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- Keep areas well-lit so hazards can be seen. Replace worn-out light bulbs or notify maintenance to do so.

Benefits of Good Housekeeping

A few benefits of good housekeeping include:

- Better space usage for equipment and operating materials makes work easier and more efficient for everyone;
- The protection of product, materials, and personnel results in smaller inventories, fewer accidents, damaged merchandise, and compensation claims;
- Less likelihood of fires; and
- An improvement in employee morale, through a clean and orderly workplace.

A facility that is well kept will not pose hazards. Workplaces where the aisles and exits are blocked, where debris litters the floor, or when tools and equipment are simply not put away have hazards built into them.



A cluttered, unkempt workplace lends itself to slips, trips, and falls. In winter, snow is easily tracked indoors where it melts and adds to the risk of slipping. Equipment may also be brought inside to be stored, which can pose an increased risk of fluid leaks.

Fire Prevention

To remain on top of potential fire hazards, employees should be aware of items on the following checklist.

- Storage arrangements affect the spread of fire. For example, increased height of stock adds to the “chimney effect” between stacks and within racks, and prevents water sprinklers from reaching a fire.
- Wide aisles help prevent fires from spreading. They also allow easier access for firefighters. The main traffic aisles should always be clear and debris-free.
- Smoking control can curb the risk of fire. Smoking should only be permitted in designated areas, and signs addressing this should be prominently displayed.
- Fire extinguishers and fire-fighting equipment should never be blocked. The same holds true for heating equipment, vents, lighting, and electrical equipment.

When stock is where it belongs, properly marked, and easily accessible, inventory of material is much easier. When six pallets have to be removed to get at the one needed, the task uses more time and energy than it should.

Housekeeping chores are easy to put off when you are busy, but organized cleaning and storage really does help the work go more smoothly.

Housekeeping checklist

Use this checklist to assess work areas to make sure that they are free of potential hazards.

- Is the area free of debris? This could include obvious traffic hazards such as oil spills, broken pallets, loose wire, and banding.
- Are tools, materials, and equipment returned to their assigned place?
- Are your personal belongings either locked up or under your control?
- Are switches, lights, and equipment turned off when not in use?
- Are power cords removed from traffic areas? These can cause problems for forklift operators as well as pedestrians.
- Are aisles and exits kept clear and fire doors closed?
- Are wet floors mopped up around entryways?
- Is there clear access to all fire extinguishers and pull alarms?
- Is there at least 18 inches of clearance under all sprinkler heads?
- Is there plenty of clearance around electrical panels?
- Are hazardous chemicals kept in closed containers put back into proper storage when they aren't in use?
- Is machinery and equipment kept free of clutter and debris?
- Is trash removed often enough so rubbish doesn't attract pests or cause odors?
- Are the floors swept when dirt, dust, shavings, or scraps accumulate?
- Is banding wire removed so it doesn't create a tripping hazard?
- Are tools, nails, pencils, etc., picked up if they've been dropped?
- Can storage shelves support the weight of the materials on them?
- Are cartons, pallets, or other stacked materials arranged so the stacking is stable?
- Are items that have to be stored leaning on-end supported so they will not fall or slide down?
- Is food kept away from areas where toxic materials are used?

Safety focus: Respiratory protection — getting back to basics

Despite the prevalence of respiratory protection in industry, many employers have difficulty understanding how respirators work, their different classifications, how to match the respirator to the hazard, and how to evaluate workers medically.

Respirators protect the user in two basic ways:

- The first is by the removal of contaminants from the air. Respirators of this type include particulate respirators, which filter out airborne particles and “gas masks” which filter out chemicals and gases.
- Other respirators protect by supplying clean respirable air from another source. Respirators that fall into this category include airline respirators, which use compressed air from a remote source and self-contained breathing apparatus (SCBA), which include their own air supply. **Note:** OSHA recommends that respirators should only be used when engineering control systems are not feasible. Engineering control systems, such as adequate ventilation or scrubbing of contaminants, are the preferred control methods for reducing worker exposures.



Selecting the right respirator requires an assessment of all the workplace operations, processes, or environments that may create a respiratory hazard. The identity of the hazard and its airborne concentrations need to be determined before choosing a respirator. This assessment should be done by experienced safety personnel or by an industrial hygienist. There are several different types of respirators.

Particulate respirators

Particulate respirators are the simplest, least expensive, and least protective of the respirator types available. These respirators only protect against particles (e.g., dust). They do not protect against chemicals, gases, or vapors, and are intended only for low hazard levels. The commonly known “N-95” filtering facepiece respirator or “dust mask” is one type of particulate respirator, often used in hospitals to protect against infectious agents. Particulate respirators are “air-purifying respirators” because they clean particles out of the air as you breathe. Particulate respirators:

- Filter out dusts, fumes, and mists.
- Are usually disposable dust masks or respirators with disposable filters.
- Must be replaced when they become discolored, damaged, or clogged.

Chemical cartridge/Gas mask respirator

Gas masks are also known as “air-purifying respirators” because they filter or clean chemical gases out of the air as you breathe. This respirator includes a facepiece or mask, and a cartridge or canister. Straps secure the facepiece to the head. The cartridge may also have a filter to remove particles.

Gas masks are effective only if used with the correct cartridge or filter (these terms are often used interchangeably) for a particular biological or chemical substance. There are cartridges available that protect against more than one hazard, but there is no “all-in-one” cartridge that protects against all substances. Chemical cartridge/Gas mask respirators:

- Use replaceable chemical cartridges or canisters to remove the contaminant.
- Are color-coded to help you select the right one. For example, acid gases have white cartridges/canisters, while organic vapors have black, carbon monoxide have blue, ammonia gas have green, and particulates free of oil have teal.
- May require more than one cartridge to protect against multiple hazards.

Powered air-purifying respirator (PAPR)

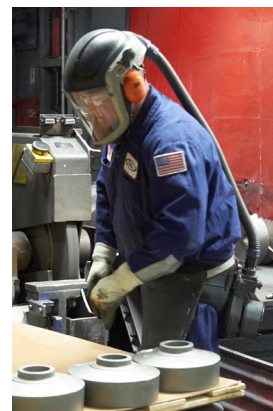
Powered air-purifying respirators use a fan to draw air through the filter to the user. They are easier to breathe through; however, they need a fully charged battery to work properly. They use the same type of filters/cartridges as other air-purifying respirators. It is important to know what the hazard is and how much of it is in the air, in order to select the proper filters/cartridges.

Self-contained breathing apparatus (SCBA)

SCBA is the respirator commonly used by firefighters. These use their own air tank to supply clean air, so you don’t need to worry about filters. They also protect against higher concentrations of dangerous chemicals. However, they are very heavy (30 pounds or more), and require very special training on how to use and to maintain them. Also, the air tanks typically last an hour or less depending upon their rating and your breathing rate (how hard you are breathing). SCBA:

- Provide clean air from a portable air tank when the air around you is simply too dangerous to breathe.

All of these respirators (except for the “dust masks” or filtering face pieces) are available in either half-mask or full-mask pieces.



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The purpose of this newsletter is to provide a forum for the dissemination of health and safety information. It is intended to enhance communication to National Institutes of Health (NIH) employees, raise awareness of current safety policies and procedures, and provide guidance on relevant issues. It is provided as a service by the NIH, Office of Research Services, Division of Occupational Health and Safety. This is not an NIH publication.

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Eating right protects your sight

"The secret of change is to focus all of your energy, not on fighting the old, but on building the new."

~ Socrates

The choices you make when filling your plate may have a positive impact on the health of your eyes.

A healthy diet can help prevent eye conditions such as:

Glaucoma: This disease damages the optic nerve.

Macular degeneration: Central and sharp vision is affected as the center of the retina deteriorates.

Cataracts: These cloud the eye's lens, leading to vision loss.

Diabetic retinopathy: High blood sugar levels damage the retina's blood vessels, impairing vision.

Eating foods containing vision-supporting nutrients won't allow you to throw away your glasses, but this practice may help prevent conditions that impact your sight.

Make sure your diet includes these foods that support eye health:

Leafy greens: Spinach, kale, and collard greens contain lutein and zeaxanthin, which may protect the eyes from damage caused by sunlight. They also contain vitamin C (helpful in cataract prevention) and vitamin E (good for protecting cells from damage that



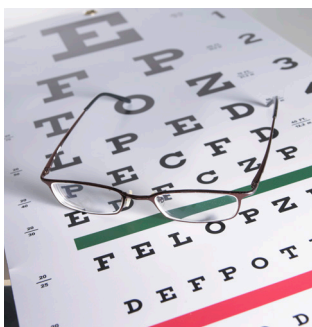
increases the risk of cataracts and age-related macular degeneration).

Salmon, tuna, and halibut: The omega-3 fatty acids in these fish help your retinas work properly. Other sources of omega-3 fatty acids include walnuts and flax.

Bell peppers, strawberries, broccoli, and cantaloupe: They contain vitamin C, an antioxidant that lowers cataract risk.

Carrots, sweet potatoes, and apricots: Orange-colored fruits and vegetables have high levels of beta-carotene. This form of vitamin A helps with night vision and can slow the progress of macular degeneration.

Eggs: Egg yolks are packed with vision-supporting vitamins. They contain lutein and zeaxanthin as well as zinc, which helps your body use these eye-friendly vitamins. Lutein and zeaxanthin are especially good for your eyes because they have a yellow-orange color that blocks blue light (which can damage the retina). In addition, eggs have vitamin A, which protects the cornea.



Eating healthy foods has a positive effect on eye health.