Eye on Safety

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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.

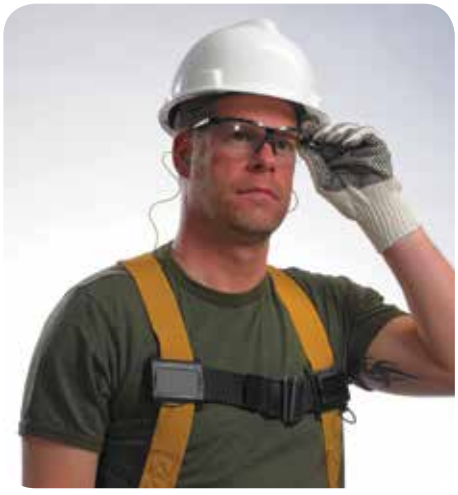
"Safe science and good science go hand-in-hand."

Eye protection

Eye protection is required by OSHA in situations where there is a reasonable probability that the use of this protection will aid in preventing injury. Suitable eye protection must be provided where there is a potential for eye injury from machines, flying objects, glare, liquids, injurious radiation, or a combination of these.

Eye protection must meet the following minimum requirements:

- Adequately protect against the particular hazards for which it is designed;
- Be reasonably comfortable when worn under the designated conditions;
- Fit snugly without interfering with the movements or vision of the wearer;
- Be durable;
- Be capable of being disinfected;
- Be easily cleanable; and
- Be kept clean and in good repair.



Wearing eye protection is just as much a part of the job as is using the right tools or equipment. It isn't enough to have your protective eyewear within reach — you must be wearing it properly when you're doing a job where it is required. These stipulations also apply to supervisors and management personnel, and should apply to visitors while they are in hazardous areas.

Selection of Eye Protection

You have to wear the right type of eye and face protection for the hazards. The American National Standards Institute (ANSI) has issued standard requirements for the design, construction, testing, and use of protective devices for the eyes and face. Protective eyewear must meet the requirements of ANSI Z87.1.

Goggles fit the face and form a protective seal around the eyes. Materials can't get under or around the seal. They protect the eyes from impact, dust, splashes, mists, vapors, and fumes. Different types of goggles are designed for different types of hazards. For example, types used to protect from splash hazards have indirect venting, while models used solely for impact hazards can have direct venting to help prevent the lenses from fogging.

Safety spectacles are impact-resistant eyeglasses. They can have metal and/or plastic safety frames, and they're fitted with impact-resistant lenses.

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Eye protection *(continued from page 1)*

They come with and without side shields. OSHA requires side protection (side shields) when there's a hazard from flying objects. Some models are adjustable so you can get a good fit.

Face shields extend from the brow to below the chin across the entire width of the head. Face shields are secondary protection. Goggles or spectacles worn under a face shield provide the important primary protection. Face shields provide additional protection from impact, chemical splashes or sprays, high temperatures, splashes from molten metal, and hot sparks. If you must wear a face shield, be sure to wear the appropriate spectacles or goggles under it.

Welding helmets are heat resistant, and they're fitted with a filtered lens. They provide secondary protection from optical radiation, flying sparks, metal spatter, and slag chips produced during welding, brazing, soldering, and cutting. Goggles or spectacles provide the primary eye protection under the welding helmet.

Laser safety spectacles or goggles have specialized lens tints to protect from laser light. Their selection depends upon the equipment and operating conditions in the workplace.

Fit

Fitting of goggles and safety spectacles should be done by someone skilled in the procedure. Prescription safety spectacles should be fitted only by qualified optical personnel.

Inspection and Maintenance

It is essential that the lenses of eye protectors be kept clean and free of damage. Daily inspection and cleaning of the eye protector with soap and hot water, or with a cleaning solution and tissue, is recommended.

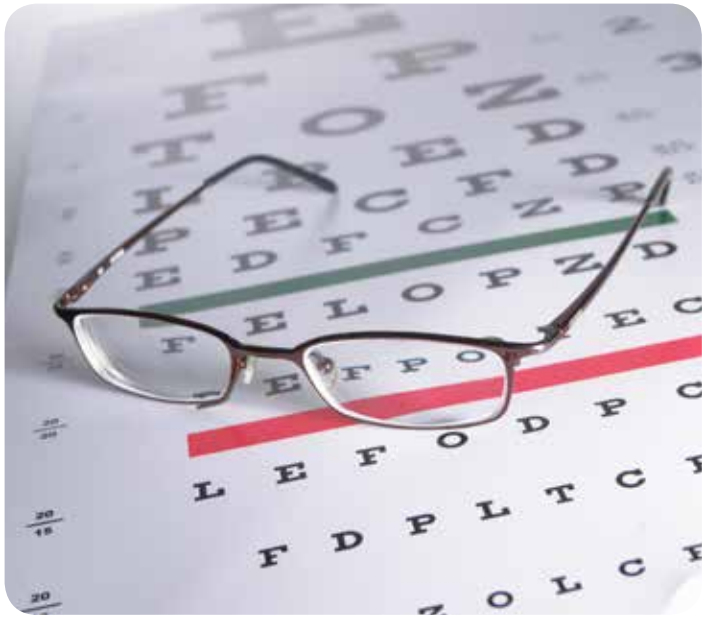
Several methods for disinfecting equipment for eye protection are acceptable. The most effective method is to disassemble the goggles or spectacles and thoroughly clean all parts with soap and warm water. Carefully rinse all traces of soap, and replace defective parts with new ones. Swab thoroughly or completely and immerse all parts for 10 minutes in a solution of germicidal deodorant fungicide. Remove parts from solution and suspend in a clean place for air drying at room temperature or with heated air. Do not rinse after removing parts from the solution because this will remove the germicidal residue which retains its effectiveness after drying.

The dry parts or items should be placed in a clean, dust-proof container, such as a box, bag, or plastic envelope, to protect them until reissue.

Contacts and Prescription Lenses

Employers must ensure that employees who wear prescription (Rx) lenses or contacts use personal protective equipment (PPE) that incorporates the prescription or use eye protection that can be worn over prescription lenses.

Dust and chemicals present additional hazards to individuals who wear contacts. OSHA recommends that workers have an extra pair of contacts or eyeglasses in case of contact failure or loss.



Paying for Eye Protection

Employers generally must provide required eye protection at no cost to the employee. However, there is an exception – employers are not required to pay for prescription safety glasses provided that:

- The glasses are non-specialty protection (e.g., general safety glasses to protect against impact); and
- The glasses are allowed to be worn off the job.

For example, prescription eyewear inserts/lenses for full face respirators are considered to be specialty eye protection, therefore the exception would not apply and employers would have to pay for the equipment.

On the other hand, ordinary prescription safety glasses to protect against general impact hazards would not have to be provided for free, if the employer allows the employee to take the glasses off the job.

Safety focus: Step-by-step: Using ladders safely

Ladders are useful tools when it comes to performing work at elevated heights. They are safe alternatives to standing on chairs or other objects. However, working on ladders can be hazardous since falls are one of the leading causes of occupational injuries and fatalities. Improper use, lack of maintenance, and failure to follow proper climbing techniques are major sources of injury. You need to learn how to use ladders safely to prevent falls.

Choosing a Ladder

The first step is choosing the correct ladder for the job. Look at the job that needs to be done and think about the ladder size and type needed. Follow these guidelines for choosing a ladder:

- Don't use or build makeshift ladders out of chairs, benches, or boxes. If the job calls for a ladder, take the time to find one.
- Choose a ladder height so that you don't need to stand higher on the ladder than you should.
- Choose a ladder that can support your weight and any tools that you might need to use.

Inspect the Ladder Before Use

- Check the ladder's condition before climbing. Don't use a ladder with broken or cracked rails or rungs.
- Look for corrosion and broken or split side rails. Make sure hardware and fittings are secure.
- Look to see moveable parts operate freely without binding or excessive play.
- Clean the ladder if needed, especially if the rungs are slippery with grease or oil.
- If a ladder is damaged, take it out of service until it has been repaired.

Ladder Set-up

- Check where you are going to place the ladder. Make sure you have a level area that is solid.
- Place the ladder so it has secure footing. Don't place a ladder on boxes or blocks to make it taller.
- Do not use a stepladder as a straight ladder in a folded and leaning position.
- Make sure stepladders are in a fully open position and braces are locked before climbing.
- Set straight ladders up properly by using the 4 to 1 rule. The distance from the wall to the base of the ladder should be one fourth the distance from the base of the ladder to where it touches the wall.
- Don't stand on top of a step ladder. Also be careful not to get too close to the top of an extension or straight ladder.
- Watch for people walking or working around where you place the ladder.

Proper Climbing Techniques

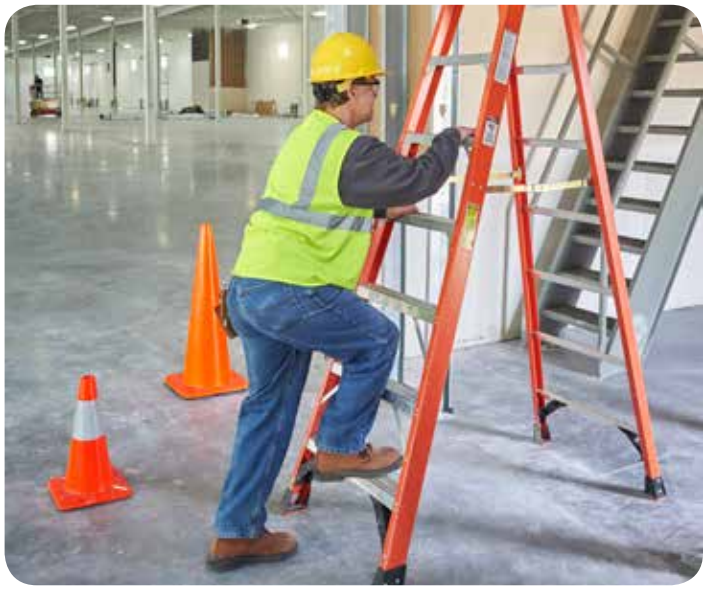
Follow these climbing techniques to climb a ladder:

- Face the front and use three points-of-contact as you climb or descend.
- Keep your body near the middle of the step and always face the ladder while ascending or descending.
- Do not carry objects or a load that could cause a loss of balance and a fall.

Using Ladders Safely

- Wear appropriate footwear for climbing a ladder.
- Make sure there is only one person on a ladder at a time. Don't overreach from a ladder. If your waist reaches past the uprights, you've gone too far — move the ladder.
- Hoist tools or heavy materials up to you after you reach the top of the ladder. You need both hands for climbing.
- Never move a ladder while you or someone else is standing on it.
- After use, collapse ladders and store in a proper area so they don't create a tripping hazard.

Ladders are essential tools that can make your job easier. Take the time to use them correctly to prevent injuries.



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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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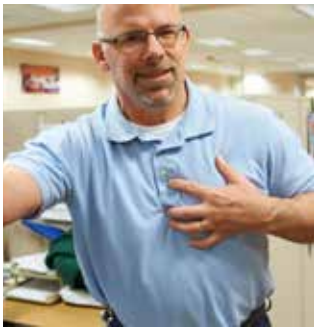
Take action to support heart health

"He who has health has hope; and he who has hope, has everything."

Arabian Proverb



Lower your chances of heart disease by keeping risk factors in check.

Heart disease is responsible for 1 in 4 male deaths, but many men may not realize when their life is at risk.

The Centers for Disease Control and Prevention (CDC) points out that half of the men who die suddenly of coronary heart disease did not experience symptoms.

To lower your risk for heart disease, it's important to stay on top of heart health risk factors, such as blood pressure and cholesterol levels. In addition, make lifestyle choices that support cardiovascular health. To support heart health:

Bring on healthy foods. A heart-healthy diet includes a variety of fresh fruits and vegetables, whole grains, skinless poultry, and fish. Select low-fat dairy products and eat fewer processed foods. Choose foods that are low in saturated and trans fat, and high in fiber, to help lower cholesterol. Limiting salt can help lower blood pressure; flavor your food with herbs instead. Also limit red meat and sweets.

Burn calories with activity. Being active can help you reach and maintain a healthy weight. Aim for 150 minutes of moderate exercise each week, such as brisk walking or biking. If you can't set aside a long period of time for daily exercise, fit several 10-minute bouts of exercise into your day.

Don't smoke. About 1 in 6 men smoke cigarettes, according to the CDC. Smoking increases the risk of heart disease and stroke, as well as cancer. It damages the way the heart functions and also harms the structure of blood vessels.

Limit alcohol. Drinking too much alcohol can raise blood pressure. If you drink, do so moderately — up to two drinks per day for men and one for women.

Get regular checkups. Ask your doctor if your weight is in a healthy range, and have your blood pressure checked. High blood pressure has no symptoms and is a risk factor for heart disease. Also ask your health care provider about cholesterol levels, as high cholesterol is also a key risk factor, and talk about additional steps you can take to lower your risk for heart disease.

Risk factors for heart disease:

- High blood pressure
- High LDL (bad) cholesterol
- Smoking
- Diabetes
- Being overweight or obese
- A poor diet
- Physical inactivity