Welding Can Hurt More Than Eyes

What’s At Stake

Welding is a routine job on many worksites. This common task has many health and safety risks that can result in serious injury, endangering more than 500,000 workers in a variety of industries. It’s not just those involved directly with welding who are at risk. Bystanders can also be affected. So it’s important for everyone to have a basic knowledge of welding hazards.

What’s The Danger

There are more than 70 different welding processes used in numerous industries. The hazards associated with these operations include eye damage, hearing damage, ergonomic injuries, electrical shock, exposure to toxic fumes and burns.

Example

A worker was using an oxygen/propane torch to cut scrap metal when his coveralls, which were not flame-resistant, caught fire. He suffered second and third degree burns to his legs, thighs and groin.

Explaining The Hazards

It’s no surprise welding can cause damage to your eyes if you don’t use the proper eye protection. But your hearing, skin, neck, back, head and your respiratory system are also all at risk when performing welding operations.

Here’s how:

Skin: Unprotected skin is exposed to hot metal, sparks and ultraviolet radiation from a welding arc.

Hearing: Some welding operations can generate noise at levels that cause hearing loss.

Respiratory: If you perform welding operations in a poorly ventilated area, you're at risk of inhaling fumes, gas and dust.

Head: If your head is uncovered, your scalp can be exposed to UV radiation and burns from sparks.

Neck and back: Standing for long periods of time bent over your work can cause stress to your back. The traditional "nodding of the helmet"—flicking your face shield down with your head and neck just before the arc is struck—can cause neck strain.

Eyes: The hazards to your eyes include:

- burns caused by sparks, heat, molten metal and ultraviolet rays,
- cuts caused by flying spatter, and
- flash burns, commonly known as welder's flash or arc eye.

How To Protect Yourself

All of these hazards point to the importance of wearing the right personal protective equipment (PPE) when welding.

Talk with your supervisor about what PPE you need to protect yourself from the welding task at hand. Some of the most common PPE include filtered eyewear, including face shields, goggles and glasses, as well as appropriate eye protection. Hearing protection may also be required.

Protective clothing includes non-flammable head protection, leather jackets and aprons, welding gloves and long-sleeved shirts with buttoned cuffs and a collar. Pant legs should cover the tops of high-cut leather safety boots, and should not have cuffs, as cuffs can collect sparks.

It's important to keep clothing dry and free of oil, grease, solvents and combustible contaminants. Also, keep in mind that repeated laundering reduces the effectiveness of flame retardant treatments.

Respirators may be needed for some welding jobs, especially when

there is not sufficient ventilation to remove the welding fumes or there is oxygen deficiency. You must be properly trained in the use of the respirator and be aware when you need one. Your supervisor will be able to tell you the requirements needed when using a respirator.

Final Word

Welding jobs are necessary, but there are many hazards that come with the task. Protect yourself from these hazards. The few minutes it takes to put on the PPE can prevent injuries that will last a lifetime.