

Welding—MSDs

Explain dangers

Welding presents workers with a number of hazards. The most common are

- metal fumes
- welding arc light (both visible light and invisible ultraviolet light)
- particles getting in your eyes
- burns
- noise.

Welding also comes with the risk of developing a musculoskeletal disorder (MSD). Most studies on this topic have found that the main contributing factors to MSDs come from work conditions such as

- awkward postures from squatting, kneeling, or stooping due to the confined or tight locations
- lifting heavy equipment or materials
- keeping your neck bent or keeping your shoulders raised for a long time
- increased stress on your neck from supporting the heavy weight of a hard hat and welding mask.

These conditions can lead to MSDs such as back, shoulder, neck, or knee problems.

Identify controls

You can prevent MSDs associated with welding by reducing or eliminating:

- forceful exertion (e.g., heavy lifting).
- awkward postures (eg. body positions where you don't move for a long time).



Reducing forceful exertion

- Use auto-darkening lenses. They darken as soon as the arc is struck, eliminating the need to keep opening and closing your helmet. This reduces neck strain.
- Use mechanical lifting equipment whenever you can, particularly when loading or unloading material.
- Pre-assemble parts and use material handling equipment to help reduce unnecessary lifting.
- Use height-adjustable mobile lift tables for transporting material into the workshop. These tables can also be used to support material when you're loading machines. A smaller table can be used for smaller sheets of metal or machines such as a punch press. The larger table can be used for the "break and bending presses" as well as incoming materials.
- When you have to lift, ask someone to help you.

Reducing awkward postures

- Position the work at a height between your waist and your shoulder.
- Use lifting and turning tables with wheels.
- Use welding guns that have swivels and can be used in either hand.
- Sit on a work stool when the work is low.
- Use a work table or workbench instead of bending over to work on the ground.
- Use a rotating clamp for pipe.
- Put your welding leads on pulleys.
- Take stretch breaks throughout the day to relieve discomfort and get the muscles moving.

Demonstrate

More than half of the injuries to welders involve the back, neck, shoulders, arms, and hands. Ask workers to describe any problems they have had to these parts of the body.

Discuss how those problems can be avoided.