

Company \_\_\_\_\_ Location \_\_\_\_\_ Date \_\_\_\_\_

### Vol 27 - No 21 MANGANESE POISONING & WELDING

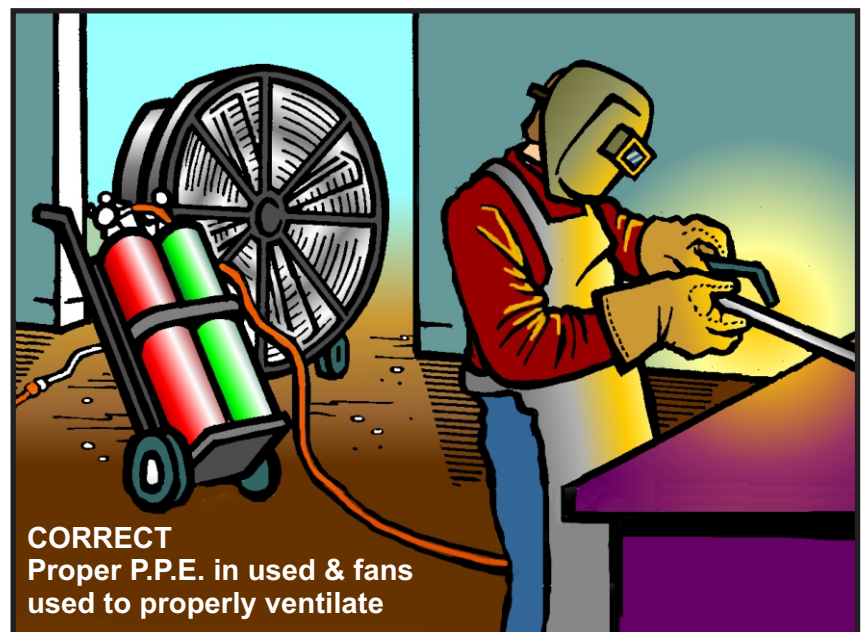
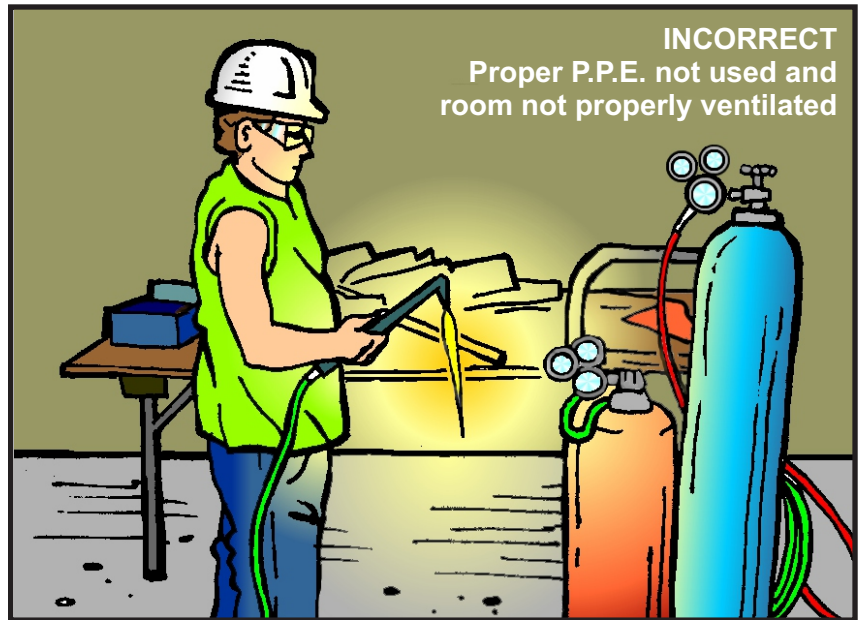
Manganese is a naturally occurring metal that is usually found in compound form with other elements such as oxygen, sulfur or carbon. A small amount of manganese is essential to human health, but over exposure to manganese can lead to manganese poisoning and a condition known as Manganism.

The two most common ways that people are exposed to manganese occur through ingestion and inhalation. A small amount of manganese in foods is essential to maintaining good health but large amounts can be dangerous. Fumes from welding, steel manufacturing, mining and railroad work contribute to manganese inhalation. People who work with manganese on a daily basis are at the highest risk of exposure to manganese.

The symptoms of Manganism include tremors, lethargy, impaired coordination, speech difficulties and an awkward gait. Because Manganism and Parkinson's Disease share similar symptoms, experts have classified Manganism as a Parkinson's syndrome. Researchers are also trying to determine if welding is an environmental cause of Parkinson's Disease. Parkinson's Disease is a progressive movement disorder that affects more than 1 million Americans. It is characterized by slowness of movement and tremors that affect one side more than the other. Although genetics can account for some cases, 80 percent of sufferers lack a family history of the disease.

Welding is usually safe because of the many precautions taken. However, welding equipment used improperly can expose welders to a number of hazards including toxic fumes, dusts, burns, fires, explosions, electric shock, radiation, noise and heat stress. Any of these hazards can cause injury or death. Welders are sometimes exposed to temperatures in excess of 10,000 degrees. Welders know it is important that the workplace be made fire safe. Welders also know it is essential that operators and helpers be properly clothed and protected because of the heat, ultra-violet rays and sparks produced by the welding equipment. What welders may not know is that welding may cause Parkinson's Disease. A scientific research team found that professional welders developed typical clinical and neurological signs of the disease an average of 15 years earlier than the general population. The majority of these patients had a much younger age of onset. The theory is that we have identified a group of people who probably would have developed the disease eventually, but something in the welding equipment caused them to develop symptoms earlier.

The best prevention is to use all possible precautions when welding and make sure that the area is well ventilated to reduce the inhalation hazard.





# TOOLBOX

## SAFETY TRAINING

Company \_\_\_\_\_ Location \_\_\_\_\_ Date \_\_\_\_\_

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