

# Manganese

Exposure to Manganese has the potential to harm your health. Contact with any hazardous substances can cause health effects and the occurrence and nature of the effects depend on how much, how long and how one comes into contact with the substance.

## What is Manganese?

Manganese is an essential nutrient that occurs naturally in the environment. It occurs in low levels in the air, water, soil, and food, Manganese can be found in grains and cereals, and is found in high amounts in other foods, such as tea.

## How could I be exposed to Manganese?

People can be exposed to manganese by ingestion or inhalation.

What are the sources? Some people are exposed to eating food or supplements containing manganese. The way manganese gets into your body is by eating food, drinking, swimming or bathing in water or breathing in workplace air contaminated with manganese. Workers in the welding or factory industry may be exposed through air in the workplace. Manganese is used in a variety of products such as fireworks, dry-cell batteries, fertilizer, paints and cosmetics. Manganese is also found in the environment in soil and water after release from the manufacture, use and disposal of manganese based products.

## What are the health effects of Manganese Exposure?

Depending on the concentration, manganese exposure may cause neurological effects on the most vulnerable populations, which includes infants, children, and pregnant women.

## How can I limit or prevent my exposure to Manganese?

- Avoid manganese exposure sources.
- Test your well water on a regular basis.
- Workers with potential for manganese exposure should remove contaminated clothing before getting in car or entering your house.
- Weld objects in a well-ventilated area and use an appropriate respirator to reduce inhalation of fumes.

## Is there a medical test to show if I have been exposed to manganese?

Manganese is an essential element in the body so there will always be some present. Levels can be measured in the blood, hair, feces, and urine. Increased levels in your in your body may not indicate the health effects experienced from the exposure.

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## Additional Information

Call the N.C. Department of Health and Human Services, Division of Public Health at (919) 707-5900 for additional information.

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Agency for Toxic Substances & Disease Registry (ATSDR). Manganese. March 2011. Available at: [www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=23](http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=23)

## References

Agency for Toxic Substances & Disease Registry (ATSDR). Public Health Statement for Manganese. January 2015. Available at: [www.atsdr.cdc.gov/phs/phs.asp?id=100&tid=23](http://www.atsdr.cdc.gov/phs/phs.asp?id=100&tid=23)

Agency for Toxic Substances & Disease Registry (ATSDR). ToxFAQs for Manganese. March 2014. Available at: [www.atsdr.cdc.gov/toxfaqs/tf.asp?id=101&tid=23](http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=101&tid=23)

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