Journal of Heavy Metal Toxicity and Diseases
ISSN: 2473-6457

Open access Perspective

The Silent Threat: Health Disorders due to Heavy Metal Toxicity

Wang Tang*

Department of Environmental and Biological Engineering, Lanzhou University, China

INTRODUCTION

Heavy metals are essential micronutrients in small amounts, an excessive accumulation of these elements can pose significant health risks, leading to a range of health disorders. This phenomenon, known as heavy metal toxicity, is a silent threat that warrants attention and understanding. Heavy metals such as lead, mercury, cadmium, arsenic, and nickel are commonly encountered in various industrial processes, pollution sources, and natural deposits. Their toxicity stems from their ability to accumulate within the body over time, interfering with normal cellular functions and biochemical processes. Exposure to heavy metals can occur through inhalation, ingestion, or skin contact, making virtually everyone susceptible to their adverse effects.

DESCRIPTION

Lead, a well-known heavy metal, has been linked to numerous health issues, especially in children. Lead poisoning can occur through exposure to lead-based paint, contaminated water, and certain consumer products. The effects of lead toxicity are particularly concerning in developing brains, as it can lead to cognitive impairments, learning disabilities, and behavioural problems. Even low levels of lead exposure have been associated with decreased IQ levels and attention deficits in children, highlighting the importance of preventing lead exposure early in life. Mercury, a toxic heavy metal found in various forms, poses a significant threat to the nervous system. Methylmercury, a type of organic mercury commonly found in seafood, is especially concerning due to its ability to accumulate in aquatic food chains. Prolonged exposure to high levels of methylmercury can lead to irreversible neurological damage, resulting in symptoms such as tremors, memory loss, and cognitive decline. Pregnant women and young children are particularly vulnerable, as mercury exposure during pregnancy can impact foetal brain development. Cadmium, often released into the environment through industrial activities and tobacco smoke, is known for its harmful effects on the kidneys. This heavy metal accumulates in the kidneys over time, impairing their function and increasing the risk of kidney disease. Long-term exposure to cadmium has been associated with renal dysfunction, osteoporosis, and even an elevated risk of certain types of cancer, making it crucial to reduce exposure to this toxic metal. Arsenic, found in drinking water, food, and industrial processes, is a highly toxic element that affects multiple body systems. Ingesting high levels of arsenic over time has been linked to various health disorders, including skin lesions, cardiovascular diseases, and various types of cancer, such as skin, lung, and bladder cancer. Regions with naturally elevated levels of arsenic in their water sources are at heightened risk, underscoring the importance of regular water testing and effective filtration methods. Nickel, commonly used in various consumer products like jewellery, coins, and clothing fasteners, can cause skin sensitization and allergic reactions upon direct contact with the skin. Nickel allergy is one of the most prevalent contact allergies worldwide, leading to skin rashes, itching, and discomfort.

CONCLUSION

Heavy metal toxicity is a significant health concern with far-reaching consequences. The various health disorders associated with heavy metal exposure highlight the urgent need for awareness, prevention, and action. By understanding the sources of heavy metal exposure and implementing strategies to reduce it, we can work towards a healthier future for ourselves and the generations to come.

Received:	01-May-2023	**Manuscript No:**	ipjhmct-23-17457
Editor assigned:	03-May-2023	**PreQC No:**	ipjhmct-23-17457 (PQ)
Reviewed:	17-May-2023	**QC No:**	ipjhmct-23-17457
Revised:	22-May-2023	**Manuscript No:**	ipjhmct-23-17457 (R)
Published:	29-May-2023	**DOI:**	10.21767/2473-6457.23.3.28

Corresponding author Wang Tang, Department of Environmental and Biological Engineering, Lanzhou University, China, E-mail: w_123@gmail.com

Citation Tang W (2023) The Silent Threat: Health Disorders due to Heavy Metal Toxicity. J Heavy Met Toxicity Dis. 08:28.

Copyright © 2023 Tang W. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

© Under License of Creative Commons Attribution 4.0 License
This article is available in: https://www.primescholars.com/heavy-metal-toxicity-diseases.html