

## Heavy Metal Toxicity and Measures to Removal

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### Editorial

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### Editorial

Metal toxicity is very common in today's life style this is one of the pathological condition resulting into many diseases like Hypertension, Kidney damage, Asthma, Chronic Bronchitis, Cardiac disorders, Abdominal cramps, Vomiting, Nausea, Allergic reactions, Muscle weakness etc. The toxic metals include mainly mercury, arsenic, lead, cadmium, barium, chromium, beryllium, copper and selenium. These metals are normally present in the natural environment in traces. However when they are found in larger amounts they may impose additional risks to the body [1].

Toxic metals normally acquire through ingestion, drinking, eating, and breathing or inhalation. Some people acquire mercury and lead through some selected substandard Ayurved, Unani and Siddha medicines. Sufficient mercury is picked up through fish consumption for there to have been warnings about over-consumption of certain types of fish. People living / working in industrial areas where these metals are utilized, or those who reside in areas where these metals are disposed improperly in particular in coastal regions.

ASU-Ayurved, Siddha and Unani some classical selected metallic drugs are having mercury, lead, copper as inbuilt ingredients [2]. The preparation of such drugs requires the through purification of metallic ingredients adopting classical methods. The purification and manufacturing of such drugs is very much time and labor consuming and hence causes increase in cost. It is observed that, such substandard drugs are available in the market. Consumption of such substandard drugs is hazardous to the health giving rise to many diseases in particular kidney damages. The standard ASU metallic classical drugs strictly prepared as per the classical

methods are not toxic but more effective and beneficial; such studies are conducted in AIIMS New Delhi by CCRAS-AYUSH Ministry [3].

The remedial measures for metal toxicity are many and proved scientifically in many institutes. The following herbs are having proved to have detox properties against many toxic metals.

1. Coriander-also known as cilantro and Thai parsley-It is readily available almost in all parts of world, inexpensive and shows promise in removing certain metals, such as lead, copper and mercury, that can be harmful to human health [4].
2. The Coriander is a common spice used in many communities, the paste in the form of Chutney or dry powder of Coriander seeds 4 to 5 gm. twice daily with water after food is beneficial in heavy metal toxicity.
3. The potential of Moringa Olifera whole seed kernels and ram press cakes, in removing lead, iron, and cadmium ions from synthetic contaminated water was investigated and found positive results [5]. The Moringa Olifera is a common vegetable in Asiatic countries; every part of this plant possesses medicinal properties. The paste or dry powder of leaves or dry seeds 2 to 3 gm. twice in a day with water after food is beneficial in heavy metal toxicity.
4. Garlic- the study is conducted in college of medicine Seoul, Korea and demonstrated that the consumption of Garlic reduced the Mercury and Cadmium from body reduced the pathological changes in liver, kidney, bone and testes [6-8].

Garlic is a spice used in curry, vegetable and chutney, it has many medicinal properties. The paste of Garlic buds

2 to 3 gm. Or dry powder 1 to 2 gm. After food with water is beneficial in metal toxicity.

### References

1. (1970) Toxic Metals.
2. Rasratnakar (2015) Rasdhatuprakash Chaukhamba Prakashan Varanasi.
3. Gupta YK (2014) Effect of Traditionally used Ayurvedic Rasa Aushadhies on Renal and Hepatic Functions: Clinical and Experimental Study (November 2009-March 2014), Delhi.
4. (2005) A study by the Department of Atomic Energy in India found cilantro able to remove mercury ions from aqueous solution "with good efficiency.
5. Karunasagar D (2005) Removal and pre concentration of inorganic and methyl mercury from aqueous media using a sorbent prepared from the plant *Coriandrum sativum*. J Hazard Mater 118(1-3): 133-139.
6. Nand V, Maata M, Koshy K, Sotheeswaran S (2012) Water Purification using *Moringa oleifera* and Other Locally Available Seeds in Fiji for Heavy Metal Removal. International Journal of Applied Science and Technology 2(5): 1-5.
7. Cha CW (1987) A study on the effect of Garlic to the heavy metals poisoning of Rat J Korean Med Sci 2(4): 213-224.
8. Carr HP, Carino FA, Yang MS, Wong MH (1998) Characterization of the Cadmium-Binding Capacity of *Chlorella vulgaris*. Bulletin of Environmental Contamination and Toxicology 60(3): 433-440.

