

Metal Exposure from Utensils: Risk to Public Health- An Illustartive Review †

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Abstract: Elements (micro and macro) are essential for humans. It has been established from various researches that concentrations of heavy metals higher than permissible limits are harmful to humans due to their toxic nature. Metabolic functions in humans are disturbed due to heavy metal poisoning, mainly due to disruption in the functioning of vital organs. Additionally, due to the chelation effect of certain heavy metals, the metabolism of essential elements is affected. Elevated levels of heavy metals have been reported in the food chain at several levels. Environmental pollution, due to massive industrialization, is one of the primary reasons for heavy metal contamination of food and water bodies. There have been various studies that have shown that the type and nature of cookware and cooking process can also lead to the increase of heavy metals contamination in food. Due to the leaching effect, cooking utensils are a potential source for contamination of heavy metals. Certain cookware leach out of heavy metals at high temperatures and changes in pH, e.g., acidic foods such as tomatoes prepared in aluminum pots. In the present work, a comprehensive analysis of heavy metal toxicity due to cooking utensils has been reviewed. The focus has been made on the leaching of metals from different types of utensils.

Keywords: heavy metals contamination; metal toxicity; metal poisoning; utensils.

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Conflicts of Interest

The authors declare no conflict of interest.