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Revisiting few metals, their sources, applications and medicative treatment potentials against their toxic manifestations

Pratima Dutta, *Satendra Kumar Nirala

Department of Rural Technology and Social Development
Guru Ghasidas Vishwavidyalaya (A Central University)
Koni- Bilaspur 495009 (Chhattisgarh) India

*Corresponding Author

Email: satendrak75@rediffmail.com

ABSTRACT

The enchanting eclat of nature endow blissful life to all living forms. Unfortunate deliverance of pollutants makes environment impure. The geogenic and anthropogenic activities possibly introduce health hazards to the individuals. However, Industrial production, pesticide production, metallic industries, smelting industries, electronic gadgets, vehicular emission, waste and garbage disposal and natural factors are considered to be the wide sources of heavy metal pollutants. High atomic weight, higher density, no. of oxidation states and concentration dependent toxic exposure to heavy metals develop a number of diseases in human and animals. The release of metals may arrive into the body via food, water, air and dermal contact. Environmental and anthropogenic activities adversely disturb the physiological and histological functions of organs and tissues. Bioaccumulation of heavy metals disorganize cellular events, damage deterioration, apoptosis, genetic function, immoderate generation of free radicals, organ failure and ultimately death. However, toxicological profile of metals considerably depends on various factors like route of exposure, dose, age, sex and health status of an individual. Moreover, worldwide utilization of heavy metals in several forms and occupational exposure induce degree of toxicity in liver, kidney, brain, heart, lungs, intestine, blood components and other tissues and organs. This review presents an insight towards source, applications, toxicological mechanism of action and therapeutic aspects of few metals,