**Lead poisoning and its toxic effects**

Oyesiji Rilwan Oyebamiji[1], Tamar Kezeli[2], Nodar Sulashvili[3]

[1]The University of Georgia, School of Health Sciences and Public Health
[2]Tbilisi State University, Faculty of Medicine
[1]Student of pharmacy program in English[1]; [2]Supervisor, MD, PhD, Professor[2]; [3]Supervisor, PhD (c)[1]

The toxic effects of lead have been recognized since ancient times. Today, lead and its compounds are some of the most well□studied environmental toxicants. There are Common toxic agents also heavy metals, drugs, organophosphates, bacterial, and animal neurotoxins. Among heavy metal exposures, lead exposure is one of the most common exposures that can lead to significant neuropsychological and functional decline in humans. Lead toxicity is an important environmental disease and its effects on the human body are devastating. There is almost no function in the human body which is not affected by lead toxicity. Though in countries like US and Canada the use of lead has been controlled up to a certain extent, it is still used vehemently in the developing countries. This is primarily because lead bears unique physical and chemical properties that make it suitable for a large number of applications for which humans have exploited its benefits from historical times and thus it has become a common environmental pollutant. Lead is highly persistent in the environment and because of its continuous use its levels rise in almost every country, posing serious threats. Lead is a metal with many recognized adverse health side effects, and yet the molecular processes underlying lead toxicity are still poorly understood. Lead poisoning causes severe effects and is a matter of serious concern, yet importantly, it is preventable. The best approach is to avoid exposure to lead. It is recommended to frequently wash the hands and also to increase their intake of calcium and iron. Vacuuming frequently and eliminating the use and or presence of lead containing objects like blinds and jewellery in the house can also help to prevent exposures. House pipes containing lead or plumbing solder fitted in old houses should be replaced to avoid lead contamination through drinking water. It is believed that hot water contains higher lead levels than dose cold water, so it is recommended that for household uses cold water should be preferred to hot water. The treatment for lead poisoning consists of dimercaprol and succimer. Due to the persistent findings on cognitive deficits caused by lead poisoning particularly in children, widespread reduction of exposure should be mandatory. In order to prevent lead poisoning and toxicity, proper diagnosis is a primary and rather important issue. In order to make a proper diagnosis, an inquiry about the possible routes of exposure is a must. The inquiry should include medical history and determination of clinical signs. The involvement of proper staff, *i.e.* clinical toxicologists and medical specialists, can help in establishing proper diagnosis and treatment. Several methods are used to detect elevated blood lead levels. The presence of changes in blood cells visible under the microscope or deletion of dense lines in the bones of children seen on X-ray are signs used for detecting lead poisoning. However the main tool to detect elevated levels of body lead is to measure the level of lead in blood samples. This test gives however only an account of lead present in circulating blood but cannot show how much lead is stored in the body.

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