TURJOEM
The Turkish Journal of Occupational / Environmental Medicine and Safety

Vol:2, No:1 (1), 2017 Web: http://www.turjoem.com ISSN : 2149-4711

P47. A REVIEW OF HEAVY METAL (As, Pb, Cd and Hg) TOXICITY ON INFANTS

Selda SERT, Zeliha KAYAALTI

Directorship of Chemistry Laboratory, Test and Calibration Centre Department, Turkish Standards Institution (TSE), Gebze Quality Campus, Cumhuriyet Neighbourhood, 2258 Avenue, 10, Gebze, Kocaeli, Turkey
Institute of Forensic Sciences, Ankara University, Turkey

Heavy metals such as lead, arsenic, mercury, cadmium, aluminum and copper constitute one of the most significant pollutant groups in the world. They are considered toxic and hazardous to human being like many organisms due to their poisoning potential even at low concentrations. They may not inflict heavy damages on the general populations but it is not the same for fetuses and neonates since they are much more vulnerable to the all kinds of toxicity owing to their immature detoxification systems. Arsenic, lead, cadmium and mercury acknowledged as the most toxic ones are transferred from mother to child during pregnancy without any filtration by placenta. It could be said that placenta is the biological access of environmental hazards and maternal transfer to the fetus. However, there are not many data concerned with the toxic effects of these metals on infants. It appears that exposure to arsenic during pregnancy may increase the risk of mental and developmental deficiency or even worse fetal and infant death. Exposure to lead during pregnancy may cause the physical and cognitive development of infant adversely. Cadmium may harm the placenta and retard weight gain of the new born. Mercury may also have adverse effects on nervous system of infant. In this paper, a review is presented on the studies related to heavy metal (As, Pb, Cd and Hg) toxicity on infants accompanied by pregnants. The hazard identification and risk characterization of these metals have also been discussed in the paper.

*seldasert.04@gmail.com
Corresponding Author: zkayaalti@gmail.com