16th Global Summit on

TOXICOLOGY & APPLIED PHARMACOLOGY

October 15-16, 2018 | Las Vegas, USA

Environmental and nutritional lead toxicity and study its biological effect on human health

Mufeed J Ewadh[1] and **Mohammed A Ayyash**[2]
[1]Babylon University, Iraq
[2]Food Pollution Center, Iraq

Theoretical: Lead toxicity is a medical condition resulting from elevated lead element levels in the blood. Lead poisoning can lead to damage to several organic organs such as the nervous system, digestive system, reproductive system, circulatory system, and kidney problems. The danger lies in the ability of lead to accumulate in the nervous tissue, especially in children, which makes it more dangerous to them. If not fatal, it causes malfunction and poor performance In the adult context, the owners of some professions such as anesthesiologists, seal makers, and car batteries are the most exposed to lead poisoning.

The aim of the study: The present study aimed to evaluate the environmental and food pollution due to lead poisoning and study its biological effects on human health by examining and analyzing environmental and nutritional samples as well as blood samples.

Methodology: The present study included (50) male person divided into two groups with count (25) male for each. Group (A) was the control group, group (B) included peoples working in gas stations, a battery- making plant and workers in paint factories. "SHIMADZU" GFAAS technique was used for the determination of Lead element. In the biological section; Micronuclei examination, Hb and WBC examinations were done.

Results: The results show that there is an increase in the rate of formation of micronuclei in the peoples who exposed to lead when compared with the control group where the number of micronuclei is increased by increasing lead concentration. This study shows that there are accumulations of lead in environmental, nutritional, and blood samples, which exceed the limits allowed in the world. Harmful gases emitted by factories, cars, and electric generators exhaust, in addition to the industrial waste and garbage.

Conclusion: The results show that there is a clear evidence of a lead effect on the environmental, nutritional, and human body as directly and indirectly due to the accidental contamination. Biological effect on cells show that; Lead exposure in any form leads to increase the formation rate of micronuclei when compared with the control group. The study found that the numbers of micronuclei increase exponentially with the increases in lead concentration.

Biography

Mufeed J Ewadh has his expertise in many fields of biochemistry research in his institute dealing with a health problem, herbal extraction, alternative medicine. He participated in many international and local conferences and workshops which deal with improvement of biochemical research to increase people awareness about its role. He participated in the post-doctorate course in Marburg University (Germany) in 2005, and he participated in the electrophoresis workshop in Japan for two weeks as well as in biochemical workshop in Leipzig (Germany), 2016. His postgraduate supervision deals with many graduate students (MSc and PhD) which focus on publishing more than 134 papers in different local and international journals. His interest in publishing research paper made his institute to nominate him as the best professor for two years (2003), (2009). He is chief editor of the most famous journal in Iraq (Medical Journal of Babylon) and he got many rewards during his scientific life.

mewadh@yahoo.com

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