

## Evaluation of the Effects of Lead on Some Physiological and Hormonal Biomarkers among Workers

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**Abstract :** Environmental and biological monitoring are used for the evaluation of exposure to industrial chemicals, and provide a tool for assessing workers' exposure to chemicals. The organs or tissues where the first biological effects can be observed with increasing amounts of lead toxicity. This study aims at evaluating the effect of the metal element-trace; lead, on the sex hormones in male workers, exposed to this metal on the level of the manufacturing plant of lead accumulators. The results indicate a significant reduction of the testosterone concentration in exposed workers compared to the control. However, the rate of LH was strongly increased at the individuals exposed to Pb. A significant difference concerning the rate of FSH, the hormone Prolactin and cortisol was recorded. The indicators of the lead poisoning indicate a very highly significant increase in the value of Pbs which vary between (142-796 µg/L) among which 50% of the workers present a high lead poisoning and the value of PPZ which vary between (43-554µg/L). The biochemical parameters show a significant increase in the rate of the créatinine, the urea and the acid urique. The hepatic results show no significant differentiation in the rate of TGO and TGP between both groups of study. However the rates of the enzyme phosphatase alkaline, triglyceride, and cholesterol a significant difference were registered.

**Keywords :** hormones, parameters, physiological, Pbs, PPZ

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