

# The Biological Levels of Lead in Selected Workers

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### **Abstract**

A total of 592 subjects, 385 male and 207 female, from four industrial establishments were studied. Adverse effects of lead in terms of subjective/objective complaints and biochemical indicators were evident among battery and lead smelter workers. The most common complaints were the following: easy to tire, irritability, malaise, muscle and joint pains, abdominal colic and paraesthesia. Lead in blood (PbB) and delta-aminolevulinic acid in urine (ALA-U) were determined by atomic absorption spectrophotometry and colorimetric spectrophotometry, respectively. Levels were observed to be higher in lead smelter workers with a mean PbB and ALA-U of  $82.6 \pm 23.9$  ug/dl and  $7.0 \pm 6.0$  mg/l, respectively. Storage battery workers showed a mean PbB of  $67.1 \pm 18.2$  ug/dl with a mean ALA-U of  $4.7 \pm 3.8$  mg/l. Levels of workers in refrigerator and semiconductor companies were within normal range. Other factors as age, sex, duration of exposure, and smoking which might have significant effects on lead levels were also observed. Results of the survey with appropriate recommendations, were given to the physicians of these companies for proper management and monitoring of their workers.