

## عنوان مقاله:

Investigation of Blood Lead Levels and Its Toxicity in Workers of Zinc Melting Factory of Dandi, Zanjan, Iran

## محل انتشار:

مجله علمی پژوهشی دانشگاه علوم پزشکی زنجان، دوره 17، شماره 66 (سال: 1388)

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## خلاصه مقاله:

Background and Objective: Environmental pollutions that affect human health are one of the important worries related to heavy metals production. Our objective of this study was to investigate the blood lead levels in workers of Zinc melting factory of Dandi Zanjan and to compare its level with healthy men who were living around the factory. Materials and Methods: This study was carried out on ۴۰ workers as case group and ۴۰ healthy non-worker male individuals who were living around the mentioned factory in Dandi region of Zanjan as control group. Blood lead concentrations was measured by graphite furnace atomic absorption spectrophotometer (GFAAS). The data were analyzed using T-test and ANOVA. Results: The mean of blood lead levels in case and control groups were ۱۶.۰۶ and ۱۰.۴۷ µg/dL respectively ( $P = ۰.۰۰۰۱$ ). There was also a significant difference between workers lead levels in different parts of the factory ( $P = ۰.۰۴$ ). Conclusion: Blood lead levels in factory workers were higher than in control group, although blood lead levels were in reference limit in workers on the basis of OSHA standards. Since the major way of lead pollution is respiratory tracts, therefore it is necessary to use appropriate air conditioner systems in such factories.

## کلمات کلیدی:

Key words: Plumbism (Lead toxicity), Blood Lead (PbB), Occupational poisoning, Graphite furnace atomic absorption spectrophotometer (GFAAS)

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