



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية

@ ASUNET



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of
15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالاصل



2011

**Institute of Postgraduate
Childhood Studies
Ain Shams University**

“Long Term Lead Exposure, Effects on Intellectual Functions of Pre-School Children”

Thesis

Submitted for the fulfillment of

**Ph.D. Degree in Medical Childhood Studies
Institute of Postgraduate Childhood Studies
Medical Department**

By

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بسم الله الرحمن الرحيم

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ABSTRACT

The aim of this study was to compare Blood Lead Level (BLL), its inhibitory effect on specific enzymes in the heme synthetic pathway and its toxic effect on the intellectual functions in two groups of preschool children. One group (120 children) was living in an industrial area, the other group (40 children) were living in non-industrial area. The children of the two groups were matched as regards their age, sex, socioeconomic status and anthropometric measurements.

Estimation of BLL, ALAD activity, FEP level, Hb concentration and Hct percent was done. Also, assessment of children's IQ was performed by applying WPPSI. The study revealed that: children from the industrial area were lead intoxicated (mean BLL was 17.9 ± 6.9 $\mu\text{g/dl}$) more than those from the non-industrial area (mean BLL was 8.4 ± 1.9 $\mu\text{g/dl}$). There was highly significant negative correlation between BLL and the activity of the enzyme ALAD in both areas. There was highly significant positive correlation between BLL and FEP in the industrial area only. There was highly significant negative correlation between BLL and IQ in the industrial area. On multiple regression analysis, BLL was the strongest confounding variable affecting IQ in the industrial area, while social status was the confounding variable affecting IQ in the non-industrial area.

Key-Words:

Lead Poisoning – Preschool Children – Aminolevulinic Acid Dehydratase – Free Erythrocyte Protoporphrin – Intellectual Function – Blood Lead – Social Class

