
Children's Environmental Health Research Findings
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Topic: lead poisoning

Title: Surveillance of childhood blood lead levels in Chengdu of China in 2010-2011.

Conclusion: The mean BLL of children in Chengdu (6.2 µg/dL) was higher than that in developed countries.

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Abstract:

Introduction: Lead poisoning has been receiving great attention around the world. The Child Hygiene Cooperation Center of the World Health Organization in China has been conducting investigations to monitor blood lead levels (BLLs) from as early as 2004. However, only several lead poisoning studies have been conducted in China since August 2009. The aim of the present study is to investigate the BLLs in children aged < 7 years and to analyse the risk factors of high BLLs in Chengdu, China. Methods: Questionnaires were distributed to children in Chengdu from 2010 to 2011. A total of 2,271 children were included in this study - 1,157 received BLLs tests in 2010, while the remaining received the tests in 2011. BLL was measured using a Tungsten atomiser absorption spectrophotometer. Results: The mean BLL of the 2,271 children was 6.2 µg/dL and 2.03% of the children had BLLs that were ≥ 10 µg/dL. Mean BLL seemed to increase with age. Unhealthy habits (e.g. not washing hands frequently, and habitual biting of toys and pencils), history of pica, use of coal and living in an industrial zone were found to be the main risk factors contributing to high BLL ($p < 0.05$). Children with high BLL have a higher risk of manifesting anorexia and abdominal pain as compared to children with low BLL ($p < 0.05$). Conclusion: The mean BLL of children in Chengdu (i.e. 6.2 µg/dL) was found to be higher than that in developed countries. Childhood lead poisoning remains a public health problem.

Keywords: lead, child