

Letter to the Editor: The Pundit Speaks

By Randolph M. Howes, M.D., Ph.D.

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“Lead Exposure May Be as Deadly as Cigarettes”

Lead exposure may be killing as many Americans as cigarettes. A new analysis using data from the Third National Health and Nutrition Examination Survey (NHANES-III) showed blood lead levels in adults not currently considered to be harmful are associated with an increased risk of death from cardiovascular disease, as well as a greater likelihood of dying from any cause. Lead exposure is a leading, but largely ignored, risk factor for cardiovascular disease. Chronic lead exposure is a known contributor to hypertension and cardiovascular disease. Lead exposure occurs when lead dust or fumes are inhaled, or when lead is ingested via contaminated hands, food, water, cigarettes or clothing. Lead particles or dust can be brought into the home and family vehicle on work clothes and equipment. This is called "take home" lead and it can harm anyone who is exposed. Lead entering the respiratory and digestive systems is released to the blood and distributed throughout the body. More than 90% of the total body burden of lead is accumulated in the bones, where it is stored. Lead in bones may be released into the blood, re-exposing organ systems long after the original exposure. The toxic nature of lead is well documented. Lead poisoning in children is especially dangerous because it can cause learning problems and serious illness. Lead affects all organs and functions of the body to varying degrees. The frequency and severity of symptoms among exposed individuals depends upon the amount of exposure. There are many thousands of people in this country exposed to lead occupationally, in battery manufacture, recycling, police officers who spend time around the firing range because of the lead in the bullets. Since blood borne lead crosses the placenta, a pregnant woman with an elevated blood lead level may expose her fetus to the toxic effects of lead. All women should receive guidance on preventing lead poisoning before and during pregnancy. In the NHANES-III study, higher blood lead was associated with being older, less educated, male and a cigarette smoker as well as heavy drinking and unhealthy eating, high cholesterol, hypertension, and diabetes. Experts say, “If these results are borne out, lead is going to have to be added to that list of major risk factors for heart disease, and doctors are going to have to start systematically inquiring about lead exposure and take a systematic occupational history.” Dr. Bruce Lanphear of Simon Fraser University in Vancouver and colleagues estimate lead exposure accounts for 412,000 adult deaths in the US annually, comparable to the number of people who die of cigarette smoking-related causes and 10 times higher than the current estimate of lead-related deaths.

In the America that I love, please pay attention to scientific facts.

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