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# EDITORIAL

## Pediatric lead poisoning: a continuing public health problem

The problem of lead toxicity has been with us for many years and continues to be a public health concern albeit at levels of lead exposure well below those formerly associated with harmful health effects. Frank lead poisoning in children oftentimes results in severe neuropsychological deficits, encephalopathy, or, in severe cases, death.

The health effects of lead in children at much lower exposure levels are currently under investigation in a prospective study in Cincinnati, Ohio. In this study exposure to lead continues to be a problem in urban, inner-city areas where older, poorly maintained housing contains substantial amounts of lead-based paint. This has largely been viewed as a problem for lower-income, inner-city residences. However, with the current 'homesteading' trends and revitalization of inner-city areas, middle income families are also at risk for lead exposure. These families often are actively engaged in rehabilitating interior and exterior lead painted surfaces, thus, potentially increasing their own exposure.

Adverse health effects have been identified among infants whose mothers had low levels of lead in their blood. Studies indicate that exposure to even moderate to low levels of lead *in utero* increases the likelihood that a child will be born with a lower birth weight and perhaps show delayed neurological development (Dietrich et al. in press).

Lead laden materials are readily available in many dwellings built before World War II. Such housing is characteristic of many urban neighborhoods. The age of the dwelling indicates when lead-based paint was frequently used. Lead in soil, household dust and chalking or cracked surfaces pose a real hazard to infants and young children since they spend a good deal of time on the floor. Motor advances from rolling to crawling to standing, in conjunction with improved eye-hand coordination, provide a dangerous mechanism of exposure to lead in a normally developing or advanced infant. That is, the normal to precocious infant showing early development of grasping objects, eye-hand coordination, mouthing, and/or mobility may have greater access to available environmental lead (Krafft et al. 1986).

This early developmental period represents a critical stage in central nervous system maturation and a particularly sensitive one in terms of producing long-term and potentially irreversible health effects. The role of health care professionals in prevention and intervention of lead exposure in children requires multidisciplinary action with well informed team members. A common feature of lead poisoning, especially in children from low income families where dental hygiene is oftentimes inadequate, is the formation of the Burontina blue line or "Lead Line" at the gingival margin. Hopefully, identification of an individual with such frank lead toxicity is infrequent. Other factors which have been associated with lead exposure include: lower socioeconomic status; anemia, poor nutrition; obvious signs of neglect; poor overall hygiene, especially hands; and noticeable fingers-in-mouth activity in preschool to school age children.

If lead toxicity is a real or potential health hazard for your pediatric patients, public health officials should be consulted. Some public health programs provide lead screening so that the child's blood lead level can be monitored. In addition, the dwelling may be surveyed for sources of lead and abatement orders issued. Early detection of lead hazards will benefit the child in question as well as other infants and children residing in the same dwelling.

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