Lead poisoning in childhood is a preventable disease. Virtually all cases occur in children who live in old, deteriorated houses which were built and painted years ago when the use of lead-based paints on housing surfaces was widespread. Eighty-five percent of recognized cases occur in children in the 1- to 3-year age range in which pica (the habit of eating non-food substances) is prevalent. Consequently, the disease results from the interaction between hazardous housing and the child with pica. Early diagnosis of plumbism on clinical grounds alone is exceedingly difficult, and often impossible. Furthermore, by the time the clinical diagnosis is obvious, permanent brain damage which cannot be modified by therapy may already have taken place. Although the true incidence of plumbism is not known, careful surveys have revealed that 10 to 25% of young children who live in deteriorated urban slum housing show evidence of increased absorption of lead and that 2 to 5% show evidence of poisoning. While recent therapeutic advances have reduced the mortality of acute lead encephalopathy, it is now apparent that at least one-third of the survivors of encephalopathy sustain permanent irreversible damage to the brain. Significant reduction in the risk of permanent brain damage, therefore, requires identification of the child with increased body lead burden prior to the onset of poisoning. Fundamentally, both the prevention of adverse health effects due to lead and the treatment of identified cases depend upon the elimination of the housing hazard which lies at the root of the problem. In view of the foregoing and in the interest of effective action to eradicate this preventable health hazard to children, the American Academy of Pediatrics recommends that:

1. The major emphasis of programs designed to prevent adverse health effects in children from lead be placed on the testing of dwellings for lead-pigment paints on housing surfaces, both interior and exterior, in order to identify high-risk areas within the community.

2. As a policy, determine lead in blood of all 12-to-15-month-old children living in poorly maintained dwellings in identified high-risk areas and wherever other special local situations expose children to lead hazards. At the very least, a subsequent sample of blood should be obtained during the following spring or summer.

Those children with levels of blood lead greater than 50 μg per 100 ml whole blood should be referred immediately for definitive medical evaluation and a repeat blood lead determination. All children having two blood samples with a concentration greater than 50 μg per 100 ml whole blood should be reported to the responsible local government agency so their environment can be investigated by appropriate officials and action taken to eliminate the hazard.

To be effective, these programs must be supported by local health and housing departments with appropriate personnel and laboratory facilities at their disposal.
ACUTE AND CHRONIC CHILDHOOD LEAD POISONING

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