

**Minnesota Public Health Association Resolution:
Protecting Children from Harmful Effects of Lead in the Environment**

WHEREAS, the toxic effects of excessive lead exposure on the brain and nervous system have been recognized for centuries,¹ and,

WHEREAS, during the second half of the 20th century, it became increasingly evident that lower exposures to lead can also cause lasting intellectual and behavioral impairments, even when the dose is not immediately life-threatening,¹⁻³ and,

WHEREAS, over the past 40 years, science has repeatedly shown that blood lead concentrations once believed to be safe are actually toxic to children's developing brains and nervous systems,⁴ and,

WHEREAS, since the 1960s, the Centers for Disease Control and Prevention (CDC) has reduced its blood lead "level of concern" four times, due to scientific evidence of harm: In 1971, from 60 µg/dL to 40 µg/dL; in 1978, to 30 µg/dL; in 1985, to 25 µg/dL; and, in 1991, to the current limit of 10 µg/dL,⁴ and,

WHEREAS, a large and growing body of scientific evidence published since 1991 demonstrates adverse effects among children whose blood lead concentrations do not exceed the current CDC exposure limit ("level of concern"; "elevated blood lead level") of 10 µg/dL,⁵⁻¹⁶ and,

WHEREAS, studies have found that intellectual impairment, quantified as significant loss of points on IQ tests, is associated with blood lead concentrations under 10 µg/dL,⁵⁻⁷ and,

WHEREAS, researchers have evaluated effects of lead on brain function through the use of a variety of other tests of cognitive ability, academic aptitude, and neurodevelopment, and have reported adverse effects at blood lead concentrations below 10 µg/dL,⁸⁻¹⁰ and,

WHEREAS, a recent study of the impacts of lead on children's academic performance found that blood lead concentrations below 10 µg/dL were correlated with lower reading and math scores on standardized tests that school systems administer to assess children's academic achievement,¹¹ and,

WHEREAS, lead exposure has been identified as a risk factor for attention deficit/hyperactivity disorder (ADHD)¹²⁻¹⁵ and conduct disorder (CD)¹⁶ even when blood concentrations do not exceed 10 µg/dL, and,

WHEREAS, a no-effects threshold for blood lead concentration has not been found,² yet studies have reported more serious neurocognitive effects of lead among children whose blood concentrations are between 5 µg/dL and 10 µg/dL, compared to children with levels below 5 µg/dL,^{6,8,11} and,

WHEREAS, the majority of children exposed to lead paint today are already disadvantaged, mainly living in poverty-stricken areas of our cities, and,

WHEREAS, African-American children as a group and children from lower-income families (of any racial or ethnic background) are subject to disproportionately high exposures,¹⁷ and,

WHEREAS, in 2005, the American Public Health Association (APHA) published a resolution urging the CDC to "substantially lower its current 'blood lead level of concern' because the current action level is set too high and does not adequately protect children from the toxic effects of lead,"¹⁸ and,

WHEREAS, the CDC acknowledges that "research conducted since 1991 has strengthened the evidence that children's physical and mental development can be affected at [blood lead levels] < 10 µg/dL",¹⁹ and,

WHEREAS, investment in lead exposure prevention can yield great economic returns: Decades after the phaseout of lead from gasoline, children's lead exposure from other sources still costs the U.S. economy over \$40 billion per year in lost productivity when children become adults of working age,²⁰ and,

WHEREAS, the State of Vermont,²¹ the City of Chicago,²² the City of Cincinnati,²³ and the City of Cleveland²⁴ have each successfully established a blood lead exposure limit of 5 µg/dL, demonstrating that this standard is both cost-effective and achievable, and,

WHEREAS, policy requiring thorough family education and follow-up venous blood testing at an exposure limit of 5 µg/dL would not change or supersede higher regulatory thresholds already in place (e.g., 15 µg/dL, 45 µg/dL, 60 µg/dL) that trigger more intensive interventions,^{25,26}

THEREFORE, BE IT RESOLVED, that the Minnesota Public Health Association urges Minnesota state and local government agencies to promulgate policy, as resources become available, adjusting the children's blood lead exposure limit ("level of concern"; "elevated blood lead level") from 10 µg/dL to 5 µg/dL, and,

THEREFORE, BE IT RESOLVED, that when a child's blood lead level exceeds 5 µg/dL, the Minnesota Public Health Association recommends: 1) thorough family education on potential sources of lead and on ways to avoid exposure, and, 2) at least one follow-up (venous) blood test after 3 months for the exposed child and for all other children ≤ 5 years of age living in the residence.

References

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