

Preventing Lead Poisoning in Young Children

A STATEMENT BY THE CENTERS FOR DISEASE CONTROL AND PREVENTION - OCTOBER 1991

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Table of Contents:

[Preface](#)

[Advisory Committee On Childhood Lead Poisoning Prevention](#)

[Conversion To Systeme International \(SI\) Units](#)

[Chapter 1. Introduction](#)

- [Summary](#)
- [References](#)

[Chapter 2. Background](#)

- [Summary](#)
- [Effects of lead on children and fetuses](#)
- [Absorption of lead](#)
- [Blood lead levels in the united states](#)
- [References](#)

[Chapter 3. Sources And Pathways Of Lead Exposure](#)

- [Introduction](#)
- [Lead-based paint](#)
- [Soil and dust](#)
- [Drinking water](#)
- [Occupations and hobbies](#)
- [Airborne lead](#)
- [Food](#)
- [Other sources](#)
- [Sources of lead outside the united states](#)
- [References](#)

[Chapter 4. The Role Of The Pediatric Health-Care Provider](#)

- [Anticipatory guidance](#)
- [Screening for childhood lead poisoning](#)
- [Doing appropriate diagnostic blood lead testing](#)
- [Interpretation of blood lead levels](#)
- [Educating parents about reducing blood lead levels](#)
- [Coordinating with public sector officials](#)
- [Appropriate follow-up](#)

[Chapter 5. The Role Of State And Local Public Agencies](#)

- [Public health agencies](#)
- [Housing Agencies](#)
- [Environmental Agencies](#)

Chapter 6. Screening

- [Summary](#)
- [Suggested priorities for screening](#)
- [Screening method](#)
- [Anticipatory guidance and assessing risk](#)
- [Screening schedule](#)
- [Classification on the basis of screening test results](#)
- [Measurement of blood lead levels](#)
- [Erythrocyte protoporphyrin \(ep\)](#)
- [References](#)

Chapter 7. Diagnostic Evaluation And Medical Management Of Children With Blood Lead Level $\geq$ 20 $\mu\text{g/dL}$

- [Summary](#)
- [Symptoms of lead poisoning](#)
- [Evaluation of the child with a blood lead level \$>\$ or \$=\$ 20 \$\mu\text{g/dl}\$](#)
- [Pharmacology of chelating agents](#)
- [BAL](#)
- [CaNa₂EDTA](#)
- [Treatment guidelines for children with blood lead levels \$>\$ or \$=\$ 20 \$\mu\text{g/dl}\$](#)
- [Post-chelation follow-up](#)
- [Research areas and future trends in the management of childhood lead poisoning](#)
- [References](#)

Chapter 8. Management Of Lead Hazards In The Environment Of The Individual Child

- [Summary](#)
- [Environmental case management](#)
- [Testing for and abating lead-based paint](#)
- [References](#)

Chapter 9. Management Of Lead Hazards In The Community

- [Surveillance](#)
- [Risk assessment and integrated prevention planning](#)
- [Outreach and education](#)
- [Infrastructure development](#)
- [Hazard abatement](#)

Appendix I. Capillary Sampling Protocol

- [A. Needed materials](#)
- [B. Preparing for blood collection](#)
- [C. Preparing the finger for puncture](#)
- [D. Puncturing of the finger and forming drops of blood](#)
- [E. Filling the collection container](#)
- [References](#)

Appendix II. Summary For The Pediatric Health-Care Provider

- [Chapters 1 and 2. Introduction and background](#)
- [Chapter 3. Sources and pathways of lead exposure](#)
- [Chapter 4. The role of the pediatric health-care provider](#)
- [Chapter 5. The role of state and local public agencies](#)
- [Chapter 6. Screening](#)
- [Chapter 7. Diagnostic evaluation and medical management of children with blood lead levels \$>\$ or \$=\$ 20 \$\mu\text{g/dl}\$](#)
- [BAL](#)
- [CaNa₂EDTA](#)
- [Chapter 8. Management of lead hazards in the environment of the individual child](#)
- [Chapter 9. Management of lead hazards in the community](#)

Point Of Contact For This Document

Tables

- [Table 1.1 - Interpretation](#)
- [Table 3.1 - Industries](#)
- [Table 6.1 - Priority](#)
- [Table 6.2 - Assessing](#)
- [Table 6.3 - Class](#)
- [Table 6.4 - Suggested](#)
- [Table 7.1 - Pharmacology](#)

Figures

- [Fig. 2.1 - Lowest](#)
- [Fig. 2.2 - Blood](#)
- [Fig. 2.3 - Blood](#)
- [Fig. 2.4 - Cumulative](#)
- [Fig. 2.5 - Change](#)
- [Fig. 2.6 - Relationship](#)

[Back to top](#)

Preface

This is the fourth revision of the statement on Preventing Lead Poisoning in Young Children by the Centers for Disease Control (CDC). The recommendations continued herein are based mainly on the scientific data showing adverse effects of lead in young children at increasingly lower blood lead levels. They are tempered, however, by practical considerations, for example, of the numbers of children who would require follow up and the resources required to prevent this disease. It is possible that further scientific data and development of infrastructure and technology will result in a lowering of the blood lead level at which interventions are recommended at a future time.

This statement is a departure from previous ones in several ways. Perhaps most important is the emphasis on primary prevention and the need for coordination between pediatric health-care providers and public agencies. This statement reflects the vision expressed in the Department of Health and Human Services' Strategic Plan for the Elimination of Childhood Lead Poisoning, which calls for a concerted, coordinated society wide effort to eliminate this disease.

In writing this statement, we identified several areas where better data are needed in order to provide scientifically sound guidance. These range from evaluating the efficacy of chelation therapy at lower blood lead levels in terms of preventing the adverse effects of lead to developing science-based criteria for determining when an abated unit is cleaned up enough for rehabilitation. We hope that the appropriate research to answer such questions will be conducted in a timely manner, and we will continue to update the statement to reflect current understanding.

We are aware of concerns about the impact the changes in the statement will have on childhood lead poisoning prevention programs, laboratories, and pediatric health-care providers. In this new statement, we recognize the need for a transition period until we are able to implement fully the new recommendations; it will take time and a concerted effort to implement this new guidance.

CDC is conducting several activities which bear directly on the implementation of the statement. First, as noted above, the Strategic Plan for the Elimination of Childhood Lead Poisoning was released by Dr. Louis W. Sullivan, Secretary of the Department of Health and Human Services, on February 21, 1991. In addition to laying out the actions needed to eliminate childhood lead poisoning, this plan describes the need for infrastructure and technology development, including for the evaluation of blood and environmental lead levels. Second, CDC is aggressively pursuing research and development efforts in collaboration with several instrument manufacturers to develop a field-rugged, relatively inexpensive, and simple-to-operate blood lead instrument, which would markedly enhance blood lead screening efforts. Initial results are encouraging, but the effort is still in the developmental stage. If all goes well, new instrumentation could be ready in 2 to 3 years. Third, we are continuing our efforts to help laboratories improve the quality of their blood lead measurements through our proficiency testing program and through our Blood Lead Laboratory Reference System. Finally, CDC also has a grant program in childhood lead poisoning prevention, through which state and local health agencies receive Federal money to screen children for lead poisoning, ensure environmental and medical follow up for poisoned children, and provide education about lead poisoning. By the end of FY 1991, we will be funding 13 state and 2 city childhood lead poisoning prevention programs, and the President's budget for 1992 includes almost a doubling of the FY 1991 budget. We continue to encourage CDC-funded programs to address infrastructure issues.

Other Federal agencies, like the Environmental Protection Agency and the Department of Housing and Urban Development, have also released plans that deal with aspects of the childhood lead poisoning problem. These agencies are also working to build the needed infrastructure for and expand the scientific knowledge on reducing exposure to lead in the environment.

I wish to thank the members of the Committee and consultants, as well as the numerous other people who assisted in the development and revision of this document. I believe this document will be a major landmark in the effort to eliminate childhood lead poisoning from the United States.

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[Back to top](#)

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CONVERSION TO SYSTEME INTERNATIONAL (SI) UNITS

Blood Lead

1.0 µg/dL = 0.04826 umol/L 1.0 µg/dL = 20.72 µg/dL

0 µg/dL = 0. umol/L
5 µg/dL = 0.241 umol/L
10 µg/dL = 0.483 umol/L
15 µg/dL = 0.724 umol/L
20 µg/dL = 0.965 umol/L
25 µg/dL = 1.206 umol/L
30 µg/dL = 1.448 umol/L
35 µg/dL = 1.689 umol/L
40 µg/dL = 1.930 umol/L
45 µg/dL = 2.172 umol/L
50 µg/dL = 2.413 umol/L
55 µg/dL = 2.654 umol/L
60 µg/dL = 2.896 umol/L
65 µg/dL = 3.137 umol/L
70 µg/dL = 3.378 umol/L

Erythrocyte Protoporphyrin

1.0 µg/dL = 0.01778 umol/L 1.0 umol/L = 56.25 µg/dL

28 µg/dL = 0.498 umol/L
35 µg/dL = 0.622 umol/L
70 µg/dL = 1.245 umol/L

[Back to top](#)

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