Preventing Lead Poisoning in Young Children

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

William L. Roper, M.D., M.P.H, Director

National Center for Environmental Health and Injury Control
Vernon N. Houk, M.D., Director

Division of Environmental Hazards and Health Effects
Henry Falk, M.D., Director

Lead Poisoning Prevention Branch
Sue Binder, M.D., Chief

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Centers for Disease Control and Prevention

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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 echo 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.

Vernon N. Houk, M.D.
Director
National Center for Environmental Health and Injury Control

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ADVISORY COMMITTEE ON CHILDHOOD LEAD POISONING PREVENTION

MEMBERS AND CONSULTANTS

Chair

John F. Rosen, M.D., Attending Pediatrician, Montefiore Hospital and Medical Center, 111 East 20th Street, Bronx, New York 10467

Executive Secretary

Henry Falk, M..D., Director Division of Environmental Hazards and Health Effects, National Center for Environmental Health and Injury Control, Centers for Disease Control, Atlanta, Georgia 30333

Members

Evelyn S. Bouden, M.D. ,Director ,Division of Maternal and Child Health, Pennsylvania Department of Health, 725 H & W Building, Harrisburg, Pennsylvania 17108

Beverly Coleman-Miller, M.D., Special Assistant for Medical Affairs, Commission of Public Health, 1660 L Street, N.W., Suite 1204, Washington, D.C. 20036

Ronald L. Fletcher, M.D., Co-Director, Oncology Department, Greene Memorial Hospital, 1141 N. Monroe Drive, Xenia, Ohio 44385

Lynn R. Goldman, M.D., Chief, Environmental Epidemiology and Toxicology Section Department of Health Services, 5900 Hollis Street, Suite E Emeryville, California 94608

Dwala S. Griffin, Administrator, Division of Preventive Medicine, Louisville-Jefferson County Board of Health, 400 East Gray Street, Louisville, Kentucky 40202

Richard J. Jackson, M.D., Chief, Office of Environmental Health Hazards Assessment, California Department of Health Services, 2151 Berkeley Way, Room 619, Berkeley, California 4704-1071

Rudolph E. Jackson, M.D., Professor and Acting Chairman, Department of Pediatrics, Morehouse School of Medicine, 720 Westview Drive, S.W., Atlanta, Georgia 30310

James C. Keck, President, Leadtec Services, Inc., 522 Beck Avenue, Baltimore, Maryland 21221

Herbert L. Needleman, M.D., Professor of Psychiatry, Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Iroquois Building, Suite 305, 3600 Forbes Avenue, Pittsburgh, Pennsylvania 15213-2593

Sergio Piomelli, M.D., Director, Babies Hospital, 3959 Broadway, New York, New York 10032

Stephanie L. Pollack, J.D., Attorney, Conservation Law Foundation of New England, 3 Joy Street, Boston, Massachusetts 02108-1497

Knut Ringen, Dr.P.H., Director, Laborers' National Health and Safety Fund, 905 16th Street, NW, Washington, D.C. 20006

Noel V. Stanton, Lead Chemist, Toxicology Section, State Laboratory of Hygiene, 465 Henry Mall, Madison, Wisconsin 53706

Consultants

David Bellinger, Ph.D., Neuroepidemiology Unit Children's Hospital, 300 Longwood Avenue, Boston, Massachusetts 02115

James J. Chisolm, Jr., M.D., Associate Professor, Francis Scott Key Medical Center, Building G. Room 224, 4940 Eastern Avenue, Baltimore, Maryland 21224

Charles G. Copley, Deputy Health Commissioner, City of Saint Louis, Department of Health and Hospitals, Office of the Commissioner, 634 N. Grand, P. O. Box 147202, Saint Louis, Missouri 63178

Anita S. Curran, M.D., Assistant Dean for Clinical Affairs, Robert Wood Johnson Medical Center, University of Medicine and Dentistry of New Jersey, One Robert Wood Johnson Place, New Brunswick, New Jersey 08903

John W. Graef, M.D., Director, Lead/Toxicology Clinic, The Children's Hospital, 300 Longwood Avenue, Boston, Massachusetts 02115

Phillip J. Landrigan, M.D., Director Division of Environmental and Occupational Medicine, Mount Sinai Medical Center, One Gustave L. Levy Place, New York, New York 10029

John R. Reigart, M.D., Project Pediatrician, S. C. Childhood Lead Poisoning Project, Department of Pediatrics, Children's Hospital, 171 Ashley Avenue, 6th Floor, Charleston, South Carolina 29425

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

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