

Occupational Health Unit

ADULT BLOOD LEAD EPIDEMIOLOGY AND SURVEILLANCE (ABLES) PROGRAM

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The public health objective of the Adult Blood Lead Epidemiology and Surveillance (ABLES) program (Objective 20.7 in "[Healthy People 2010](#)") is to "Reduce the number of adults who have blood lead concentrations of 25 micrograms or greater per deciliter ($\mu\text{g}/\text{dl}$) of whole blood."

Elevated Adult Blood Lead Levels - The Problem

Lead has been recognized as a health hazard since ancient times. Ninety to ninety-five percent of adults with elevated blood lead levels are exposed occupationally. In 2000, about 10,361 adults were reported by 24 ABLES states to have blood lead levels greater than or equal to 25 $\mu\text{g}/\text{dl}$. This number is known to be an under-estimate because many lead-exposed adults do not have routine blood lead level testing. Of the 10,361 reported, 2001 (19%) had blood lead levels greater than or equal to 40 $\mu\text{g}/\text{dl}$; the level at which workers may return to lead-related work under [Occupational Safety and Health Administration](#) (OSHA) regulations. Adults exposed to lead can experience anemia, nervous system dysfunction, kidney problems, hypertension, decreased fertility, and increased miscarriages. Workers can bring lead home from their workplace, and unknowingly expose their families. It is estimated that two to three percent of children with blood lead levels of 10 $\mu\text{g}/\text{dl}$ or greater were exposed by lead brought home from their parent's work.

The Connecticut ABLES Program

The primary objective of the Connecticut ABLES program is to identify and prevent cases of elevated blood lead levels in adults living or working in Connecticut. The Connecticut ABLES program collects data on adult blood lead levels from private health care providers, and from both private and state laboratories. The Connecticut ABLES program has been funded by the [National Institute for Occupational Safety and Health](#) (NIOSH) since 1991.

The Connecticut ABLES program performs the follow activities with respect to adult blood lead poisonings:

1. collect, analyze, and report data;
2. conduct follow-up with physicians, workers, and employers;
3. provide referrals to cooperating agencies that target on-site inspections of work sites;
4. identify new exposures and failures in prevention, and;
5. target educational and other interventions.

Reporting Requirements

As of October 1, 1998, Connecticut laboratories are required to report all blood lead test results to the Department of Public Health ([Public Act 98-66](#)). This information is vital to the ABLES program's ability to analyze trends in adult lead poisonings in Connecticut. Analysis and dissemination of these results is also at the core of the national approach to eliminate lead poisoning. Analysis of blood lead level data has helped in the identification of high-risk industries and occupations; most recently including: home remodeling, furniture restoration and plastics compounding.

Case Management Activities

The Connecticut ABLES program has implemented a case management protocol for follow-up of individuals with elevated blood lead levels (EBLLs) ≥ 17 $\mu\text{g}/\text{dl}$. This protocol includes sending a notification letter, accompanied by a [Lead Fact Sheet](#) and [Take Home Lead Survey](#), to the affected individuals. Copies of the letters are also sent to the local health department where the individual resides to notify the Director of Health about the EBLL and keep them informed of our activities. In many cases, we also contact the physician to gather essential information pertaining to the patient's lead exposure.

State ABLES Activities

Nationwide data from the state ABLES programs are published in CDC's Morbidity and Mortality Weekly Report (MMWR), and elsewhere. Twenty-eight ABLES reports published in the MMWR may be viewed at: <http://www.cdc.gov/mmwr/> .