National Report on Human Exposure to Environmental Chemicals

The **National Report on Human Exposure to Environmental Chemicals** transitioned from print to a web-based based interface in 2022, and is currently available at https://www.cdc.gov/environmental-exposure-report/

Overview

The *National Report on Human Exposure to Environmental Chemicals* (*Report*) presents nationally representative, cumulative biomonitoring data gathered since 1999–2000.

In each survey period, the reported chemicals or their metabolites were measured in blood, serum, and urine samples from random subsamples of the National Health and Nutrition Examination Survey (NHANES). These subsamples typically consisted of about 2,500 participants – exact numbers are included in the tables. Survey data and samples are collected by the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics. CDC's Environmental Health Laboratory (Division of Laboratory Sciences (DLS), National Center for Environmental Health) used mass spectrometry methods to obtain the blood, serum, and urine exposure measurements presented in the *Report*.

The term *environmental chemical* refers to a chemical compound or chemical element present in air, water, food, soil, dust, or other environmental media (e.g., consumer products). Biomonitoring is the assessment of human exposure to chemicals by measuring the chemicals or their metabolites in human specimens such as blood or urine. A metabolite is a chemical alteration of the original compound produced by body tissues. Blood, serum, and urine levels reflect the amount of the chemical that gets into the body by all routes of exposure, including ingestion, inhalation, and dermal absorption. The measurement of an environmental chemical in a person's blood or urine is a measure of exposure; it does not by itself mean that the chemical causes disease or an adverse effect. Research studies, separate from these data, are required to determine which blood or urine levels are safe and which are associated with disease or an adverse effect.

The *Report* provides geometric means and percentiles of environmental chemicals by age group, gender, and race/ethnicity for blood, serum, and urine levels measured in individual samples. For serum levels measured in pooled samples, weighted arithmetic means, and unadjusted standard errors are provided for categories defined by race/ethnicity, gender, age group, and survey years. More in-depth statistical analysis, including multivariate analysis incorporating health endpoints and other predictive variables, is beyond the scope of this document. We encourage scientists to examine the data further through analysis of the raw data available at NHANES.

Suggested Citation

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