

# NCEH Brochure

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CDC's National Center for Environmental Health (NCEH) plans, directs, and coordinates a national program to maintain and improve the health of the American people. NCEH strives to promote a healthy environment and prevent premature death, avoidable illness, and disability caused by non-infectious, non-occupational environmental and related factors.

NCEH protects people's health from environmental hazards that can be present in the air we breathe, the water we drink, and the world that sustains us. We do this by investigating the relationship between environmental factors and health, developing guidance, and building partnerships to support healthy decision making.

We are especially committed to safeguarding the health of populations that are particularly vulnerable to certain environmental hazards – children, the elderly, and people with disabilities.

## Reducing Environmental Hazards and Their Adverse Health Effects

NCEH investigators study ways to prevent an extraordinarily broad mix of complex environmental problems. Examples include the adverse health effects of natural and technologic disasters, radiation poisoning, and exposures to toxic chemicals.

- **The adverse health effects of natural disasters.** NCEH identifies potential health hazards, recommends and evaluates methods of preventing injuries, and studies the aftermath of disasters such as tornadoes and earthquakes to learn new ways of mitigating the effects of future disasters.
- **Air pollution and passive smoking.** Studies are under way—in the United States and other countries—on the effects of these irritants on people with asthma.
- **Nuclear radiation.** NCEH conducts dose reconstruction projects (estimations of past exposure) at sites near nuclear weapons facilities in order to measure health effects on local populations.
- **Inadequate data on death certificates.** NCEH is working to improve the quality, availability, and usefulness of the data gathered during death investigations by medical examiners or coroners.

## Improving the Practice of Environmental Health

- NCEH advances environmental public health practice and emergency preparedness and response efforts to better serve and protect the health of all people in the United States by focusing on **Chemical weapons elimination**. NCEH protects public health and safety by reviewing, advising, and making recommendations on the safe disposal and transportation of stockpile and non-stockpile chemical warfare agents and providing technical guidance for issues involving highly hazardous chemicals.
- **Childhood lead poisoning prevention.** NCEH tracks and prevents childhood lead poisoning and other adverse health conditions related to the home environment.
- **Environmental health services.** NCEH provides surveillance, practice-based research, evidence-based practice, training, and technical assistance for state, tribal, local, and territorial environmental health practitioners. Practitioners use these tools to prevent environmental exposures and protect health.

- **Healthy community design.** NCEH helps public health, transportation, and land-use professionals create environments that prevent disease and injury by providing people convenient and safe opportunities to walk, bicycle, or use public transit.
- **Cruise ship [vessel] sanitation.** NCEH assists the cruise ship industry with preventing and controlling the introduction, transmission, and spread of gastrointestinal illnesses on cruise ships.

## Laboratory Sciences

NCEH's Division of Laboratory Sciences (DLS) develops and applies advanced laboratory science that improves the detection, diagnosis, treatment and prevention of environmental, tobacco-related, nutritional, newborn, and selected chronic and infectious diseases. DLS also provides laboratory support that improves the rapid and accurate detection and diagnosis of chemical threat agents, radiological threat agents, and selected toxins. Some examples of DLS's ongoing programs include:

**National Biomonitoring Program.** DLS uses biomonitoring—measurements in human blood and urine—to identify harmful exposures or nutrition deficiencies in the U.S. population. DLS measures more than 300 chemicals and nutritional indicators in participants in the National Health and Nutrition Examination Survey and in studies that assess environmental exposures or nutrition status. CDC publishes findings in peer-reviewed journals and in the *National Report on Human Exposure to Environmental Chemicals* and the *National Report on Biochemical Indicators of Diet and Nutrition in the U.S. Population*.

**Quality assurance and standardization of laboratory testing.** DLS works to standardize and improve

- the quality and accuracy of laboratory tests for environmental chemicals
- nutritional indicators
- heart disease and stroke, and
- newborn screening.

CDC's efforts reach more than 2,000 domestic and international laboratories, including newborn screening laboratories in all 50 states.

## NCEH and the EIS Program

Epidemic Intelligence Service (EIS) Officers assigned to NCEH participate fully in the center's activities, including epidemiologic investigations, laboratory studies, public health surveillance programs, and development of public health policies.

**NCEH is committed to Equal Employment Opportunity and Affirmative Action.**

## Other NCEH Programs

**National Disabilities Prevention Program.**

NCEH's goals are to reduce the incidence and severity of disabilities, to make people with disabilities more independent and productive, and to integrate people with disabilities into the community. To achieve these goals, NCEH uses several approaches:

- We coordinate disability prevention programs throughout the United States.
- We establish disability surveillance systems.
- We use epidemiologic methods to identify risks and target interventions.
- We provide states with technical and financial help to increase their disability prevention capacity.

**Vessel Sanitation Program.**

The major goal is to lower the risk of gastrointestinal disease among passengers and crew. Twice a year, NCEH inspects cruise ships with 13 or more passengers and a foreign itinerary. The inspection scores are published and sent to travel-related services every 2 weeks and to individuals upon request.

### **Demilitarization of Chemical Weapons.**

NCEH reviews Department of Defense plans to store, destroy, transport, or open-air test lethal chemical munitions and makes recommendations to protect the public.

NCEH also works with communities near weapons' storage sites to help improve their emergency response programs. NCEH trains local medical personnel to diagnose chemical-related injuries and to treat affected people.

### **Review of Environmental Impact Statements.**

NCEH serves as the Public Health Service's clearinghouse for environmental impact statements drafted by other federal agencies.

### **Emergency Response.**

NCEH/ATSDR prepares for and responds to public health emergencies which include:

- chemical
- biological
- radiological and nuclear incidents
- natural disasters
- extreme weather events.

Natural disasters and chemical, biological, radiological, and nuclear incidents, whether unintentional or acts of terrorism, can seriously impact people's health. Preparing for and responding to such incidents requires coordination across multiple federal, state, and local sectors to minimize disease and death. Environmental health professionals are routinely called on to respond to situations involving exposure to chemicals, radiation, and disease, as well as to natural disasters and extreme weather events.

NCEH/ATSDR helps the nation prepare for these events by:

- providing subject matter expertise for exercises
- training the response workforce
- providing tools needed to respond

NCEH/ATSDR's expertise in environmental health, epidemiology, toxicology, and laboratory sciences is essential for evaluating emergencies that could compromise our water and food systems. NCEH/ATSDR develops recommendations to protect the public when an urgent response is required.

NCEH/ATSDR focuses on developing and using the best public health tools and information. NCEH/ATSDR ensures a trained, competent, and prepared workforce of subject matter experts and regional staff ready to assist during environmental emergencies. Through surveillance, registries, needs assessment, and research into preparedness, response, and recovery efforts, we ensure we are able to move more quickly and effectively to identify and address health problems.

Increased use of resources like ATSDR's [Assessment of Chemical Exposures](#), NCEH's Chemical and Radiologic Response Laboratories, [Community Assessment for Public Health Emergency Response](#), and the [Environmental Health Training in Emergency Response Course](#) also improves the nation's response to environmental emergencies.

Our current objectives are as follows:

- Enhance the nation's capacity to respond to environmental health emergencies through the use of environmental health science, epidemiology, laboratory science, and integrated preparedness and response planning with federal, state, tribal,

local, and international partners.

- Provide support to people, communities, and environmental public health systems to recover and rebuild after environmental incidents.
- Guide threat assessment, risk reduction, and resilience building efforts to lessen the impact of environmental threats and promote healthy community environments.

## Further Information

CDC/National Center for Environmental Health

4770 Buford Hwy NE

Atlanta, GA 30341-3717 USA

800-CDC-INFO (800-232-4636), TTY: 888-232-6348

[Email CDC-INFO](#)

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