



## COVID-19: CDC Museum Closed to the Public

Due to ongoing concerns about the novel coronavirus (COVID-19), the David J. Sencer CDC Museum is closed to the public and will remain closed as we continue to assess and monitor developments. All CDC Museum tours are canceled until further notice.

This decision is being made out of an abundance of caution and based upon the guidance of the CDC regarding social distancing and the elimination of large gatherings.

Please continue to check our website and social media accounts for additional updates.



Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

---

# Environmental Health

This section discusses CDC's early work in studying [environmental health](#). A satirical image from the 1960s about "Lady Liberty" shows the Statue of Liberty wearing a gas mask. The channel behind her and the visible land are filled with trash. The air is dark from pollution. Small factories in the background are belting out more smog. The image shows how pollution had become so commonplace and how environmental issues can harm everyone. CDC's first projects that addressed environmental health were investigations of [leukemia clusters](#) and [birth defects](#). Soon after, CDC began connecting the dots between environmental concerns and public health concerns such as [lead-based paint poisoning](#), dental disease, and the presence of rodents in urban communities.



## Lead

One major environmental health concern was Americans' blood-lead levels. Lead is a naturally occurring element that is useful in some applications but is highly toxic to humans and some other animals. No safe [blood-lead level in children](#) has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. Moreover, effects of lead exposure cannot be corrected.

The introduction of leaded gas in 1923 resulted in a drastic increase in American blood-lead levels and the amount of lead in the environment. By 1965, studies showed that Americans' blood-lead levels were 100 times higher than normal. After Congress banned leaded gas, a [CDC study](#) showed the effectiveness of the ban by demonstrating blood-lead levels were drastically lowered. This is a great public health success story and shows the power that good data can have on public health policy.

## Water Fluoridation

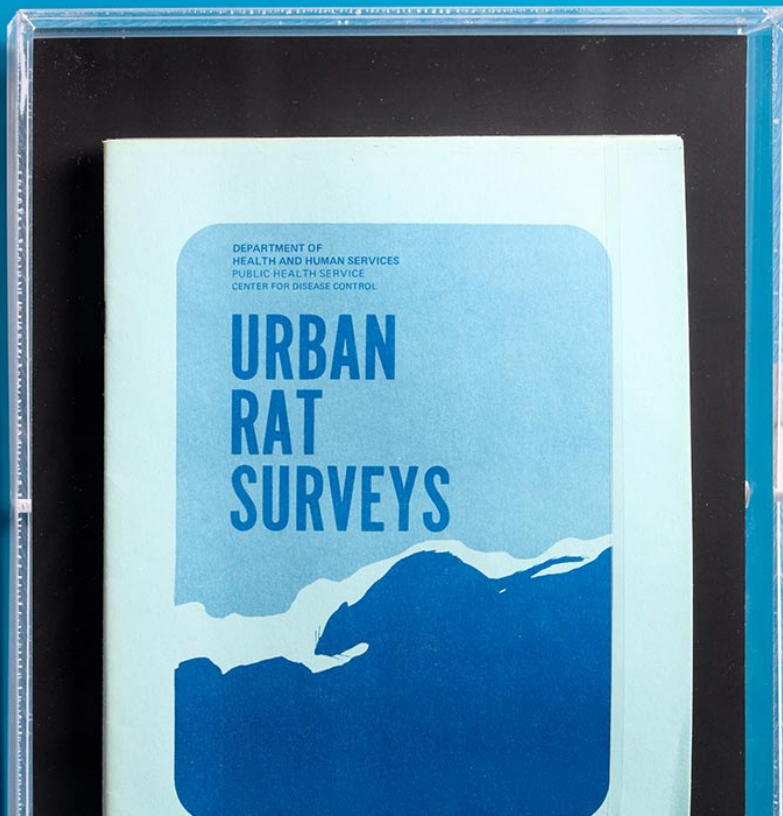
Seen here is one of the epidemiological studies from the 1930s and 1940s that confirmed that [fluoride](#), a substance naturally found in water, could prevent cavities. To help improve the [oral health](#) of the U.S., CDC encouraged Grand Rapids, Michigan to become the first American city to add fluoride to its water in 1945. Since 1975, CDC has been responsible for encouraging the effective use of fluoride in water and promoting oral health through national prevention

and technical assistance programs like teaching children to brush their teeth. As a result of CDC's work, more than 67% of Americans receive **fluoridated water** today and tooth decay has drastically declined over the last 60 years.



## PLAGUE

there was growing  
control of rats in  
often poor neighbor-



rams—then and now—  
orway rats, which  
environments and  
seases, such as murine  
rough rot droppings.



## The Urban Rat Survey

As part of the Great Society administration's Rat Control Bill of 1967, CDC was tasked with control of rats. Seen here is the Urban Rat Survey, a guide for determining the rat population of an area. Rats are known [vectors](#), or spreaders, of diseases such as [plague](#).

Worldwide, [rats and mice](#) spread over 35 diseases. These diseases can be spread to humans directly; through handling of rodents; through contact with rodent feces, urine, or saliva; or through rodent bites. Diseases carried by rodents can also be spread to humans indirectly: through ticks, mites, or fleas that have fed on an infected rodent. The Urban Rat Survey shown here was a tool developed by CDC for local health departments and cities to use. Today, CDC continues to assist state and local health departments with environmental health issues.

### Enrichment Modules

SEE

#### Take a closer look:

- What actions are necessary to the protection and improvement of environmental public health? Learn more in [this graphic](#).
- View images of a factory worker during a [1976 lead exposure study](#), a public health field walker working to [control the rat population](#) in a community, Indonesian public health field workers displaying captured rats during a [1969 plague epidemic](#), and birds flocking to a [1968 sanitary landfill](#).
- What were the ten greatest public health achievements between 1900 and 1999? Find out in [this MMWR](#).
- Learn more about diseases [directly transmitted by rodents](#).
- Read about CDC's work with [air quality](#), prevention of [birth defects](#), and [blood lead levels in children](#).
- Read about [asthma & air pollution](#) , [children's environmental health](#) , [childhood blood lead levels](#), and [environmental public health tracking](#)  initiatives at CDC.

## HEAR

### From the source:

- Meet [Captain Casey Barton Behravesh](#), veterinarian and epidemiologist in the United States Public Health Service stationed at CDC.
- Meet [Jennifer Freed](#), CDC environmental health scientist in the Division of Community Health Investigations at ATSDR.
- Hear from [CDC nurses](#) about their experiences during environmental health emergencies and outbreaks.
- View [Bartolomé Esteban Murillo's](#) art depicting the impact of plague epidemics in Spain in the 1600s.
- Watch a [Ted-Ed video](#) about the discovery of radium.

## REFLECT

### Then and now:

- Read Emerging Infectious Diseases cover story "[The Art of Intertwining Life and Work](#)," featuring artwork from Pornchai Jaima.
- Learn more about [community water fluoridation](#) and its contribution to a large decline in cavities in the U.S. since the 1960s.
- Read more about [detecting the emergence of novel pathogens](#) in this issue of Emerging Infectious Diseases.
- Learn about the [first U.S. city](#) to fluoridate its public water supply in 1945.
- Read the EPA's [history of air pollution](#).
- Learn [how climate affects community health](#) from CDC.

## DO

### Give it a try:

- Explore CDC environmental health initiatives with these coloring sheets:
  - [A field worker spreads insecticide to control a mosquito population](#)
  - [A public health official investigates water quality](#)
  - [A public health official works to control a rat population](#)
  - Watch [CDC-TV videos](#) about environmental health issues.
  - Follow [@CDCEnvironment on Twitter](#) for the latest environmental health updates.

Explore data and research involving indoor and outdoor [air pollution](#).