

# Evaluation of Ethylene Oxide

Concentrations in Outdoor Air Near the Sterigenics Facility, Willowbrook, IL

ATSDR evaluated health risks from breathing ethylene oxide (EtO) in outdoor air near the Sterigenics medical sterilization facility. Sterigenics is no longer creating EtO emissions. The Sterigenics facility stopped sterilization operations in February 2019 and closed their operation in September 2019. Before then, Sterigenics used EtO, a cancer-causing gas, to sterilize medical products

## The Bottom Line - What did ATSDR conclude?

- ATSDR concludes there is a concern for an increased lifetime risk of cancer associated with long-term EtO exposure for people who breathed the air within one mile of Sterigenics for years prior to February 15, 2019. The increased cancer risk is based on EtO concentrations measured in the air during sterilization operations.
- ATSDR also concludes, after Sterigenics stopped EtO sterilization operations on February 15, 2019, EtO concentrations in the air within a mile of the facility were similar to background EtO levels observed across the United States. Lifetime excess cancer risk from EtO exposure, for people living or working in Willowbrook after Sterigenics closed, is similar to EtO-related cancer risk for people living or working in other areas without a major EtO source.
- ATSDR recommends residents talk with their doctor about their health concerns and exposure to EtO.



## What data did ATSDR evaluate?

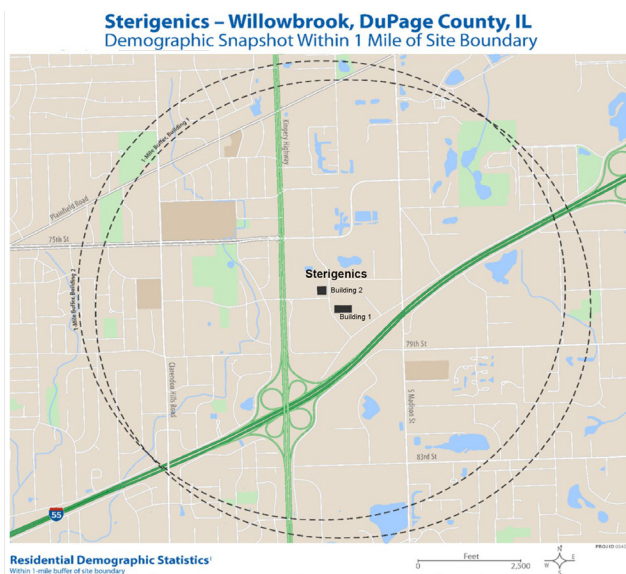
- EtO concentrations were measured at eight U.S. Environmental Protection Agency (U.S. EPA) air monitoring stations between November 12, 2018, and February 15, 2019 while Sterigenics was operating.
- There were six additional weeks of data collected while the facility was closed between February 16 and March 31, 2019.
- Based on this data ATSDR evaluated non-cancer and lifetime cancer risks to residents and off-site workers (people who work near but not at Sterigenics) before and after Sterigenics closed.

## What did ATSDR conclude about the health effects other than cancer from breathing EtO from outdoor air near Sterigenics?

People who lived and worked near Sterigenics are not expected to develop non-cancer health effects from breathing EtO. Concentrations measured in the community in November 2018-February 2019 were well below those associated with health effects other than cancer in human and animal studies.

## Who do I ask if I have medical concerns or questions?

If residents are worried about EtO exposures, ATSDR recommends that they talk to their doctor about their health concerns. To help maintain their health and detect problems early, residents can have regular checkups and complete



Map of Sterigenics facility in Willowbrook, IL with 1-mile buffers



age-appropriate medical screening tests.

If unusual symptoms or concerns arise, residents can see their doctor for an evaluation between checkups. Individuals and healthcare providers seeking more information and guidance about EtO exposure and potential health effects can consult with experts trained in environmental medicine using the contact information below for the Region 5 Pediatric Environmental Health Specialty Unit (PEHSU). The Region 5 PEHSU accepts questions about EtO exposure for both children and adults.

ATSDR also has several educational resources designed to increase awareness among healthcare professionals about ethylene oxide and its health effects available on our website (links below).

**Region 5 PEHSU - University of Illinois at Chicago  
Great Lakes Center for Reproductive and Children's  
Environmental Health**

**Website:** <https://childrensenviron.uic.edu/>

**Phone:** 866-967-7337 **Email:** [ChildrensEnviro@uic.edu](mailto:ChildrensEnviro@uic.edu)

## How can I get more information?

You can learn more about EtO and Sterigenics from the following websites:

**Agency for Toxic Substances and Disease Registry**

<https://www.cdc.gov/TSP/PHA/PHAListing.aspx?StateIndicator=IL>

[Toxicological Profile for Ethylene Oxide \(EtO\)](#)

[ATSDR Clinician Brief: Ethylene Oxide \(EtO\)](#)

**U.S. EPA**

<https://www.epa.gov/il/sterigenics-willowbrook-facility>

<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide>

**National Institutes of Health/National Cancer Institute**

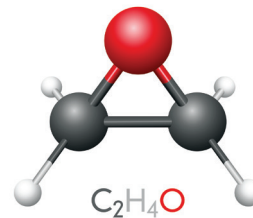
<https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/ethylene-oxide>

## Who can I contact if I have more questions?

Call 1-800-CDC-INFO and ask for information on the health consultation "Evaluation of Ethylene Oxide Concentrations in Outdoor Air Near Sterigenics, Willowbrook, DuPage County, Illinois."

## Who is ATSDR?

The Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency of the U.S. Department of Health and Human Services (HHS). ATSDR works with other agencies and tribal, state, and local governments to study possible health risks in communities where people could come in contact with natural and man-made hazardous substances. For more information, visit the ATSDR website at <https://www.atsdr.cdc.gov/>.



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