Welcome to an HEI Webinar

# Health Effects of Traffic-Related Air Pollution: Assessing the Evidence in an Evolving and Complex World

July 13, 2022 | 11:00 AM – 1:00 PM EDT

For the full report, please visit: https://tinyurl.com/HEITrafficReport.

@HEIresearch

# Before we begin

All attendees are muted (view-only) for the duration of the webinar.

There will be a Q&A period after the presentations. Please submit questions via the Q&A function at any time during the webinar.

If you experience any logistical difficulties, please contact us using the "Chat" box.

Webinar slides and video will be available in the coming weeks. Please check HEI website for details.

https://www.healtheffects.org/meeting/new-hei-review-webinar-health-effects-traffic-related-air-pollution

# Health Effects Institute

Trusted science for cleaner air and better health.

www.healtheffects.org

An independent, nonprofit corporation chartered to provide *policy-relevant, high-quality,* and *impartial science*

Funded jointly by government and the worldwide motor vehicle industry and, occasionally, private foundations

Funds research that is selected, conducted, overseen, and reviewed independently of HEI's sponsors

Does not take policy positions

# HEI 2010 Traffic and Health Review

A Panel was convened to review the traffic and health literature **up to 2008**.

Detailed chapters on emissons, exposure, toxicology and epidemiology.

At that time, evidence was considered sufficient to support a causal relationship between traffic-related air pollution and exacerbation of **asthma** in children. Suggestive and/or limited evidence for other health outcomes.

https://www.healtheffects.org/

# New Review of the Traffic and Health Literature

Strong interest in an update of the review:

- ✓ Substantial new research published
- ✓ Regulations and vehicular technology have advanced
- ✓ Interest in non-tailpipe emissions and traffic noise is increasing

HEI appointed a new panel to systematically review epidemiologic studies in 2018.

The full chain of events linking TRAP to health effects. Source: Center for Advancing Research in Transportation Emissions, Energy and Health (CARTEEH), available from: https://www.carteeh.org/.

# HEI Panel on the Health Effects of Long-term Exposure to Traffic-Related Air Pollution

**Co-chairs:**
Francesco Forastiere, *Imperial College London*
Frederick Lurmann, *Sonoma Technology*

**Members:**
Richard Atkinson, *University of London*
Jeffrey Brook, *University of Toronto; HEI Research Committee*
Howard Chang, *Emory University*
Gerard Hoek, *Utrecht University*
Barbara Hoffmann, *University of Düsseldorf; HEI Research Committee*
Sharon Sagiv, *University of California - Berkeley*
Evi Samoli, *University of Athens; HEI Research Committee*
Audrey Smargiassi, *University of Montreal*
Adam Szpiro, *University of Washington*
Danielle Vienneau, *Swiss Tropical and Public Health Institute*
Jennifer Weuve, *Boston University*

**Consultants to the Panel:**
Julia Fussell, *Imperial College London*
Frank Kelly, *Imperial College London*
Tim Nawrot, *University of Hasselt*
Gregory Wellenius, *Boston University; HEI Research Committee*

**Contractor:** Meltem Kutlar Joss and Ron Kappeler, *Swiss Tropical and Public Health Institute*

**HEI:** Hanna Boogaard, Dan Crouse, Dan Greenbaum, Robert O'Keefe, Martha Ondras, Allison Patton, Ellen Mantus, Rashid Shaikh, Eleanne van Vliet, Annemoon van Erp

# The Special Report was subjected to detailed Peer Review

**Chair:**
Bert Brunekreef, *Professor Emeritus, Utrecht University*

**Peer Reviewers Full Report:**
Haneen Khreis, *University of Cambridge*
Michael Jerrett, *University of California – Los Angeles; HEI Review Commitee*
Susan Norris, *Oregon Health & Science University*
Annette Peters, *Helmholtz Zentrum München*
Neil Pearce, *London School of Hygiene and Tropical Medicine; HEI Research Commitee*
Marie Pedersen, *University of Copenhagen*
David Savitz, *Brown University; Chair HEI Research Commitee*
Jay Turner, *Washington University in St. Louis*

**Peer reviewers Specific Chapters:**
Chad Bailey, *United States Environmental Protection Agency*
David Carslaw, *University of York*
Flemming Cassee, *National Institute for Public Health and the Environment, Netherlands*
David Foster, *University of Wisconsin – Madison*
Mark Frampton, Professor Emeritus, *University of Rochester Medical Center*
Monica Guxens, *Barcelona Institute for Global Health*
Michael Kleeman, *University of California – Davis*
Nick Molden, *Emissions Analytics, UK*
Marc Weisskopf, *Harvard T.H. Chan School of Public Health*

# Today's webinar

*Chaired by Ellen Mantus, HEI and Evi Samoli, University of Athens and HEI Research Committee*

- ✓ **Traffic-Related Air Pollution: A Moving Target** — Fred Lurmann, Sonoma Technology
- ✓ **A bird´s eye overview of HEI's traffic review** — Hanna Boogaard, HEI
- ✓ **A deeper dive into the evidence for some of the selected health outcomes:**

*Moderated by Jeff Brook, University of Toronto and HEI Research Committee*

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|---|---|
| Birth outcomes | Danielle Vienneau, Swiss Tropical and Public Health Institute |
| Respiratory | Audrey Smargiassi, University of Montreal |
| Cardiometabolic | Barbara Hoffmann, University of Düsseldorf |
| Mortality | Gerard Hoek, Utrecht University |
| Neurodevelopmental | Sharon Sagiv, University of California - Berkeley |
| Neurodegenerative | Jennifer Weuve, Boston University |

- ✓ **Current knowledge: have we filled the gap?** — Francesco Forastiere, Imperial College
- ✓ Q&A