



Annual Conference 2025

Selected HEI Publications Related to Conference Topics

SUNDAY

Unleashing the Power of Artificial Intelligence for Environmental Health

Apte JS, Chambliss SE, Messier KP, Gani S, Upadhyaya AR, Kushwaha M, et al. 2024. [Scalable multipollutant exposure assessment using routine mobile monitoring platforms](#). Research Report 216. Boston, MA: Health Effects Institute.

Weichenthal S, Lloyd M, Ganji A, Simon L, Xu J, Venuta A, et al. 2024. [Long-term exposure to outdoor ultrafine particles and black carbon and effects on mortality in Montreal and Toronto, Canada](#). Research Report 217. Boston, MA: Health Effects Institute.

MONDAY

Spotlight on Recent HEI Initiatives and Accomplishments

Health Effects Institute. 2025. [The 2025-2030 Strategic Plan](#). Boston, MA: Health Effects Institute.

Health Effects Institute. 2025. [Building on Our Mission](#). 2024 Annual Report. Boston, MA: Health Effects Institute.

Health Effects Institute. 2024. [State of Global Air 2024](#). Special Report. Boston, MA: Health Effects Institute.

Please also see the separate list of new HEI publications since the last Annual Conference.

The TRACER Collaboration: Tracking Community Exposures to Air Emissions and Noise from Oil and Gas Development

Ariana A, Rosofsky A, Danforth C, Vorhees D. 2023. [Potential Human Exposures to Produced Water from Onshore Oil and Gas Production](#). Research Brief 5. Boston, MA: Health Effects Institute Energy.

Rosofsky AS, Vorhees DJ. 2023. [Bringing Multisectoral and Multidisciplinary Stakeholders Together to Optimize Environmental Health Research](#). GeoHealth 7:e2022GH000746; doi:10.1029/2022GH000746.

Elliott EG. 2022. [Abandoned and Orphaned Oil and Natural Gas Wells: Potential Human Exposures](#). Research Brief 4. Boston, MA: Health Effects Institute Energy.

Adelsheim LA, Rosofsky AR. 2022. [Natural Gas Flaring Associated with Unconventional Oil and Gas Development: Potential Human Exposures](#). Research Brief 3. Boston, MA: Health Effects Institute Energy.

Health Effects Institute Energy Research Committee. 2020. [Human Exposure to Unconventional Oil and](#)

[Gas Development: A Literature Survey for Research Planning](#). Communication 1. Boston, MA: Health Effects Institute.

HEI Special Scientific Committee on Unconventional Oil and Gas Development in the Appalachian Basin. 2015. [Strategic Research Agenda on the Potential Impacts of 21st Century Oil and Natural Gas Development in the Appalachian Region and Beyond](#). Boston, MA: Health Effects Institute.

From Global to Local: Advances in Estimating the Air Pollution Disease Burden

Health Effects Institute. 2025. [Trends in Air Quality and Health Impacts: Insights from Central, South, and Southeast Asia](#). Boston, MA: Health Effects Institute.

Health Effects Institute. 2024. [State of Global Air 2024](#). Special Report. Boston, MA: Health Effects Institute.

Downward GS, Vermeulen R; Asia Cohort Consortium Executive Board. 2023. [Ambient Air Pollution and All-Cause and Cause-Specific Mortality in an Analysis of Asian Cohorts](#). Research Report 213. Boston, MA: Health Effects Institute.

McDuffie E, Martin R, Yin H, Brauer M. 2021. [Global Burden of Disease from Major Air Pollution Sources \(GBD MAPS\): A Global Approach](#). Research Report 210. Boston, MA: Health Effects Institute.

GBD MAPS Working Group. 2018. [Burden of Disease Attributable to Major Air Pollution Sources in India](#). Special Report 21. Boston, MA: Health Effects Institute.

GBD MAPS Working Group. 2016. [Burden of Disease Attributable to Coal-Burning and Other Major Sources of Air Pollution in China](#). Special Report 20. Boston, MA: Health Effects Institute.

Developing Minds and Environmental Health Matters: Exploring Environmental Exposures, Neurodevelopment, and Mental Health in Children and Adolescents

Herting MM, Burnor E, Ahmadi H, Eckel SP, Gauderman W, Schwartz J, et al. 2025. [Air Pollution Exposure, Prefrontal Connectivity, and Emotional Behavior in Early Adolescence](#). Research Report 225. Boston, MA: Health Effects Institute.

Adar SD, Pedde M, Hirth R, Szpiro A. 2024. [Assessing the National Health, Education, and Air Quality Benefits of the United States Environmental Protection Agency's School Bus Rebate Program: A Randomized Controlled Trial Design](#). Research Report 221. Boston, MA: Health Effects Institute.

HEI Panel on the Health Effects of Long-Term Exposure to Traffic-Related Air Pollution. 2022. [Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution](#). Special Report 23. Boston, MA: Health Effects Institute.

Chen J-C, Wang X, Serre M, Cen S, Franklin M, Espeland M. 2017. [Particulate Air Pollutants, Brain Structure, and Neurocognitive Disorders in Older Women](#). Research Report 193. Boston, MA: Health Effects Institute.

Guxens M, Lubczyńska MJ, Pérez-Crespo L, Muetzel RL, El Marroun H, Basagaña X, et al. 2022. [Associations of Air Pollution on the Brain in Children: A Brain Imaging Study](#). Research Report 209. Boston, MA: Health Effects Institute.

Innovations in Assessment of Long-term Exposures to Outdoor Air Pollution

Katsouyanni K, Evangelopoulos D, Wood D, Barratt B, Zhang H, Walton H, et al. 2025. [Investigating the Consequences of Measurement Error of Gradually More Sophisticated Long-Term Personal Exposure](#)

[Models in Assessing Health Effects: The London Study \(MELONS\)](#). Research Report 227. Boston, MA: Health Effects Institute.

Hoek G, Bouma F, Janssen N, Wesseling J, van Ratingen S, Kerckhoffs J, et al. 2025. [Comparison of Long-term Air Pollution Exposure assessment based on mobile monitoring, low-cost sensors, dispersion modelling and routine monitoring-based models \(CLAIRE\)](#). Research Report 226. Boston, MA: Health Effects Institute.

Weichenthal S, Lloyd M, Ganji A, Simon L, Xu J, Venuta A, et al. 2024. [Long-Term Exposure to Outdoor Ultrafine Particles and Black Carbon and Effects on Mortality in Montreal and Toronto, Canada](#). Research Report 217. Boston, MA: Health Effects Institute.

Sheppard L, Blanco MN, Doubleday A, Szpiro AA, Bi J, Zuidema C, et al. in press. Optimizing Exposure Assessment for Inference About Air Pollution Effects with Application to the Aging Brain. Research Report (in press). Boston, MA: Health Effects Institute.

de Hoogh K, Flückiger B, Probst-Hensch N, Vienneau D, Jeong A, Imboden M, et al. in press. Accounting for Mobility in Air Pollution Exposure Estimates in Studies on Long-Term Health Effects (MOBI-AIR). Research Report (in press). Boston, MA: Health Effects Institute.

TUESDAY

The Road Ahead for the Legacy Diesel Fleet

Adar SD, Pedde M, Hirth R, Szpiro A. 2024. [Assessing the National Health, Education, and Air Quality Benefits of the United States Environmental Protection Agency's School Bus Rebate Program: A Randomized Controlled Trial Design](#). Research Report 221. Boston, MA: Health Effects Institute.

Hakami A, Zhao S, Soltanzadeh M, Vasilakos P, Alhusban A, Oztaner B, et al. 2024. [Estimating Model-Based Marginal Societal Health Benefits of Air Pollution Emission Reductions in the United States and Canada](#). Research Report 218. Boston, MA: Health Effects Institute.

HEI Panel on the Health Effects of Long-Term Exposure to Traffic-Related Air Pollution. 2022. [Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution](#). Special Report 23. Boston, MA: Health Effects Institute.

Meng YY, Su JG, Chen X, Molitor J, Yue D, Jerrett M. 2021. [Improvements in Air Quality and Health Outcomes Among California Medicaid Enrollees Due to Goods Movement Actions](#). Research Report 205. Boston, MA: Health Effects Institute.

Wang XL, Khlystov A, Ho KF, Campbell D, Chow JC, Kohl SD, et al. 2019. [Real-World Vehicle Emissions Characterization for the Shing Mun Tunnel in Hong Kong and Fort McHenry Tunnel in the United States](#). Research Report 199. Boston, MA: Health Effects Institute.

Health Effects Institute. 2015. [Executive Summary. The Advanced Collaborative Emissions Study \(ACES\)](#). Boston, MA: Health Effects Institute.

HEI Diesel Epidemiology Panel. 2015. [Diesel Emissions and Lung Cancer: An Evaluation of Recent Epidemiological Evidence for Quantitative Risk Assessment](#). HEI Special Report 19. Boston, MA: Health Effects Institute.

Transportation's Next Stop: The Benefits and Challenges of Emerging Technologies and Fuels

Health Effects Institute. 2017. [Executive Summary. HEI Workshop on Fuel Composition and PM – December 8, 2016](#), Chicago, IL.

Health Effects Institute. 2015. [Executive Summary. The Advanced Collaborative Emissions Study \(ACES\)](#). Boston, MA: Health Effects Institute.

Advanced Collaborative Emissions Study (ACES). 2015. [Advanced Collaborative Emissions Study \(ACES\): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust](#). Research Report 184. Boston, MA: Health Effects Institute.

Wong C-M, Rabl A, Thach TQ, Chau YK, Chan KP, Cowling BJ, et al. 2012. [Impact of the 1990 Hong Kong Legislation for Restriction on Sulfur Content in Fuel](#). HEI Research Report 170. Boston, MA: Health Effects Institute.

Advanced Collaborative Emissions Study (ACES). 2012. [Advanced Collaborative Emissions Study \(ACES\) Subchronic Exposure Results: Biologic Responses in Rats and Mice and Assessment of Genotoxicity](#). Research Report 166. Boston, MA: Health Effects Institute.

HEI Special Committee on Emerging Technologies. 2011. [The Future of Vehicle Fuels and Technologies: Anticipating Health Benefits and Challenges](#). Communication 16. Health Effects Institute, Boston, MA.

Bagley ST, Baumgard KJ, Gratz LD, Johnson JH, Leddy DG. 1996. [Characterization of Fuel and Aftertreatment Device Effects on Diesel Emissions](#). Research Report 76. Cambridge, MA: Health Effects Institute.

Health Effects Institute. 1988. [Potential Health Effects of Manganese in Emissions from Trap-Equipped Diesel Vehicles](#). Special Report. Cambridge, MA: Health Effects Institute.



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New HEI Publications

INSTITUTIONAL PUBLICATIONS

Health Effects Institute. 2025. [The 2025-2030 Strategic Plan](#). Boston, MA: Health Effects Institute.

Health Effects Institute. 2025. [Building on Our Mission](#). 2024 Annual Report. Boston, MA: Health Effects Institute.

Health Effects Institute. 2024. [HEI 2023 Annual Report](#). Boston, MA: Health Effects Institute.

ENVIRONMENT & HEALTH

Accountability

Hystad P, Willis M, Hill E, Schrank D, Molitor J, Larkin A, et al. 2025. [Impacts of Vehicle Emission Regulations and Local Congestion Policies on Birth Outcomes Associated with Traffic Air Pollution](#). Research Report 223. Boston, MA: Health Effects Institute.

Adar SD, Pedde M, Hirth R, Szpiro A. 2024. [Assessing the National Health, Education, and Air Quality Benefits of the United States Environmental Protection Agency's School Bus Rebate Program: A Randomized Controlled Trial Design](#). Research Report 221. Boston, MA: Health Effects Institute.

Hakami A, Zhao S, Soltanzadeh M, Vasilakos P, Alhusban A, Oztaner B, et al. 2024. [Estimating Model-Based Marginal Societal Health Benefits of Air Pollution Emission Reductions in the United States and Canada](#). Research Report 218. Boston, MA: Health Effects Institute.

Health Effects of Traffic-Related Air Pollution

Raaschou-Nielsen O, Poulsen AH, Ketzel M, Frohn LM, Roswall N, Hvidtfeldt UA, et al. 2024. [Cardiometabolic Health Effects of Air Pollution, Noise, Green Space, and Socioeconomic Status: The HERMES Study](#). Research Report 222. Boston, MA: Health Effects Institute.

Improving Exposure Assessment

Katsouyanni K, Evangelopoulos D, Wood D, Barratt B, Zhang H, Walton H, et al. 2025. [Investigating the Consequences of Measurement Error of Gradually More Sophisticated Long-Term Personal Exposure Models in Assessing Health Effects: The London Study \(MELONS\)](#). Research Report 227. Boston, MA: Health Effects Institute.

Hoek G, Bouma F, Janssen N, Wesseling J, van Ratingen S, Kerckhoffs J, et al. 2025. [Comparison of Long-term Air Pollution Exposure assessment based on mobile monitoring, low-cost sensors, dispersion modelling and routine monitoring-based models \(CLAIRE\)](#). Research Report 226. Boston, MA: Health Effects Institute.

Weichenthal S, Lloyd M, Ganji A, Simon L, Xu J, Venuta A, et al. 2024. [Long-Term Exposure to Outdoor Ultrafine Particles and Black Carbon and Effects on Mortality in Montreal and Toronto, Canada](#). Research Report 217. Boston, MA: Health Effects Institute.

COVID-19, Air Quality, and Health

Chen K, Ma Y, Marb A, Nobile F, Dubrow R, Stafoggia M, et al. 2025. [Effect of Air Pollution Reductions on Mortality During the COVID-19 Lockdowns in Early 2020](#). Research Report 224. Boston, MA: Health Effects Institute.

Tonne C, Ranzani O, Alari A, Ballester J, Basagaña X, Chaccour C, et al. 2024. [Air Pollution in Relation to COVID-19 Morbidity and Mortality: A Large Population-Based Cohort Study in Catalonia, Spain \(COVAIR-CAT\)](#). Research Report 220. Boston, MA: Health Effects Institute.

Rosenblith Award Studies

Herting MM, Burnor E, Ahmadi H, Eckel SP, Gauderman W, Schwartz J, et al. 2025. [Air Pollution Exposure, Prefrontal Connectivity, and Emotional Behavior in Early Adolescence](#). Research Report 225. Boston, MA: Health Effects Institute.

Pedersen M, Liu S, Andersen ZJ, Nybo Andersen AM, Brandt J, Budtz-Jørgensen E, et al. 2024. [Birth Cohort Studies of Long-Term Exposure to Ambient Air Pollution in Early Life and Development of Asthma in Children and Adolescents from Denmark](#). Research Report 219. Boston, MA: Health Effects Institute.

ENERGY

HEI Energy. March 2024. [Spring Quarterly Research Updates](#).

HEI Energy. June 2024. [Summer Quarterly Research Updates](#).

Romitti Y, Daza G, Danforth C, Rosofsky A, Mantus E, Vorhees D. 2024. [Cumulative Impact Assessment for Unconventional Oil and Gas Development Communities](#). Research Brief 6. Boston, MA: Health Effects Institute Energy.

GLOBAL

Unleashing the Power of Artificial Intelligence for Environmental Health

Health Effects Institute. 2025. [Health Effects of Air Pollution in East Africa: Current Evidence and Priorities for Future Action](#). Boston, MA: Health Effects Institute.

State of Global Air and StoryMine. April 2024. [Cleaner Air, Healthier Children](#) (Video).

Health Effects Institute. 2024. [State of Global Air 2024](#). Special Report. Boston, MA: Health Effects Institute.