

Sheena Elizabeth Martenies

Department of Kinesiology and Community Health
University of Illinois at Urbana-Champaign
906 S Goodwin Ave M/C 052 | Urbana, IL | 61801
smarte4@illinois.edu | (217) 300-9375

EDUCATION

2017 Doctor of Philosophy, Environmental Health Sciences
University of Michigan School of Public Health
2013 Master of Public Health, Environmental Health Science and Policy
The George Washington University School of Public Health and Health Services
2008 Bachelor of Science, Chemistry
San Diego State University

POSITIONS HELD

2020 – Assistant Professor
Kinesiology and Community Health, University of Illinois Urbana-Champaign
2022 – present Affiliate, Division of Nutritional Sciences
2022 – present Affiliate, Personalized Nutrition Initiative
2023 – present Collaborative Affiliate, Family Resiliency Center
2020 – Associate Affiliate
Environmental and Radiological Health Sciences, Colorado State University
2020 – 2020 Adjunct Faculty Instructor
Colorado School of Public Health, University of Northern Colorado
2017 – 2020 Postdoctoral Fellow
Environmental and Radiological Health Sciences, Colorado State University

SCHOLARSHIP

Peer-Reviewed Publications

34. **Martenies SE**, Wilson A, Hoskovec L, Bol KA, Burket TL, Podewils L, Magzamen S. 2023. The COVID-19-wildfire smoke paradox: Reduced risk of all-cause mortality due to wildfire smoke in Colorado during the first year of the COVID-19 pandemic. *Environmental Research* 115591; doi:[10.1016/j.envres.2023.115591](https://doi.org/10.1016/j.envres.2023.115591).
33. Kowalski K, Auerbach J, **Martenies SE**, Starling AP, Moore B, Dabelea D, Magzamen S. 2023. Neighborhood Walkability, Historical Redlining, and Childhood Obesity in Denver, Colorado. *J Urban Health*; doi:[10.1007/s11524-022-00703-w](https://doi.org/10.1007/s11524-022-00703-w).
32. **Martenies SE**, Hoskovec L, Wilson A, Moore BF, Starling AP, Allshouse WB, Adgate JL, Dabelea D, Magzamen S. 2022. Using non-parametric Bayes shrinkage to assess relationships between multiple environmental and social stressors and neonatal size and body composition in the Healthy Start cohort. *Environmental Health* 21:111; doi:[10.1186/s12940-022-00934-z](https://doi.org/10.1186/s12940-022-00934-z).
31. Moore BF, Kreitner KJ, Starling AP, **Martenies SE**, Magzamen S, Clark M, et al. 2022. Early-life exposure to tobacco and childhood adiposity: Identifying windows of susceptibility. *Pediatric Obesity* n/a:e12967; doi:[10.1111/ijpo.12967](https://doi.org/10.1111/ijpo.12967).
30. **Martenies SE**, Zhang M, Corrigan AE, Kvit A, Shields T, Wheaton W, Bastain TM, Breton CV, Dabela D, Habre R, Magzamen S, Padula AM, Around Him D, Carmargo Jr. CA, Cowell W, Croen LA, Deoni S, Everson TM, Hartert TV, Hipwell AE, McEvoy CT, Morello-Frosch R, O'Connor TG, Petriello M, Sathyanarayana S, Stanford JB, Woodruff TJ, Wright RJ, Kress AM, on behalf of program collaborators for Environmental Influences on Child Health Outcomes. 2022. Associations between combined exposure to environmental hazards and social stressors at the neighborhood level and individual perinatal outcomes in the ECHO-wide cohort. *Health Place* 76:102858; doi:[10.1016/j.healthplace.2022.102858](https://doi.org/10.1016/j.healthplace.2022.102858).

29. Hoskovec L, **Martenies S**, Burket TL, Magzamen S, Wilson A. 2022. Association Between Air Pollution and COVID-19 Disease Severity via Bayesian Multinomial Logistic Regression with Partially Missing Outcomes. *Envirometrics* 33:7; <http://dx.doi.org/10.1002/env.2751>.
28. Starling AP, Wood C, Liu C, Kechris K, Yang IV, Friedman C, Thomas DSK, Peel JL, Adgate JL, Magzamen S, **Martenies SE**, Allshouse WB, Dabelea D. 2022. Ambient air pollution during pregnancy and DNA methylation in umbilical cord blood, with potential mediation of associations with infant adiposity: The Healthy Start study. *Environmental Research* 214:113881; doi:[10.1016/j.envres.2022.113881](https://doi.org/10.1016/j.envres.2022.113881).
27. **Martenies SE**, Schill J, Klimm M, Cross JE, Oliver S, Magzamen S. 2022. Relationships between social climate and indoor environmental quality and frequently reported health symptoms among teachers and staff in a suburban school district. *Journal of Occupational and Environmental Hygiene* 0:1–11; doi:[10.1080/15459624.2022.2089675](https://doi.org/10.1080/15459624.2022.2089675).
26. Friedman C, Dabelea D, Bloemsmas LD, Thomas DSK, Peel JL, Adgate JL, Magzamen S, **Martenies SE**, Allshouse WB, Starling AP. 2022. Ambient air pollution during pregnancy and cardiometabolic biomarkers in cord blood. *Environmental Epidemiology* 6:e203; doi:[10.1097/EE9.000000000000203](https://doi.org/10.1097/EE9.000000000000203).
25. Mielnik A, **Martenies SE**, Heiderscheidt JM, Su J, Ross Z, Jerrett M, et al. 2022. Location-weighted traffic-related air pollution and asthma symptoms in urban adolescents. *Air Qual Atmos Health*; doi:[10.1007/s11869-022-01181-4](https://doi.org/10.1007/s11869-022-01181-4).
24. Beaupied BL, Martinez H, **Martenies S**, McConnel CS, Pollack IB, Giardina D, et al. 2021. Cows as canaries: The effects of ambient air pollution exposure on milk production and somatic cell count in dairy cows. *Environmental Research* 112197; doi:[10.1016/j.envres.2021.112197](https://doi.org/10.1016/j.envres.2021.112197).
23. Bloemsmas LD, Dabelea D, Thomas DS, Peel JL, Adgate JL, Allshouse WB, **Martenies SE**, Magzamen S, Starling AP. 2021. Prenatal exposure to ambient air pollution and traffic and indicators of adiposity in early childhood: the Healthy Start study. *International Journal of Obesity* 46:494–501; doi:<https://doi.org/10.1038/s41366-021-01003-0>.
22. O’Dell K, Bilsback K, Ford B, **Martenies SE**, Magzamen S, Fischer EV, et al. 2021. Estimated Mortality and Morbidity Attributable to Smoke Plumes in the United States: Not Just a Western US Problem. *GeoHealth* 5:e2021GH000457; doi:[10.1029/2021GH000457](https://doi.org/10.1029/2021GH000457).
21. Moore BF, Starling AP, **Martenies SE**, Magzamen S, Dabelea D. 2021. Joint effects of ambient air pollution and maternal smoking on neonatal adiposity and childhood BMI trajectories in the Healthy Start study. *Environ Epidemiol* 5:e142; doi:[10.1097/EE9.000000000000142](https://doi.org/10.1097/EE9.000000000000142).
20. **Martenies SE**, Hoskovec L, Wilson A, Allshouse WB, Adgate JL, Dabelea D, et al. 2021. Assessing the Impact of Wildfires on the Use of Black Carbon as an Indicator of Traffic Exposures in Environmental Epidemiology Studies. *GeoHealth* n/a:e2020GH000347; doi:<https://doi.org/10.1029/2020GH000347>.
19. Friedman C, Dabelea D, Thomas DSK, Peel JL, Adgate JL, Magzamen S, **Martenies SE**, Allshouse WB, Starling AP. 2021. Exposure to ambient air pollution during pregnancy and inflammatory biomarkers in maternal and umbilical cord blood: The Healthy Start study. *Environmental Research* 197:111165; doi:[10.1016/j.envres.2021.111165](https://doi.org/10.1016/j.envres.2021.111165).
18. **Martenies SE**, Keller JP, WeMott S, Kuiper G, Ross Z, Allshouse WB, et al. 2021. A Spatiotemporal Prediction Model for Black Carbon in the Denver Metropolitan Area, 2009–2020. *Environ Sci Technol* 55:3112–3123; doi:[10.1021/acs.est.0c06451](https://doi.org/10.1021/acs.est.0c06451).
17. Warren RJ, **Martenies SE**, Peel JL, Yi T, Robinson AL, Presto AA, et al. 2020. The relationship between black carbon and polycyclic aromatic hydrocarbon exposures and mortality in Allegheny County, Pennsylvania. *Air Qual Atmos Health* 13:893–908; doi:10.1007/s11869-020-00853-3.

16. **Martenies SE**, Schaeffer JW, Erlandson G, Bradford M, Poole JA, Wilson A, et al. 2020. Associations Between Bioaerosol Exposures and Lung Function Changes Among Dairy Workers in Colorado. *Journal of Occupational and Environmental Medicine* 62:424–430; doi:[10.1097/JOM.0000000000001856](https://doi.org/10.1097/JOM.0000000000001856).
15. Starling AP, Moore BF, Thomas DSK, Peel JL, Zhang W, Adgate JL, Magzamen S, **Martenies SE**, Allshouse WB, Dabelea D. 2020. Prenatal exposure to traffic and ambient air pollution and infant weight and adiposity: The Healthy Start study. *Environmental Research* 182:109130; doi:10.1016/j.envres.2020.109130.
14. **Martenies SE**, Akherati A, Jathar S, Magzamen S. 2019. Health and Environmental Justice Implications of Retiring Two Coal-Fired Power Plants in the Southern Front Range Region of Colorado. *GeoHealth*; doi:10.1029/2019GH000206.
13. **Martenies SE**, Allshouse WB, Starling AP, Ringham BM, Glueck DH, Adgate JL, *et al.* 2019. Combined environmental and social exposures during pregnancy and associations with neonatal size and body composition: The Healthy Start study. *Environmental Epidemiology* 3:e043; doi:10.1097/EE9.0000000000000043.
12. **Martenies SE**, Batterman SA. 2018. Effectiveness of Using Enhanced Filters in Schools and Homes to Reduce Indoor Exposures to PM from Outdoor Sources and Subsequent Health Benefits for Children with Asthma. *Environ Sci Tech*; doi:10.1021/acs.est.8b02053
11. Ward M, Schulz AJ, Israel BA, Rice K, **Martenies SE**, Markarian E. 2018. A conceptual framework for evaluating health equity promotion within community-based participatory research partnerships. *Eval Program Plann* 70:25–34; doi:10.1016/j.evalprogplan.2018.04.014.
10. **Martenies SE**, Milando CW, Batterman, SA. 2018. Air pollutant strategies to reduce adverse health impacts and health inequalities: a quantitative assessment for Detroit, Michigan. *Air Quality, Atmosphere & Health*; doi: 10.1007/s11869-017-0543-3.
9. **Martenies SE**, Milando CW, Williams GO, Batterman SA. 2017. Disease and Health Inequalities Attributable to Air Pollutant Exposure in Detroit, Michigan. *International Journal of Environmental Research and Public Health* 14:1243; doi:10.3390/ijerph14101243.
8. Branch F, Nguyen G, Porter N, Young HA, **Martenies SE**, McCray N, Deloid G, Popratiloff A, Perry MJ. 2017. Semi-automated scoring of triple-probe FISH in human sperm using confocal microscopy. *Cytometry A*, doi:10.1002/cyto.a.23126
7. Milando CW, **Martenies SE**, Batterman SA. 2016. Assessing concentrations and health impacts of air quality management strategies: framework for rapid emissions scenario and health impact estimation (FRESH-EST). *Environ. Int.* 94:473–481 , doi:10.1016/j.envint.2016.06.005
6. Perry MJ, Young HA, Grandjean P, Halling J, Petersen MS, **Martenies SE**, *et al.* 2015. Sperm aneuploidy in Faroese men with lifetime exposure to dichlorodiphenyldichloroethylene (DDE) and polychlorinated biphenyl (PCB) pollutants. *Environ. Health Perspect.*; doi:10.1289/ehp.1509779.
5. Figueroa ZI, Young HA, Meeker JD, **Martenies SE**, Barr DB, Gray G, Perry MJ. 2015. Dialkyl phosphate urinary metabolites and chromosomal abnormalities in human sperm. *Environ. Res.* 143:256–265; doi:10.1016/j.envres.2015.10.021.
4. **Martenies SE**, Wilkins D, Batterman SA. 2015. Health impact metrics for air pollution management strategies. *Environ. Int.* 85:84–95; doi:10.1016/j.envint.2015.08.013.
3. McAuliffe ME, Williams PL, Korrick SA, Dadd R, Marchetti F, **Martenies SE**, Perry MJ. 2014. Human sperm sex chromosome disomy and sperm DNA damage assessed by the neutral comet assay. *Hum. Reprod.*; doi:10.1093/humrep/deu177.
2. Young HA, Meeker JD, **Martenies SE**, Figueroa ZI, Barr DB, Perry MJ. 2013. Environmental exposure to pyrethroids and sperm sex chromosome disomy: a cross-sectional study. *Environ. Health* 12:111; doi:10.1186/1476-069X-12-111.

1. **Martenies SE**, Perry MJ. 2013. Environmental and occupational pesticide exposure and human sperm parameters: A systematic review. *Toxicology* 307:66–73; doi:10.1016/j.tox.2013.02.005.

PRESENTATIONS

Oral Presentations and Invited Talks

12. **Martenies SE**, Wilson A, Hoskovec L, Bol KA, Burket TL, Podewils L, Magzamen S. June 2023. *The COVID-19-wildfire smoke paradox: Reduced risk of all-cause mortality due to wildfire smoke in Colorado during the first year of the COVID-19 pandemic*. Presented at the 1st Annual Meeting of the International Society for Environmental Epidemiology North American Chapter. Corvallis, Oregon.
11. **Martenies SE**, Hoskovec L, Wilson A, Moore BF, Starling AP, Allshouse WB, Adgate JL, Dabelea D, Magzamen S., 2020. *A mixtures approach to assessing relationships between environmental and social determinants of health and neonatal size in the Healthy Start cohort*. Presented at the 32nd Annual Conference of the International Society for Environmental Epidemiology (ISEE 2020). Virtual.
10. **Martenies SE**, WeMott S, Kuiper G, Allshouse WB, Adgate JL, Starling AP, Dabelea D, Magzamen S. July 2020. dropbox.com. Presented at the AWMA Annual Conference and Exhibition. Virtual.
9. **Martenies SE**, WeMott S, Kuiper G, Lorber K, Dawson C, Andresen K, Allshouse WB, Starling AP, Adgate JL, Dabelea D, Magzamen S. August 2019. *Wildfire smoke may interfere with the use of black carbon as an indicator of traffic exposure*. Presented at the 31st Annual Conference of the International Society for Environmental Epidemiology (ISEE 2019). Utrecht, Netherlands.
8. **Martenies SE**, Allshouse W, Starling A, Ringham BM, Glueck DH, Adgate JL, Dabelea D, Magzamen S. August 29, 2018. *Combined environmental and social exposures during pregnancy and associations with weight and adiposity measured at birth in the Denver Healthy Start study*. Presented at the ISES-ISEE Joint Annual Meeting. Ottawa, ON.
7. **Martenies SE**, Batterman, SA. May 4, 2018. *Can school buildings make kids smarter and healthier? New findings from EPA's research grantees*. Presented at the Green Schools Conference and Expo. Denver, CO.
6. **Martenies SE**. February 26, 2018. *Cumulative exposures to environmental and social determinants of health among Healthy Start participants*. Presented at the Lifecourse Epidemiology of Adiposity & Diabetes (LEAD) Seminar Series. University of Colorado Denver. Denver, CO.
5. **Martenies SE**, Reyes AG, Batterman SA. November, 2016. *Health and equity impacts of alternative air quality management strategies: A quantitative health impact assessment for Detroit, Michigan*. Presented at the APHA Annual Meeting and Expo. Denver, CO.
4. **Martenies SE**. October, 2016. *Health and inequality impacts of ambient air pollution in Detroit, MI*. Presented at Doctoral Seminar (EHS 869). Univ of Michigan School of Public Health. Ann Arbor, MI
3. **Martenies SE**, Milando CW, Batterman SA. June, 2016. *Urban scale pollutant mitigation strategies to reduce the burden of disease: An application in Detroit, MI*. Presented at the AWMA Annual Conference and Exhibition. New Orleans, LA.
2. Batterman SA, Reyes AG, **Martenies SE**. May, 2016. *Detroit-specific asthma research and interventions*. Presented at the Detroit Asthma Summit. Detroit, MI.
1. **Martenies SE**. October, 2015. *Estimating the burden of disease attributable to air pollutants from local sources in Detroit, MI*. Presented at Doctoral Seminar (EHS 869). Univ of Michigan School of Public Health. Ann Arbor, MI

Poster Presentations

8. Park G, Sander W, **Martenies SE**, Rosencranz H, Rice LA, Jayasingh J, Michaels S, Aldridge B. June 2023. *Teaching Climate Change Collaboratively*. Presented at the 27th Annual Meeting of the International Association of Medical Science Educators. Cancun, Mexico.
7. **Martenies SE**, Bol K, Wilson A, Hoskovec L, Burket VL, Podewils L, Magzamen S. August 2021. *Excess mortality in the Colorado Front Range during the COVID-19 pandemic and a concurrent intense wildfire season*. Presented at the 33rd Annual Conference of the International Society for Environmental Epidemiology (ISEE 2021). Virtual.
6. **Martenies SE**, Magzamen S, Bastain TM, Breton CV, Farzan SF, Habre R, Dabelea D. April 2022. Examining the potential joint effects of prenatal exposure to environmental and social stressors on childhood obesity outcomes. Presented at the Spring Environmental influences on Child Health Outcomes (ECHO) Meeting.
4. **Martenies SE**, WeMott S, Kuiper G, Lorber K, Dawson C, Andresen K, Allshouse WB, Starling AP, Adgate JL, Dabelea D, Magzamen S. August 2019. *Developing a black carbon land use regression model for the Denver, CO metropolitan area*. Presented at the 31st Annual Conference of the International Society for Environmental Epidemiology (ISEE 2019). Utrecht, Netherlands.
3. WeMott SD, **Martenies SE**, Kuiper G, Lorber K, Dawson C, Andresen K, Allshouse WB, Starling AP, Adgate JL, Dabelea D, Magzamen S. August 2019. Developing a predictive model for indoor black carbon for the Denver, CO metropolitan area. Presented at the 31st Annual Conference of the International Society for Environmental Epidemiology (ISEE 2019). Utrecht, Netherlands.
2. **Martenies SE**, Batterman, SA. March 2017. *Assessing the health impacts and health burden inequality of ambient air pollution in Detroit, MI*. Presented at the 22nd Annual Environmental Health Sciences Research Symposium. Univ of Michigan School of Public Health. Ann Arbor, MI
1. **Martenies SE**, Milando CW, Batterman, SA. January 2016. *Asthma-related health benefits of reducing SO2 exposures in Detroit, MI*. Presented at the 21st Annual Environmental Health Sciences Research Symposium. Univ of Michigan School of Public Health. Ann Arbor, MI

Media and Outreach Presentations

1. **Martenies SE**. Panelist. "Health Concerns Set Off Gas Stove Debate." The 21st Show (Illinois Public Media). January 17, 2023.
<https://will.illinois.edu/21stshow/story/health-concerns-set-off-gas-stove-debate>

FUNDING AND GRANT SUPPORT

Current

US Department of Energy Francisco (PI) 2/1/2023 - 1/31/2026
Reducing Deferrals by Integrating Healthy Homes with Weatherization
Pole: Co-investigator

PNI Seed Grant **Martenies (PI)** 9/1/2022 – 8/31/2024
Diet and adiposity as potential effect modifiers in the relationship between the oxidative potential of particulate matter and inflammation in children
Role: Principal Investigator

Chancellor's Call To Action Rea, E (PI) 7/1/2022 – 6/30/2023
Determining Racial Bias in Drinking Water Quality Among Private Well Users in Chicagoland
Role: Co-Principal Investigator

Colorado Department of Public Health and Environment Magzamen (PI) 3/1/2022 – 2/28/2025
ENVIRONS: Estudio de nuestros vecinos para investigar riesgo y nuestros salud (Study of our neighbors to research risk and our health).
Role: Subaward PI

NIH-U2COD023375 Benjamin, D; Newby, K; Smith, B (MPIS) 9/1/2016 – 8/31/2023
Environmental influences on Child Health Outcomes (ECHO)
Opportunities and Infrastructure Fund (OIF) subaward **Martenies (PI)** 9/1/2021 – 8/31/2023
Examining the joint effects of prenatal exposures to traffic-related air pollutants and social determinants of health on childhood obesity outcomes. Pilot project funded under the umbrella parent grant number.
Role: OIF PI

Under Review

NIEHS Martenies (PI) 12/1/2023 – 11/30/2023
Understanding the Total Environmental Landscape in Family Based Childcare: A mixed methods participatory approach to identifying sustainable opportunities to improve children’s environmental health
Role: PI

Completed

A.J. Kauvar Foundation Magzamen, S (PI) 9/1/2020 – 8/31/2022
Examining Prevention Locally Through Research on Environmental Factors for COVID-19
Role: Subaward PI

TEACHING

University of Illinois at Urbana-Champaign (2020 – Present)

CHLH 101 – Introduction to Public Health

CHLH 469 – Environmental Health

University of Northern Colorado (2020)

CH 550 – Introduction to Environmental Health

STUDENT MENTORING

PhD Students (As Faculty Mentor)

2022 – Alice Oloo, Community Health, UIUC

PhD Students (As Committee Member)

2022 – 2023 Ana Mitchell, Division of Nutritional Sciences, UIUC

2022 – Present Wonjin Jeong, Recreation, Sport and Tourism, UIUC

2022 – Present Chloe Friedman, Epidemiology, University of Colorado Anschutz Medical Campus

2022 – Present Grant Erlandson, Environmental Health Sciences, Colorado State University

MS Students (As Committee Member)

2022 – 2023 Jane Gross, Natural Resources and Environmental Sciences, UIUC

Undergraduate Students (As Faculty Mentor)

2022 – Present Brianna Sirdich (START student)
2022 – Present Vinh Vo (START student)
2023 – Present Kalia Davis (START student)
2023 – Present Anastasia Adjei (START student)

SERVICE

Professional Society Memberships

2020 – Member, International Society for Environmental Epidemiology
2021 – Member, American Public Health Association (Environmental Health Section)

Professional Service

2022 *Ad Hoc* Reviewer, Neurological, Aging and Musculoskeletal Epi Study Section, NIH

Ad Hoc Journal Reviewer

International Journal of Public Health and Environment; Science of the Total Environment;
Environmental Research; Environmental Science and Technology; Sustainability; Health & Place;
Environment International

Department Service (Kinesiology and Community Health, UIUC)

2023 Admissions Committee Faculty Representative, MPH Program
2022 MPH Director (Assoc./Full Professor) Search Committee Member
2021 – 2022 KCH Undergraduate Degree Programs Task Force Member
2021 – 2022 KCH Strategic Plan Implementation Committee Member
2021 – 2022 KCH Travel Award Committee Ad-Hoc Reviewer
2021 MPH Assistant Director Search Committee Member
2021 Specialized Faculty (Assist. Professor- Epidemiology) Search Committee Member
2021 Admissions Committee Faculty Representative, MPH Program
2020 – 2021 Tenure Track Faculty (Assist. Professor- Epidemiology) Search Committee Member