

Curriculum Vitae
Anne P. Starling, PhD

CONTACT INFORMATION

Department of Epidemiology
Colorado School of Public Health
University of Colorado Anschutz Medical Campus
13001 E. 17th Place, Mail Stop B119, Aurora, CO 80045
303-724-8483
Anne.Starling@cuanschutz.edu

CURRENT APPOINTMENTS

Assistant Professor Department of Epidemiology Colorado School of Public Health University of Colorado Anschutz Medical Campus, Aurora, CO	2017-present
Assistant Director for Environmental Health Research Lifecourse Epidemiology of Adiposity and Diabetes (LEAD) Center Colorado School of Public Health University of Colorado Anschutz Medical Campus, Aurora, CO	2018-present

EDUCATION

Postdoctoral	Epidemiology, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO	2017
Ph.D.	Epidemiology, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC	2013
M.Phil.	Biological Anthropology, Leverhulme Centre for Human Evolutionary Studies, University of Cambridge, United Kingdom	2005
B.S.	Biological Anthropology and Anatomy, <i>magna cum laude</i> , Duke University, Durham, NC.	2003

RESEARCH SUPPORT

Current

Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention U01000300 (MPI: Adgate, Starling) PFAS Exposure and Health Effects in El Paso County, Colorado. Role: PI	2019-2024
Office of the Director, National Institutes of Health UH3OD023248 (PI: Dabelea) The Early Life Exposome and Childhood Health – The Colorado Healthy Start 3 Cohort Study. Role: Co-Investigator	2018-2023

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National Institute of Environmental Health Sciences R00ES025817 (PI: Starling) 2017-2021
A Mechanistic Study of Prenatal Air Pollution Exposure and Offspring Obesity Risk.
Role: PI

National Institute of Environmental Health Sciences R21ES029394 (PI: Adgate) 2018-2020
Exposure and Health Effects from Poly- and Perfluoroalkyl Substances in Colorado
Water. Role: Co-Investigator

Completed

National Institute of Environmental Health Sciences K99ES025817 (PI: Starling) 2016-2017
A Mechanistic Study of Prenatal Air Pollution Exposure and Offspring Obesity Risk
Role: PI

National Institute of Environmental Health Sciences R01ES022934 (PI: Hamman) 2014-2016
Endocrine Disruptors, Epigenetic Programming and Neonatal Outcomes
Role: Postdoctoral Fellow

National Institute of Environmental Health Sciences F30ES022126 (PI: Starling) 2012-2013
Epidemiology of Perfluorinated Compounds in Pregnancy and Risk of Preeclampsia
Role: PI, Trainee

PEER-REVIEWED PUBLICATIONS

1. Buckley, J.P., E.S. Barrett, P.I. Beamer, D.H. Bennett, M.S. Bloom, T.R. Fennell, R.C. Fry, W.E. Funk, G.B. Hamra, S.S. Hecht, K. Kannan, R. Iyer, M.R. Karagas, K. Lyall, P.J. Parsons, E.D. Pellizzari, A.J. Signes-Pastor, **A.P. Starling**, A. Wang, D.J. Watkins, M. Zhang, T.J. Woodruff, on behalf of program collaborators for ECHO. Opportunities for evaluating chemical exposures and child health in the United States: the Environmental influences on Child Health Outcomes (ECHO) Program. *Journal of Exposure Science and Environmental Epidemiology*, 2020; 30(3):397-419.
2. **Starling, A.P.**, B.F. Moore, D.S.K. Thomas, J.L. Peel, W. Zhang, J.L. Adgate, S. Magzamen, S.E. Martenies, W.B. Allshouse, D. Dabelea. Prenatal exposure to traffic and ambient air pollution and infant weight and adiposity: The Healthy Start Study. *Environmental Research*, 2020; 182:109130.
3. Kaur, N., **A.P. Starling**, A.M. Calafat, A. Sjodin, N. Clouet-Foraison, L.M. Dolan, G. Imperatore, E.T. Jensen, J.M. Lawrence, M. Ospina, C. Pihoker, K. Taylor, C. Turley, D. Dabelea, L.M. Jaacks. Longitudinal Association of Biomarkers of Pesticide Exposure with Cardiovascular Disease Risk Factors in Youth with Diabetes. *Environmental Research*, 2020; 181:108916.
4. Moore, B.F., A.L. Shapiro, G. Wilkening, S. Magzamen, **A.P. Starling**, W.B. Allshouse, J.L. Adgate, D. Dabelea. Prenatal exposure to tobacco and offspring neurocognitive development in the Healthy Start study. *Journal of Pediatrics*, 2020; 218:28-34.e2.
5. Howe, C.G., C. Briggs, B. Cox, J. Jungius, T. Kvist, S. Lent, H. Miles, L.A. Salas Díaz, **A.P. Starling**, P. Yousefi, C. Ladd-Acosta, M. Bustamante, D. Dabelea, A. Ghantous, J.M.T. Lahti, D.A. Lawlor, M. Plusquin, K. Rääkkönen, C.L. Relton, G.C. Sharp, W. Zhang, M. Hivert, C.V. Breton. Maternal gestational diabetes mellitus and newborn DNA methylation: Findings from the Pregnancy and Childhood Epigenetics consortium. *Diabetes Care*, 2020; 43(1):98-105.

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6. Barton, K.E., **A.P. Starling**, C.P. Higgins, C. McDonough, A.M. Calafat, J.L. Adgate. Sociodemographic and behavioral determinants of serum concentrations of per- and polyfluoroalkyl substances in a community highly exposed to aqueous film-forming foam contaminants in drinking water. *International Journal of Hygiene and Environmental Health*, 2020; 223(1):256-266.
7. Hockett, C., K.K. Harrall, B.F. Moore, **A.P. Starling**, A. Bellatorre, K.A. Sauder, A. Scherzinger, K. Garg, B.M. Ringham, D.H. Glueck, D. Dabelea. Persistent effects of *in utero* overnutrition on offspring adiposity: the Exploring Perinatal Outcomes among Children (EPOCH) study. *Diabetologia*, 2019; 62(11):2017-2024.
8. Grebe, N., C. Fitzpatrick, **A. Starling**, K. Sharrock, C. Drea. Organizational and activation androgens, lemur social play, and the ontogeny of female dominance. *Hormones and Behavior*, 2019; 115:104554.
9. **Starling, A.P.**, J.L. Adgate, R.F. Hamman, K. Kechris, A.M. Calafat, D. Dabelea. Prenatal exposure to per- and polyfluoroalkyl substances and infant growth and adiposity: the Healthy Start Study. *Environment International*, 2019; 131:104983.
10. Kazmi, N., G. Sharp, S. Reese, F. Vehmeijer, J. Lahti, C. Page, W. Zhang, S. Rifas-Shiman, F. Rezwan, A. Simpkin, K. Burrows, T. Richardson, D. Santos Ferreira, A. Fraser, Q. Harmon, S. Zhao, V. Jaddoe, D. Czamara, E. Binder, M.C. Magnus, S.E. Håberg, W. Nystad, E. Nøhr, **A. Starling**, K. Kechris, I. Yang, D. DeMeo, A. Litonjua, A. Baccarelli, E. Oken, J.W. Holloway, W. Karmaus, S. Arshad, D. Dabelea, T. Sørensen, H. Laivuori, K. Räikkönen, J. Felix, S. London, M. Hivert, T. Gaunt, D. Lawlor, C. Relton. Hypertensive disorders of pregnancy and DNA methylation in newborns: Findings from the Pregnancy and Childhood Epigenetics Consortium. *Hypertension*, 2019; 74(2):375-383.
11. Martenies, S.E., W.B. Allshouse, **A.P. Starling**, B.M. Ringham, D.H. Glueck, J.L. Adgate, D. Dabelea, S. Magzamen. Combined environmental and social exposures during pregnancy and associations with neonatal size and body composition: the Healthy Start study. *Environmental Epidemiology*, 2019; 3(2):e043.
12. Küpers, L., C. Monnereau, G. Sharp, P. Yousefi, L. Salas, A. Ghantous, C. Page, S. Reese, A. Willcox, D. Czamara, **A. Starling**, A. Novoloaca, S. Lent, R. Roy, C. Hoyo, C. Breton, C. Allard, A. Just, K. Bakulski, J. Holloway, T. Everson, C. Xu, R. Huang, D. van der Plaats, M. Wielscher, S. Kebede Merid, V. Ullemar, F. Rezwan, J. Lahti, J. van Dongen, S. Langie, T. Richardson, M. Magnus, E. Nohr, Z. Xu, L. Duijts, S. Zhao, W. Zhang, M. Plusquin, D. Demeo, O. Solomon, J. Heimovaara, D. Jima, L. Gao, M. Bustamante, P. Perron, R. Wright, I. Hertz-Picciotto, H. Zhang, M. Karagas, U. Gehring, C. Marsit, L. Beilin, J. Vonk, M. Jarvelin, A. Bergström, A. Örtqvist, S. Ewart, P. Villa, S. Moore, G. Willemsen, A. Standaert, S. Håberg, T. Sorensen, J. Taylor, K. Räikkönen, I. Yang, K. Kechris, T. Nawrot, M. Silver, Y. Gong, L. Richiardi, M. Kogevinas, A. Litonjua, B. Eskenazi, K. Huen, H. Mbarek, R. Maguire, T. Dwyer, M. Vrijheid, L. Bouchard, A. Baccarelli, L. Croen, W. Karmaus, D. Anderson, M. de Vries, S. Sebert, J. Kere, R. Karlsson, S. Arshad, E. Hämäläinen, M. Routledge, D. Boomsma, A. Feinberg, C. Newschaffer, E. Govarts, M. Moisse, M. Fallin, E. Melén, A. Prentice, E. Kajantie, C. Almqvist, E. Oken, D. Dabelea, H. Marika Boezen, P. Melton, R. Wright, G. Koppelman, L. Trevisi, M. Hivert, J. Sunyer, M. Cheng Munthe-Kaas, S. Murphy, E. Corpeleijn, J. Wiemels, N. Holland, Z. Herceg, E. Binder, G.D. Smith, V. Jaddoe, R. Lie, W. Nystad, S. London, D. Lawlor, C. Relton, H. Snieder, and J. Felix. Meta-analysis of epigenome-wide association studies in neonates reveals widespread differential DNA methylation associated with birthweight. *Nature Communications*, 2019; 10(1):1893.

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13. Kaar, J.L., K.A. Sauder, A.L.B. Shapiro, **A.P. Starling**, B.M. Ringham, S.L. Johnson, D. Dabelea. Infant feeding practices in a diverse group of women: The Healthy Start Study. *Clinical Medicine Insights: Pediatrics*, 2019; Jan 20; 13:1179556518824362.
14. Moore, B.M., **A.P. Starling**, S. Magzamen, C. Harrod, W. Allshouse, J. Adgate, B. Ringham, D. Glueck, D. Dabelea. Fetal exposure to maternal active and secondhand smoking with offspring early-life growth in the Healthy Start study. *International Journal of Obesity*, 2019;43(4):652-662.
15. Polinski, K.J., D. Dabelea, R.F. Hamman, J.L. Adgate, A. Calafat, X. Ye, **A.P. Starling**. Distribution and predictors of urinary concentrations of phthalate metabolites and phenols among pregnant women in the Healthy Start Study. *Environmental Research*, 2018; 162:308-317.
16. Moore, B.F., K.A. Sauder, **A.P. Starling**, J.R. Hebert, N. Shivappa, B.M. Ringham, D.H. Glueck, D. Dabelea. Pro-inflammatory diets during pregnancy and neonatal adiposity in the Healthy Start study. *The Journal of Pediatrics*, 2018, 195:121-127.
17. Felix, J.F., B.R. Joubert, A.A. Baccarelli, G.C. Sharp, C. Almqvist, I. Annesi-Maesano, H. Arshad, N. Baiz, M.J. Bakermans-Kranenburg, K.M. Bakulsky, E.B. Binder, L. Bouchard, C.V. Breton, B. Brunekreef, K.J. Brunst, E.G. Burchard, M. Bustamante, L. Chatzi, M.C. Munthe-Kaas, E. Corpeleijn, D. Czamara, D. Dabelea, G. Davey Smith, P. De Boever, L. Duijts, T. Dwyer, C. Eng, B. Eskenazi, T.M. Everson, F. Falahi, M.D. Fallin, S. Farchi, M.F. Fernandez, L. Gao, T.R. Gaunt, A. Ghantous, M.W. Gillman, S. Gonseth, V. Grote, O. Gruzieva, S.E. Haberg, Z. Herceg, M. Hivert, N. Holland, J.W. Holloway, C. Hoyo, K. Hu, R. Huang, K. Huen, M. Jarvelin, D.D. Jima, A.C. Just, M.R. Karagas, R. Karlsson, W. Karmaus, K.J. Kechris, J. Kere, M. Kogevinas, B. Koletzko, G.H. Koppelman, L.K. Kupers, C. Ladd-Acosta, J. Lahti, N. Lambrechts, S.A.S. Langie, R.T. Lie, A.H. Liu, M.C. Magnus, P. Magnus, R.L. Maguire, C.J. Marsit, W. McArdle, E. Melen, P. Melton, S.K. Murphy, T.S. Nawrot, L. Nistico, E.A. Nohr, B. Nordlund, W. Nystad, S.S. Oh, E. Oken, C.M. Page, P. Perron, G. Pershagen, C. Pizzi, M. Plusquin, K. Raikkonen, S.E. Reese, E. Reischl, L. Richiardi, S. Ring, R.P. Roy, P. Rzehak, G. Schoeters, D.A. Schwartz, S. Seibert, H. Sneider, T.I.A. Sorensen, **A.P. Starling**, J. Sunyer, J.A. Taylor, H. Tiemeier, V. Ulleimar, M. Vafeiadi, M.H. van Ijzendoorn, J.M. Vonk, A. Vriens, M. Vrijheid, P. Wang, J.L. Wiemels, A.J. Wilcox, R.J. Wright, C. Xu, Z. Xu, I.V. Yang, P. Yousefi, H. Zhang, W. Zhang, S. Zhao, G. Agha, C.L. Relton, V.W.V. Jaddoe, S.J. London. Cohort profile: Pregnancy and Childhood Epigenetics (PACE) Consortium. *International Journal of Epidemiology*, 2018; 47(1):22-23u.
18. Lutz, S.M, A. Thwing, S. Schmiede, M. Kroehl, C. Baker, **A.P. Starling**, J.E. Hokanson, D. Ghosh. Examining the role of unmeasured confounding in mediation analysis with genetic and genomic applications. *BMC Bioinformatics*, 2017; 18(1):344.
19. Moore, B.F., K.A. Sauder, **A.P. Starling**, B.M. Ringham, D.H. Glueck, D. Dabelea. Exposure to secondhand smoke, exclusive breastfeeding and infant adiposity at age 5 months in the Healthy Start study. *Pediatric Obesity*, 2017; 12 Suppl 1:111-119.
20. Perng, W., B. Ringham, D.H. Glueck, K.A. Sauder, **A.P. Starling**, M.B. Belfort, D. Dabelea. An observational cohort study of weight- and length-derived anthropometric indicators with body composition at birth and 5 months: The Healthy Start Study. *American Journal of Clinical Nutrition*, 2017; 106(2):559-567.
21. **Starling, A.P.**, K.A. Sauder, J.L. Kaar, A.L.B. Shapiro, A. Siega-Riz, D. Dabelea. Maternal dietary patterns during pregnancy are associated with newborn body composition. *Journal of Nutrition*, 2017; 147(7):1334-1339.

22. Sauder K.A., J.L. Kaar, **A.P. Starling**, B.M. Ringham, D.H. Glueck, D. Dabelea. Predictors of infant body composition at 5 months of age: The Healthy Start Study. *Journal of Pediatrics*, 2017; 183:94-99.e1.
23. **Starling, A.P.**, A.L. Shapiro, K.A. Sauder, J.L. Kaar, B.M. Ringham, D.H. Glueck, H.L. Galan, D. Dabelea. Blood pressure during pregnancy, neonatal size and altered body composition: The Healthy Start Study. *Journal of Perinatology*, 2017; 37(5):502-506.
24. **Starling, A.P.**, J.A. Adgate, R.F. Hamman, K. Kechris, A. Calafat, X. Ye, D. Dabelea. Perfluoroalkyl substances during pregnancy and offspring weight and adiposity at birth: examining mediation by maternal fasting glucose in the Healthy Start Study. *Environmental Health Perspectives*, 2017; 125(6):067016. DOI:10.1289/EHP641
25. Shapiro, A.L.B., J.L. Kaar, T.L. Crume, **A.P. Starling**, A.M. Siega-Riz, B. Ringham, D. Glueck, J. Norris, L. Barbour, J.E. Friedman, D. Dabelea. Maternal diet quality in pregnancy and neonatal adiposity: The Healthy Start Study. *International Journal of Obesity*, 2016; 40(7):1056-62.
26. Sauder K.A., **A.P. Starling**, A.L. Shapiro, J.L. Kaar, B.M. Ringham, D.H. Glueck, J. Leiferman, A.M. Siega-Riz, D. Dabelea. Diet, physical activity and mental health status are associated with dysglycaemia in pregnancy: The Healthy Start Study. *Diabetic Medicine*, 2016; 33(5):663-7.
27. Sauder, K.A., **A.P. Starling**, A.L. Shapiro, J.L. Kaar, B.M. Ringham, D.H. Glueck, D. Dabelea. Exploring the association between maternal prenatal multivitamin use and early infant growth: The Healthy Start Study. *Pediatric Obesity*, 2016; 11(5):434-41.
28. Perreault, L., **A.P. Starling**, D. Glueck, J.T. Brozinick, P. Sanders, P. Siddall, M.S. Kuo, D. Dabelea, B.C. Bergman. Biomarkers of ectopic fat deposition: the next frontier in serum lipidomics. *Journal of Clinical Endocrinology and Metabolism*, 2016; 101(1):176-82.
29. **Starling, A.P.**, L.S. Engel, A.M. Calafat, S. Koutros, J. Satagopan, G. Yang, C.E. Matthews, Q. Cai, J.P. Buckley, B. Ji, H. Cai, W. Chow, W. Zheng, Y. Gao, N. Rothman, Y. Xiang, X. Shu. Predictors and long-term reproducibility of urinary phthalate metabolites in middle-aged men and women living in urban Shanghai. *Environment International*, 2015; 84:94-106.
30. **Starling, A.P.** and J.A. Hoppin. Environmental chemical risk factors for type 2 diabetes: an update. *Diabetes Management*, 2015; 5(4):285-99.
31. **Starling, A.P.**, J.T. Brinton, D.H. Glueck, A.L. Shapiro, C.S. Harrod, A.M. Lynch, A.M. Siega-Riz, D. Dabelea. Associations of maternal BMI and gestational weight gain with neonatal adiposity in the Healthy Start Study. *American Journal of Clinical Nutrition*, 2015; 101(2):294-301.
32. Klungsøyr K., Q.E. Harmon, L.B. Skard, I. Simonsen, E.T. Austvoll, E.R. Alsaker, **A. Starling**, L. Trogstad, P. Magnus, S.M. Engel. Validity of pre-eclampsia registration in the Medical Birth Registry of Norway for women participating in the Norwegian Mother and Child Cohort Study, 1999-2010. *Paediatric and Perinatal Epidemiology*, 2014; 28(5):362-71.
33. **Starling, A.P.**, D.M. Umbach, F. Kamel, S. Long, D.P. Sandler, J.A. Hoppin. Pesticide use and incident diabetes among wives of farmers in the Agricultural Health Study. *Occupational and Environmental Medicine*, 2014; 71(9):629-35.

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34. **Starling, A.P.**, S.M. Engel, D.B. Richardson, D.D. Baird, L.S. Haug, A.M. Stuebe, K. Klungsøyr, Q. Harmon, G. Becher, C. Thomsen, A. Sabaredzovic, M. Eggesbø, J.A. Hoppin, G.S. Travlos, R.E. Wilson, L.I. Trogstad, P. Magnus, M.P. Longnecker. Perfluoroalkyl substances during pregnancy and validated preeclampsia among nulliparous women in the Norwegian Mother and Child Cohort Study. *American Journal of Epidemiology*, 2014; 179(7):824-33.
35. **Starling, A.P.**, S.M. Engel, K.W. Whitworth, D.B. Richardson, A.M. Stuebe, J.L. Daniels, L.S. Haug, M. Eggesbø, G. Becher, A. Sabaredzovic, C. Thomsen, R.E. Wilson, G.S. Travlos, J.A. Hoppin, D.D. Baird, M.P. Longnecker. Perfluoroalkyl substances and lipid concentrations in plasma during pregnancy among women in the Norwegian Mother and Child Cohort Study. *Environment International*, 2014; 62:104-12.
36. Wang, Y., **A.P. Starling**, L.S. Haug, M. Eggesbø, G. Becher, C. Thomsen, G. Travlos, D. King, J.A. Hoppin, W.J. Rogan, M.P. Longnecker. Association between perfluoroalkyl substances and thyroid stimulating hormone among pregnant women: A cross-sectional study. *Environmental Health*, 2013; 12(1):76.
37. **Starling, A.P.**, M.J.E. Charpentier, C. Fitzpatrick, E.S. Scordato, and C.M. Drea. Seasonality, sociality, and reproduction: Long-term stressors of ring-tailed lemurs (*Lemur catta*). *Hormones and Behavior*, 2010; 57:76-85.
38. **Starling, A.P.** and J.T. Stock. Dental indicators of health and stress in early Egyptian and Nubian agriculturalists: A difficult transition and gradual recovery. *American Journal of Physical Anthropology*, 2007; 134:520-528.

BOOK CHAPTERS

Starling, A.P. and D. Dabelea. Diabetes in pregnancy: implications for the offspring. *A Practical Manual of Diabetes in Pregnancy, 2nd Edition*. Eds: D. McCance, M. Maresh, D. Sacks. West Sussex: Wiley-Blackwell, 2017.

TEACHING

Lead Instructor

Analytical Epidemiology, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO. Spring 2018, Fall 2018, Fall 2019.

Intermediate-level methods course for masters and doctoral students.

Co-Instructor

Introductory Epidemiology, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO. Fall 2014, Fall 2015.

Large (150 student) introductory course for Masters of Public Health students.

Guest Lecturer

Environmental and Occupational Epidemiology, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO. Spring 2020.

Design and analysis of prospective cohort studies in environmental epidemiology.

Analytical Epidemiology, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO. Spring 2019.

Introduced analytical approaches to detecting and correcting for confounding bias.

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Advanced Epidemiology, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO. Spring 2016.

Advanced seminar for Epidemiology PhD and Masters of Public Health students.

Applied Regression Topics, Department of Epidemiology, Colorado State University, Fort Collins, CO. Fall 2015.

Introduced statistical models for exposure mixtures to a small graduate seminar.

Clinical Epidemiology and Biostatistics, Colorado School of Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO. Fall 2015.

Small group leader for medical student instructional exercise.

HONORS AND AWARDS

Faculty Excellence in Teaching Award, Colorado School of Public Health, 2019.

Pathway to Independence Award (K99/R00), National Institute of Environmental Health Sciences, 2016.

Award for Excellence in Reviewing, *Journal of Nutrition Education and Behavior*, 2015.

Marilyn and Al Tyroler Endowed Scholarship in Epidemiology, UNC Chapel Hill, 2012.

Center for Global Initiatives Internship Award, University of North Carolina at Chapel Hill, 2008.

Ronald W. Hyatt Rotary Public Service Award, University of North Carolina at Chapel Hill, 2008.

Medical Alumni Loyalty Fund Scholarship, School of Medicine, University of North Carolina, 2007.

Phi Beta Kappa, Duke University, 2003.