



IN THIS ISSUE: REGISTRATION FOR THE 2023 NORCH SYMPOSIUM - 1 • PILOT & FEASIBILITY APPLICATION OPEN - 2 • FEATURED PUBLICATIONS- 3 • NUTRITION AND OBESITY EVENTS - 4

Register now for the 24th Annual NORCH Symposium

Adiposity, Immunity, and Inflammation: Interrelationships in Health and Disease

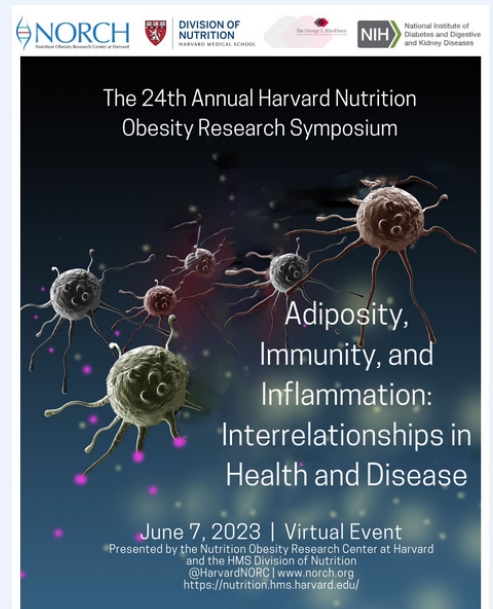
Wednesday, June 7, 2023

8:30am-4:30pm EST, Virtual

This event is free and open to the public.

The [24th Annual Harvard Nutrition and Obesity Symposium](#) will explore the latest research on a wide range of topics, including pathways from obesity to asthma, adipokines as immunoregulators, and immunological landscape of adipose tissue. The George L. Blackburn Keynote Lecture, "Obesity and Immunometabolism," will be given by Dr. Lydia Lynch of Harvard Medical School. We have an excellent lineup of speakers who will present on these topic areas. The full list of speakers is now available to view on the [event webpage](#).

[Click here to download the official event flyer.](#)



[Click here to register now!](#)

Request for Applications: Pilot and Feasibility Grants

The NORCH is now accepting applications for Pilot & Feasibility funding for projects related to nutrition, obesity, and metabolism. Up to \$30,000 per project is available. The deadline for applications is March 1, 2023. Please [click here for information](#) on eligibility, application procedure, and more.

New Publications from NORCH Members

Recent Publication Highlights from NORCH Investigators

Vatanen T, Jabbar KS, Ruhtula T, Honkanen J, Avila-Pacheco J, Siljander H, Stražar M, Oikarinen S, Hyöty H, Ilonen J, Mitchell CM, Yassour M, Virtanen SM, **Clish CB**, Plichta DR, Vlamakis H, Knip M, **Xavier RJ**. Mobile genetic elements from the maternal microbiome shape infant gut microbial assembly and metabolism. *Cell*. 2022 Dec 22;185(26):4921-4936.e15. doi: 10.1016/j.cell.2022.11.023. PMID: [36563663](#)

Trager LE, Lyons M, Kuznetsov A, Sheffield C, Roh K, Freeman R, Rhee J, **Guseh JS**, Li H, **Rosenzweig A**. Beyond cardiomyocytes: Cellular diversity in the heart's response to exercise. *J Sport Health Sci*. 2022 Dec 19;S2095-2546(22)00125-9. doi: 10.1016/j.jshs.2022.12.011. Online ahead of print. PMID: [36549585](#)

Nagao H, Cai W, Brasil Brandão B, Wewer Albrechtsen NJ, Steger M, Gattu AK, Pan H, Dreyfuss JM, Wunderlich FT, Mann M, **Kahn CR**. Leucine-973 is a crucial residue differentiating insulin and IGF-1 receptor signaling. *J Clin Invest*. 2022 Dec 22:e161472. doi: 10.1172/JCI161472. Online ahead of print. PMID: [36548088](#)

Simon TG, Roelstraete B, Alkhouri N, Hagström H, Sundström J, Ludvigsson JF. Cardiovascular disease risk in paediatric and young adult non-alcoholic fatty liver disease. *Gut*. 2022 Dec 15;gutjnl-2022-328105. doi: 10.1136/gutjnl-2022-328105. Online ahead of print. PMID: [36522149](#)

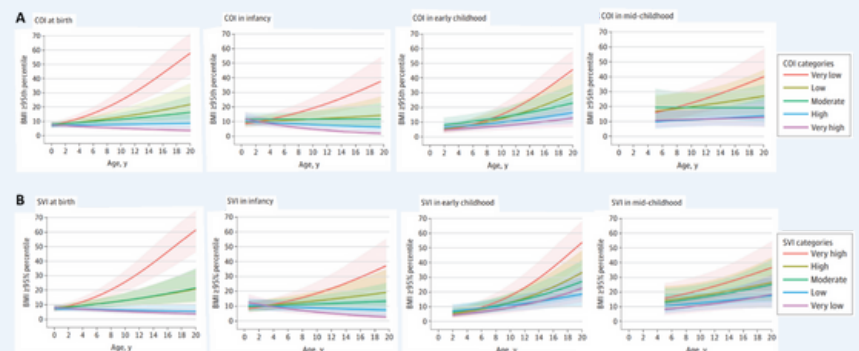
Dumas O, Arroyo AC, Faridi MK, James K, Hsu S, **Powe C**, **Camargo CA Jr**. Cohort Study of Maternal Gestational Weight Gain, Gestational Diabetes, and Childhood Asthma. *Nutrients*. 2022 Dec 6;14(23):5188. doi: 10.3390/nu14235188. PMID: [36501218](#)

Hang D, Wang L, Fang Z, Du M, Wang K, He X, Khandpur N, Rossato SL, Wu K, Hu Z, Shen H, Ogino S, **Chan AT**, Giovannucci EL, Zhang FF, **Song M**. Ultra-processed food consumption and risk of colorectal cancer precursors: results from three prospective cohorts. *J Natl Cancer Inst*. 2022 Dec 7:djac221. doi: 10.1093/jnci/djac221. Online ahead of print. PMID: [36477589](#)

Haines MS, Leong A, Porneala BC, Zhong VW, Lewis CE, Schreiner PJ, **Miller KK**, **Meigs JB**, Carnethon MR. More appendicular lean mass relative to body mass index is associated with lower incident diabetes in middle-aged adults in the CARDIA study. *Nutr Metab Cardiovasc Dis*. 2022 Oct 10;S0939-4753(22)00400-8. doi: 10.1016/j.numecd.2022.09.017. Online ahead of print. PMID: [36435699](#)

Opportunity and Social Vulnerability at Birth Predict Risk of Obesity in Adolescence

Adverse neighborhood conditions appear to be a substantial risk factor for pediatric and adult obesity, although most of the studies establishing these associations to date have been cross-sectional. In this work, NORCH Executive Committee Member Dr. Emily Oken, along with previous NORCH Outstanding Manuscript awardee Dr. Izzuddin Aris, NORCH member Dr. Carlos Camargo, and colleagues, use data from the longitudinal Environmental Influences on Child Health Outcomes (ECHO) study to examine how neighborhood-level measures of opportunity and social vulnerability at various times in children's lives are associated with BMI trajectories and risk of obesity from early childhood to adolescence. Data included 20,677 children who participated in ECHO between 1995-2021. Independent variables included the Child Opportunity Index (COI), which includes multiple neighborhood conditions found to be associated with adolescent cardiometabolic health, and the Social Vulnerability Index (SVI), which is based on 15 social factors associated with adult obesity and cardiometabolic disease. A child's neighborhood COI measure at birth and during childhood was inversely associated with mean subsequent BMI and risk of obesity at every life stage after adjusting for family sociodemographic and prenatal characteristics (**Figure, A**). Similarly, a child's neighborhood SVI measure at birth and during childhood was directly associated with mean subsequent BMI and risk of obesity at every life stage after adjusting for family sociodemographic and prenatal characteristics (**Figure, B**). For both measures, effect estimates were largest for the neighborhood exposure at birth and relatively lower for exposure later in childhood, and the magnitude of the effect of exposure was larger as children grew older. Living in the highest opportunity neighborhoods compared with the lowest, or in the least vulnerable neighborhoods compared with the most vulnerable, was associated with a mean difference of approximately -2kg/m² in BMI and a reduction in obesity risk of 80%. This large, longitudinal study further supports the detrimental effects of living in a disadvantaged neighborhood on subsequent obesity risk and highlights the need for childhood obesity interventions that target the societal and economic structures leading to disadvantage.



From Aris et al., *JAMA Network Open*. 2022;5(12):e2247957. Open access under the terms of the CC-BY License.
 CITATION: ARIS IM, PERNG W, DABELEA D, PADULA AM, ALSHAWABKEH A, VÉLEZ-VEGA CM, ASCHNER JL, **CAMARGO CA JR**, SUSSMAN TJ, DUNLOP AL, ELLIOTT AJ, FERRARA A, ZHU Y, JOSEPH CLM, SINGH AM, HARTERT T, CACHO F, KARAGAS MR, NORTH-REID T, LESTER BM, KELLY NR, GANIBAN JM, CHU SH, O'CONNOR TG, FRY RC, NORMAN G, TRASANDE L, RESTREPO B, JAMES P, **OKEN E**; PROGRAM COLLABORATORS FOR ENVIRONMENTAL INFLUENCES ON CHILD HEALTH OUTCOMES. [ASSOCIATIONS OF NEIGHBORHOOD OPPORTUNITY AND SOCIAL VULNERABILITY WITH TRAJECTORIES OF CHILDHOOD BODY MASS INDEX AND OBESITY AMONG US CHILDREN](#). *JAMA NETW OPEN*. 2022 DEC 1;5(12):E2247957. DOI: 10.1001/JAMANETWORKOPEN.2022.47957.PMID: 36547983

Our work as a Center is measured in part by the contributions we make to published science. Please cite the NIH Grant **P30 DK040561** in all publications that result from the use of NORCH services or resources.

Local Events

Longwood Nutrition Seminar

Division of Nutrition at Harvard Medical School

Tuesday, Feb 7, 2023, 12-1pm, Virtual

"Fluoride and its effects on neurological development" Rochelle St. Onge, RD, Beth Israel Deaconess Medical Center

[Click here](#) for more information. This series occurs on a monthly basis.

National Events

UNC Nutrition Seminar

UNC Nutrition Obesity Research Center

Friday, Jan 13, 2023, 2-3pm EST

Marc Cook, PhD, *Associate Professor of Exercise Physiology and Immunology*, North Carolina A&T State University

Friday, Feb 10, 2023, 2-3pm EST

Katherine A. Sauder, PhD, *Associate Professor of Pediatric Nutrition*, University of Colorado School of Medicine

[Register](#) for Zoom details or [click here](#) for more information. All are welcome to attend.

Other Opportunities

NIDDK Job Opportunity

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health (NIH) is seeking a Co-Director of the Office of Obesity Research (OOR). The OOR is located organizationally under the auspices of the Office of the Director, NIDDK. The OOR Co-Directors represent the two divisions with primary responsibility for obesity-related extramural research, the Division of Digestive Diseases and Nutrition (DDDN) and the Division of Diabetes, Endocrinology, and Metabolic Diseases (DDEMD). This position is a part of the NIDDK Senior Leadership team, reporting to the DDEMD Division Director. This position will facilitate the development of a new and exciting area of research integrating cutting edge obesity research and data science.

[Click here for more information.](#)

NIDDK Investigator Award - K26 Funding Opportunity

The purpose of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Investigator Award to Support Mentoring of Diverse Early Career Researchers is to provide protected effort and resources to established, NIDDK-funded, mentors to provide high quality mentoring to graduate students and postdoctoral fellows from diverse backgrounds, including those from underrepresented group

[Click here for more information.](#)

Contact Us

Nutrition Obesity Research Center at Harvard
Massachusetts General Hospital
55 Fruit St. 5LON207
Boston, MA 02114

Have a question, comment or suggestion for our
feature pages?
HarvardNORC@mgh.harvard.edu
(617) 724-9109

Cite the grant! P30 DK040561

Follow us on Twitter @[HarvardNORC](#)