Dr Ed Giovannucci to Receive the AACR-American Cancer Society Award for Research Excellence in Cancer Epidemiology & Prevention!

Professor Edward L. Giovannucci, MD, ScD was selected as the recipient of the 2019 AACR-American Cancer Society Award for Research Excellence in Cancer Epidemiology and Prevention for defining the role of genetic, hormonal, metabolic, and nutritional factors in determining cancer risk and patient survival and for identifying modifiable risk factors and preventive strategies for prostate and colorectal cancer.

Dr. Giovannucci will deliver his award lecture titled "Diet, Physical Activity, Metabolic Health and Cancer Prevention" on Tuesday, April 2, 2019 during the AACR Annual Meeting 2019 at the Georgia World Congress Center.

The AACR and the American Cancer Society established this highly-prestigious award in 1992 to honor outstanding research accomplishments in the fields of cancer epidemiology, biomarkers, and prevention.
**Dr Jun Li**, Postdoctoral Research Fellow, has been awarded the highly competitive Stamler Award at the Council meeting of the AHA Epil|Lifestyle meeting on March 7, 2019. The Jeremiah and Rose Stamler Research Award for New Investigators is named for the Stamlers in appreciation of their seminal contributions to cardiovascular disease epidemiology. The award recognizes and stimulates excellence in research by investigators in training.

**Dr Josiemer Mattei**, Assistant Professor of Nutrition, was recently awarded the Paul Sorlie Early Career Investigator Award by the Hispanic Community Health Study/Study of Latinos for her outstanding efforts to the study research and presentations.

**Dr Elsie Taveras**, Professor in the Department of Nutrition, has been appointed as Member, USDA 2020 Dietary Guidelines Advisory Committee. The USDA and HHS has appointed 20 nationally recognized experts to serve on the 2020 Dietary Guidelines Advisory Committee. The independent Advisory Committee will review scientific evidence on topics and questions identified by the Departments and will provide a report on their findings to the Secretaries. Their review, along with public and agency comments, will help inform USDA and HHS’ development of the 2020-2025 Dietary Guidelines for Americans.

**Increased Risk of Mortality Linked with Higher SSB Consumption: The Risks of SSBs and ASBs Explained**

According to a large long-term study of US men and women, the more sugar-sweetened beverages (SSBs) people consumed, the greater their risk of premature death—particularly death from cardiovascular disease, and to a lesser extent from cancer. The increased early death risk linked with SSB consumption was more pronounced among women than among men. This study was published in Circulation on March 18.


Vasanti Malik, ScD is a Research Scientist and Adjunct Lecturer in the Department of Nutrition, Harvard T.H. Chan School of Public Health. Her research focuses on evaluating dietary risk factors for obesity, type 2 diabetes and cardiovascular disease. Much of her work has evaluated the health effects of sugar sweetened beverages. She has published extensively on this topic including a number of influential review papers and meta-analyses. More recent research interests of Dr. Malik include studying nutritional drivers of the global obesity and diabetes epidemics in countries undergoing epidemiologic transition. Dr. Malik received the Rose Fellowship from Harvard University for conducting translational research in global health and she sits on the steering committee of the Global Nutrition and Epidemiologic Transition (GNET) Initiative. The ultimate goal of Dr. Malik’s work is to inform future large-scale community-based interventions and policy strategies to reduce the risk of obesity and related chronic diseases nationally and internationally.

NN: What did we already know about the connection between sodas and other sugary drinks and the risk of premature death, and how do the current study findings add to our understanding? What’s new/surprising here and why does it matter for patients?

VM: Previous studies have shown strong and consistent links between consumption of sugar sweetened beverages (SSBs) and weight gain, risk of type 2 diabetes, as well as other cardiometabolic conditions. Given these associations, a link between SSB consumption and mortality would be expected, but only a few studies have looked at this connection and they were of limited quality and had inconsistent findings. For example, in a follow-up study of NHANES published in 2014, baseline intake of SSBs was associated with a higher risk of CVD mortality. Now, our study—with a decade longer follow-up, a larger sample size, and repeated measurements of diet to better assess long-term intake—confirms this finding.

Our study was the first to look at long-term intake of SSBs and risk of total and cause-specific mortality in a large cohort of US men and women. We also looked at associations with artificially sweetened beverages (ASBs). We found that intake of SSBs was positively associated with total mortality showing a graded association with dose (i.e. risk increases with intake) largely due to CVD mortality, and a modest association was observed for cancer mortality.

Among women only, ASB intake was positively associated with total and CVD mortality, but not cancer mortality at high intake levels (4 or more/day) among women. This finding needs further examination because it was weak and inconsistent by gender. We also showed that replacing 1 serving/day of SSB with ASB was associated with a slightly lower risk of death.

Our findings matter for many people because this is evidence that consuming sodas and other popular sugary drinks on a daily basis is linked to premature death. Here in the US, about half of the population consumes at least one SSB per day. Replacing SSBs with other beverages, particularly water, is one strategy to improve health and longevity.
**NN:** Is juice okay?

**VM:** 100% juice contains some nutrients and polyphenols that may be beneficial for health but also contain relatively high amounts of sugar (from natural sources as opposed to added sugar). We didn’t look at associations with juice but some studies have found positive associations between juice and risk of diabetes (while inverse associations have been observed with intake of whole fruit). Current recommendations suggest consuming no more than 4-6 oz of juice per day.

**NN:** You’ve spoken a lot about SSBs, but can you speak more about the risk of ASBs and premature death? You’ve done some work in this area, but it seems like it needs further examination because your findings were weak and inconsistent with gender, reverse causation or residual confounding. How can research in this area (of ASBs) be expanded?

**VM:** Findings of a positive association between ASBs and mortality were driven by high consumers (4 or more ASBs per day) among women (NHS participants). No associations were observed in men (HPFS participants). We need more studies that can estimate associations of changes in intake of ASBs with long-term health outcomes, since this type of analysis is less prone to reverse causation and results can be easily translated to recommendations. Studies that estimate associations for replacing SSBs with ASBs would also be useful since this would evaluate their intended use and be easily translated. Another area of research that could be expanded is to look at associations with ASB starting in childhood since we don’t really know the consequences of consuming ASBs over a life-time. To complement the cohort studies, we also need well-designed trials (free from reverse causation and confounding in cohort studies) that assess the effects of replacing SSBs with ASBs and water on metabolic risk factors to better guide beverage recommendations. Looking at the effects of different types of artificial sweeteners is another area of interest since different sweeteners are metabolized differently and may have different effects on risk factors. We also need more research exploring potential biological mechanisms related to ASBs and cardiometabolic health including metabolomic changes, changes in the gut microbiome and appetite signaling and neuronal networks. Tracking trends in intake of ASBs particularly in response to initiatives targeting SSB reduction would also be an important research area.

**NN:** So far, you’ve found some positive associations between fruit juice and risk of diabetes. Will there be future studies in this area?

**VM:** Studies of fruit juice are a little complicated in that certain components of juice such as polyphenols or vitamins may be beneficial for cardiometabolic risk and offset some of the adverse association from sugars. Different types of fruit juices may also contain different components that may impact associations. Juice intake may also be prone to reverse causation, residual causation. That said, studies on juice would likely be of public health interest so it would make sense to carefully look at associations with juice alongside whole fruit. Studies in the cohorts found positive associations between juice intake and risk of diabetes but inverse associations with intake of whole fruit.
**NN:** How much evidence is there for SSBs and ASBs and associations with risk of cancer?

**VM:** We found no association between ASBs and cancer mortality in either cohort. A previous study in our cohorts found a positive association between ASB intake risk for non-Hodgkin lymphoma and multiple myeloma in men but not in women, but these findings need confirmation. Overall, the research linking ASBs to cancer seems to be weak and inconsistent. For SSBs we found modest positive associations with cancer mortality in both cohorts. There isn’t strong evidence linking intake of SSBs to cancer but since SSBs promote weight gain and development of obesity, they may contribute to cancer risk through excess adiposity. In our analysis, the association with cancer mortality seemed to be driven by breast cancer and colon cancer, both of which are obesity-related. However, the analysis was adjusted for BMI, suggesting that other pathways independent of adiposity might also be implicated. I think it would be helpful to have more research exploring the link between SSBs and various types of cancers.

**NN:** What’s the take-home message for patients here? How much soda and sports drinks should we consume, and if we drink too much how easily can we reverse any damage from this by cutting back a little bit if we can’t stop entirely? And how bad are sugary drinks for people who don’t consume too many calories overall and who aren’t overweight or obese?

**VM:** Our results provide further support for recommendations and policies to limit intake of SSBs to improve overall health and longevity. ASBs could be used to replace SSBs among habitual SSB consumers with the ultimate goal of switching to water or other healthy drinks. The optimal intake of SSBs is zero as there are no health benefits and only harms, but the risk would be small and probably not detectable with occasional consumption like ~1 or 2, 8-oz servings/week. From our substitution analysis, replacing 1 serving/day of SSB with ASB was associated with ~4% lower risk of death.

**NN:** What types of policy changes would you propose, and what types of policies toward limiting consumptions of SSBs (and in the future, ASBs) are already in place?

**VM:** I would propose a number of policy changes at different levels concurrently with the goal of changing norms about SSBs and reducing their acceptability in society (similar to how tobacco policies changed norms about smoking). This would include: strategies to raise the price of SSBs such as taxes and make healthier options such as water more accessible and affordable; policies to ensure safe drinking water in
all communities; policies that make healthful beverages the default option; banning the availability of SSBs in schools/daycares, hospitals and work environments; restricting marketing of SSBs to children and discouraging consumption of SSBs in federal nutrition assistance programs and incentivizing more healthful beverage options. To complement these policies, I would also implement education campaigns about beverage quality in public and community spaces and in school curricula that focus on health but also on the environmental impact of SSBs. A diet quality screening tool for doctors to help identify patients who are high SSB consumers that need support to reduce intake could also be a useful strategy since doctors have direct contact with patients. Some of these strategies could also be extended to ASBs in the future and this is already underway in some places. For example, in Philadelphia and Seattle both SSBs and ASBs are included in the beverage tax initiatives that were recently passed. Beverage taxes have already been adopted in a number of cities in the US and in various countries globally, but there should be a more universal adoption. Schools and workplaces in some districts have banned sales of SSBs but again a more universal adoption is needed. Educational campaigns should be implemented alongside beverage taxation and other policies to provide context and awareness for the public. To support the educational campaigns and policy initiatives, more direct guidance for beverages should be included in national and global dietary recommendations.

For more background on sugary drinks and health, visit The Nutrition Source:
https://www.hsph.harvard.edu/nutritionsource/healthy-drinks/sugary-drinks/

For more information on ASBs and low-calorie sweeteners, visit: https://www.hsph.harvard.edu/nutritionsource/healthy-drinks/artificial-sweeteners/

NEWS FROM AROUND THE NUTRITION DEPARTMENT

Drs Anne Lusk, Walter Willett, and Yanping Li published an article in the International Journal of Environmental Research and Public Health titled "Bicycle Facilities Safest from Crime and Crashes: Perceptions of Residents Familiar with Higher Crime/Lower Income Neighborhoods in Boston" (https://www.mdpi.com/1660-4601/16/3/484). This article was the most read article in IJERPH for February. The lay journal, The Conversation, also published an article about this research (https://theconversation.com/bike-friendly-cities-should-be-designed-for-everyone-not-just-for-wealthy-white-cyclists-109485), which has now been read by 129,000.

Dr Ming Ding, Research Associate, gave a talk at the AHA EPI|Lifestyle conference entitled "Lipidomics-wide Association Study with Habitual Physical Activity in Three Prospective Cohort Studies". The main finding of her study is that physical activity was positively associated with several cholesterol esters and phospholipids. As being physically active protects against CVD and cholesterol is a risk factor of CVD, this study highlighted the importance of isolating lipoproteins when conducting lipidomics analysis. For the next step, Dr Ding's research direction will focus on lipidomics of lipoproteins and risk of coronary heart disease. Coauthors of this analysis include Oana A. Zeleznik, Marta Guasch-Ferre, Jie Hu, Jessica Lasky-Su, I-Min Lee, Clary Clish, A Heather Eliassen, Frank Sacks, Walter C. Willett, Frank B. Hu, Kathryn M. Rexrode, Peter Kraft.

Laila Al-Shaar, doctoral candidate, has successfully defended her dissertation titled "Body Mass Index and Physical Activity in Relation to Mortality Among Adults with Coronary Heart Disease" on Monday, March 25th @ 2:30 p.m. in FXB-G10. Laila will be our first PhD candidate to complete their defense!

Ramadhani Abdallah Noor, doctoral candidate, will defend his dissertation titled "Micronutrient Deficiencies in Tanzania Among Vulnerable Populations: Evidence for Interventions and Programmatic Implications" on Monday, April 8th, Bldg. 2 Room 317, at 9:00 am
Mariel Arvizu-Boy, doctoral candidate, will defend her dissertation titled "Dietary Patterns and Hypertensive Disorders of Pregnancy" on Friday, April 12th, Bldg. 2 Room 317, at 4:00 pm.

Jake Beckerman, doctoral candidate, had the following study published:

WLVS Paper Selected as 1 of 10 Articles of the Year by AJE in 2018!

The President of the Epidemiologic Society of America and the Editor-in-Chief of the American Journal of Epidemiology (AJE) announced that one of the Women’s Lifestyle Validation Study (WLVS) publications titled: "Relative Validity of Nutrient Intakes Assessed by Questionnaire, 24-Hour Recalls, and Diet Records as Compared With Urinary Recovery and Plasma Concentration Biomarkers: Findings for Women” has been selected as one of ten 2018 AJE Articles of the Year! Dr Changzheng Yuan, Research Associate, and Dr Walter Willett, Professor of Epidemiology and Nutrition, were first and last authors, respectively.

A letter from the journal states that “The American Journal of Epidemiology takes great pride in publishing papers that are leading the field of epidemiology and are at the cutting edge of epidemiologic science. In our assessment, the articles of the year, which are chosen by the editors of the Journal, represent scholarship that is truly distinguished.” The AJE is a rigorous and high profile journal devoted to the publication of empirical research findings, opinion pieces, and methodological developments in the field of epidemiologic research.


New Faces in the Department!

Zhangling Chen Visiting Student

Hi everyone!

I am Zhangling Chen, a PhD student at the Department of Epidemiology at Erasmus Medical Center, The Netherlands. My research mainly focuses on nutrition, the gut microbiome, and cardiovascular diseases, including diabetes. I will be a visiting researcher in the Department of Nutrition, Harvard TH Chan School of Public Health, for the next few months. Prof. Frank Hu and Dr. Yanping Li will supervise my work.

I am a foodie, and I especially like spicy foods. I look forward to working with all of you, and hope we will enjoy working and eating delicious foods together in the near future.
Niyaz Mohammadzadeh Honarvar
Visiting Scientist

I finished my PhD in 2013, focusing on “The effect of vitamin A supplementation on gene expression of cytokines secreted by TCD4+ lymphocytes in multiple sclerotic patients”. Then I started at the Department of Cellular and Molecular Nutrition, School of Nutritional Sciences, Tehran University of Medical Sciences, Iran, in 2014 as an assistant professor. During these 4 years my research focused on nutrition and neuroscience and neurodegenerative diseases, obesity, metabolic syndrome and cardiovascular disorders. My current research focused on how diet influences the nervous system at the molecular level, I gained expertise in various scientific methods, where I began to study for an MSc degree in medical education in the virtual school of TUMS.

I have collaborated with different national/international organization such as the European Union as a nutrition expert and have won several awards at various National Festivals, as well as having been invited to lecture at several international congresses.

I am now a visiting scientist in the Nutrition Department and am working on a project entitled “Coffee, tea and caffeine in relation to subjective cognitive function in US men and women “ under the supervision of Prof. Walter Willett and Prof. Alberto Ascherio.

I am also a foodie and love to cook and try new foods!

Dr Jinhee Hur
Research Fellow

Jinhee is originally from Seoul, South Korea, and recently received her PhD in Human Nutrition from Johns Hopkins Bloomberg School of Public Health. Her dissertation was titled "Nutritional determinants of pubertal development of girls in rural Bangladesh". In order to become involved in primary data collection, she lived in Bangladesh for several months in what she would call as the best recollection of her doctoral program. Working with Drs. Edward Giovannucci and Kana Wu in the department, she will focus on identifying early life risk factors of colorectal cancer.

Dr Hur is enjoying her new home in Boston and looks forward to conducting interesting research of public health importance at Harvard for the coming years.
Dr Xing Liu  
Visiting Scientist

Hi everyone!

My name is Xing Liu and I am an Assistant Professor at Fudan University, Shanghai, China. I earned a PhD in Epidemiology from the Fielding School of Public Health, UCLA. My research interests have focused on the genetic, infectious, and environmental risk factors of cancers. I will be joining the work on dietary factors related to colorectal cancer risk and survival under the supervision of Dr. Xuehong Zhang and Dr. Edward Giovannucci in the department.

I look forward to meeting you!

Seollee Park  
Postdoctoral Fellow

Seollee Park is an applied economist working on topics in nutrition, health, behavioral, and development economics. Her research focuses on undernutrition and food security in the developing world. She investigates which suboptimal health or child-feeding behaviors cause undernutrition, what works to change these behaviors, and the behavioral and psychological consequences of undernutrition and food insecurity. To answer these questions, she employs field and lab-in-the-field experiments, develops survey instruments, and analyzes large existing datasets. For her field research, she has worked in Ethiopia, India, and the Dominican Republic.

Seollee will be joining the Nutrition Department at the Harvard T.H. Chan School of Public Health as a post-doctoral fellow with Dr. Chris Golden. She will be leading an impact evaluation of community-led nutrition programs in sub-Saharan Africa in collaboration with the Catholic Relief Services. Seollee is currently finishing her PhD in Applied Economics at Cornell University. Prior to joining their PhD program, she worked at the World Bank, received a Masters in Public Administration in International Development (MPA/ID) from the Harvard Kennedy School, and a B. in Economics and International Studies from Ewha Womans University.

MONDAY NUTRITION SEMINARS

The Department of Nutrition holds its weekly Monday Nutrition Seminar Series every Monday throughout the academic year. The talks are varied, but they highlight the many different aspects of cutting-edge research that is currently being conducted in the fields of nutrition and global public health. These seminars are held from 1:00-1:20 pm in Kresge 502 at the Harvard T.H. Chan School of Public Health. The seminars are free and open to the public.

The following speakers will present their work in April:

April 1:  **Dr Pratik Panchal, MD MPH**, Clinical Research Scientist, OpenBiome. “The microbiome and childhood undernutrition: Accelerating translational research for global health equity”. (NGHP) For more information, please contact: lpedulla@hsph.harvard.edu

April 8:  **Dr Christopher Sudfeld**, Assistant Professor of Global Health and Nutrition, “Causal or Confounding: Nutrition and Child Development in Low- and Middle-Income Countries”
April 15: **Dr Nita Bhandari**, TBD. For more information, please contact: lpedulla@hsph.harvard.edu

April 22: **Dr Ahmed Daak, MD, MSc, PhD**. Executive Medical Director, Bioverativ/ A Sanofi Company, Waltham, Massachusetts, USA; Research Professor, Center of Molecular Biology and Biotechnology (CMBB), Florida Atlantic University (FAU), USA, TBD.

April 29: **Dr Ulf Riserus**, Associate Professor of Clinical Nutrition and Metabolism, Department of Public Health & Caring Sciences, Uppsala University, Sweden, TBD.

*For more information, contact: hfarmer@hsph.harvard.edu*

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**NUTRITION IN THE NEWS**

**You Are What You Eat: New Dating App Discloses Hidden Personality Characteristics**

In keeping with the new “refrigerdating” trend, there is now a new dating app on the market that allows its users to see what’s inside a potential partner’s refrigerator. The rationale for this is that the contents of a person’s refrigerator might offer clues about their personality. According to the *New York Times* on March 12, 2019, studies suggest that what people eat can indeed provide some information about them. It cited studies that found that risk takers tended to like spicy food, people with a sweet tooth tend to have sweet personalities, and bitter taste preferences were associated with antisocial personality traits.

In the same article, **Dr Alberto Ascherio**, Professor of Epidemiology and Nutrition, discussed his own study that found that foods such as soda, red meat, and refined grains were linked with depression in women. “These results converge with parallel findings on the relation between diet and physical health,” he said. “From a public health perspective, it is reassuring that what is good for the body is also good for the mind.” Ascherio was the senior author of a 12-year-long study that tracked 43,685 women, ages 50 to 77. Those who rarely consumed wine, coffee, olive oil and vegetables but who regularly drank sodas and ate red meat or refined grains were 29 to 41 percent more likely to be depressed than those who followed a more healthful diet.


*See also:*

[https://www.nytimes.com/2019/03/12/well/family/can-your-refrigerator-improve-your-dating-life.html](https://www.nytimes.com/2019/03/12/well/family/can-your-refrigerator-improve-your-dating-life.html)


Dr Frank Hu Comments on Recent Eggs and Cholesterol Study in JAMA

According to a recent study published in the March 15th issue of JAMA, based on a pooled analysis of data from six prospective studies that had followed 29,615 US men and women for up to 31 years, for every additional 300 mg of dietary cholesterol eaten per day, the risk of CVD and all-cause mortality was higher by 17% and 18%, respectively. Also, for each additional half of an egg consumed daily, the risk of CVD and all-cause mortality was higher by 6% and 8%, respectively. When the authors looked more closely, dietary cholesterol intake was more strongly associated with risk of stroke than heart disease, and it was associated with both CVD and non-CVD deaths.

Caution must be exercised, however, because a major limitation of the study is the use of a single measure of diet to look at outcomes up to 30 years later. For example, during this time some individuals may have changed their diet after developing high cholesterol or other conditions, which may influence the results of the study. In fact, several previous studies have shown that low-to-moderate egg intake is not associated with a higher risk of CVD in generally healthy people.

According to Dr Frank Hu, Chair of the Department of Nutrition, who was not involved in the study, “These new findings may rekindle the debate about the role of dietary cholesterol and egg consumption in cardiovascular disease, but would not change general healthy eating guidelines that emphasize increasing consumption of fruits, vegetables, whole grains, nuts, and legumes and lowering consumption of red and processed meats and sugar.” Hu commented further [that] “For those who are generally healthy, low to moderate intake of eggs can be included as part of a healthy eating pattern, but they are not essential. For example, there is a range of other foods one can choose for a variety of healthful breakfasts, such as whole grain toast with nut butter, fresh fruits, and plain yogurt.”


NUTRITION SOURCE UPDATES

Spotlight on sugary drinks
The latest research on sugary drinks finds that high consumption is linked with an increased risk of premature death: https://www.hsph.harvard.edu/nutritionsource/healthy-drinks/sugary-drinks/

Food Feature: Coffee
After water, coffee is one of the most commonly consumed beverages on the planet. Learn more about coffee and health: https://www.hsph.harvard.edu/nutritionsource/food-features/coffee/

Eggs in the news
A closer look at new findings that may rekindle the debate about the role of dietary cholesterol and egg consumption in cardiovascular disease: https://www.hsph.harvard.edu/nutritionsource/2019/03/18/eggs-and-cholesterol-back-in-the-spotlight-in-new-jama-study/

If you would like to remain current as to what is happening in the field of nutrition, please be sure to view our Nutrition Source website for the latest updates!
(See: https://www.hsph.harvard.edu/nutritionsource/)
EVERGREEN: The EVidEnce-based Research GRoup to EvaluatE Nutrition policy is a team of faculty, researchers, and students at the Harvard T.H. Chan School of Public Health that are committed to improving population health through research and evaluation of U.S. nutrition policies and programs. Led by Dr. Eric Rimm, in the Departments of Nutrition and Epidemiology, and Dr. Sara Bleich, in the Department of Health Policy and Management, this interdisciplinary research group investigates a wide variety of policy-relevant nutrition topics in the public and private sectors, such as the impact of financial incentives on the diets of SNAP participants, the effects of the Philadelphia beverage tax on prices and pass-through charges, the influence of food industry marketing programs such as Box Tops on consumer choice for families, and the impact of supermarket choice architecture, such as promotions and product placement, on food purchases, among many other projects.

Interested in our group?
- Check out our website: https://sites.sph.harvard.edu/evergreen/
- Read our newsletter: https://mailchi.mp/7c35d077c445/newest-updates-from-evergreen-520417
- Contact Aarohee Fulay (afulay@hsph.harvard.edu) for more information!

The Department of Nutrition is currently seeking candidates for the position of Assistant or Associate Professor of Integrative Genomic Epidemiology. Please feel free to share this with your colleagues!

For more information: https://academicpositions.harvard.edu/postings/8319