

# **NUTRI NEWS**

## The Department of Nutrition

February, 2022

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### DR DEIRDRE TOBIAS BEGINS LARGE TRIAL ON SUGAR-SWEETENED BEVERAGES REDUCTION

Interviewed by Hilary Farmer



**Dr Deirdre (DeeDee) Tobias**, Assistant Professor in the Department of Nutrition, is an obesity and nutritional epidemiologist at the Brigham and Women's Hospital and Harvard Medical School in Boston. Dr Tobias was appointed the Academic Editor for the *American Journal of Clinical Nutrition* in 2019. Her research focuses on the role of diet and lifestyle for obesity and its major chronic diseases, including gestational diabetes and type 2 diabetes, and has been published in leading peer-reviewed journals including the *New England Journal of Medicine* and *Journal of the American Medical Association*. She contributes to the development and analyses of healthful dietary patterns, metabolomics, and nutrition

epidemiologic methods, and is co-Instructor of Nutritional Epidemiology at the Harvard TH Chan School of Public Health. Dr Tobias has recently begun a large trial on SSB reduction, funded by NIH. *NutriNews* decided to interview her about this study.

NN: Dr Tobias, I understand you just started a large trial to study adults who normally drink sugary beverages every day as they switch to sugar-free options ("diet" soda or water) for six months and beyond. What is the purpose of this study?

**DT:** Yes, we are actively recruiting participants now! Public health and clinical guidelines already appreciate the fact that patients with habitually high intake of sugar-sweetened beverages (SSBs) should cut back on their intake for a variety of health reasons. However, what remains unclear is whether artificially sweetened beverages (ASBs) offer a healthful alternative, compared with water. Perhaps calorie-free ASB options like diet soda are a sensible substitution to support sustainable shifts away from sugary choices.

#### **NN:** Why is this study so important?

**DT:** Some observational studies report that although free of sugar and calories, ASBs may not be a healthful alternative to SSBs, linking them to weight gain, T2D, cardiovascular disease, and mortality. However, reverse causation bias likely persists for many of these associations, precluding the ability to draw firm recommendations for or against ASBs. SUB-POP is therefore addressing the important gap of ASBs as an alternative to SSBs in the context of a randomized controlled trial, in a diverse population of habitual SSB consumers with overweight/obesity. SSBs contribute ~7% of calories in the adult US diet, making them the single largest source of added sugar, providing a notable and sustainable opportunity to improve health.

#### NN: What do you hope to learn from the data derived from this study?

**DT:** Whether calorie-free ASBs are a healthful interim option for a sustained transition to water among habitual SSB consumers is unknown. This RCT will therefore address a large gap to inform dietary quidelines, clinical recommendations, and public health awareness.

NN: I note that participants must be willing to consume sugar-sweetened, aspartame-sweetened, sucralose-sweetened, or water beverages for 6 months, then drink unsweetened beverages or water for the next 6 months. How will these different groups be compared?

DT: Some well-controlled short-term feeding studies suggest different artificial sweeteners vary in their effects on metabolism and taste preference, suggesting they should be evaluated separately for their potential health effects. Aspartame and sucralose are the two most common artificial sweeteners used in ASBs in the US. While both intend to provide sweetness with minimal calories, they are chemically different structures that bind at different regions of taste receptors and metabolize very differently. Thus, rather than a single "ASB" intervention group we have separate "ASB aspartame" and "ASB sucralose" beverage substitution groups, to evaluate whether effects on body weight differ by beverage recommendation type. We are also randomizing to a water group and the control group of maintaining habitual daily SSBs.



**HSPH** image

NN: How and where do you expect to recruit study participants? How many participants in all do you hope to recruit for your trial and what is your projected study population?

**DT:** Our targeted recruitment is 540, which has admittedly been a steep climb in Covid. Most of our participants are recruited through Facebook social media ads, and we've also tried several other media platforms, including radio. We have MBTA ads up now – we'd love to see your selfies if you see one!

#### NN: Do you anticipate a high rate of compliance?

**DT:** Adherence to participants' assigned beverage group for 6 months, and then the additional 6 months where everyone switches to water, may be sub-optimal long-term. We have some strategies in place to help compliance, including monthly at-home delivery of beverages via personalized Amazon accounts and a study app to track drinks. We acknowledge that imperfect adherence threatens to underestimate the efficacy of a perfectly controlled beverage substitution on body weight and cardiometabolic biomarkers. However, as an observational epidemiologist, to me that is where the fun is just beginning. Through the study app and other web-based tools were are collecting a wealth of repeated assessments specifically to be able to study the drivers of non-adherence in the real-world setting. We evaluate changes in background diet, physical activity, athome daily weighing via a Bluetooth digital scale in a subset, and of course beverage adherence. In the in person clinic visits (0, 6, and 12 months) we perform a sweet taste preference test, body composition, and are collecting urines to objectively measure artificial sweetener metabolites in a subset.

#### **NN:** Is this the first study conducted of its kind?

DT: There have been randomized trials of beverage intake in children and adolescents that provide evidence for beneficial effects of decreasing SSB intake on body weight. In the CHOICE trial, adults who regularly consumed SSBs at baseline lost significant body weight at 6 months when they switched to water or ASBs. However, the control group lost just as much weight as the beverage substitution groups, possibly due to the "Healthy Choices" monthly group weight loss diet/lifestyle sessions and unintended reductions in SSBs. Thus, it is impossible to disentangle weight loss attributed to the beverage substitution alone in that trial. SUBPOP is innovative in its comparison of SSB substitution with three different non-caloric beverage types (two ASB groups and water) vs. a control group maintaining their baseline intake of SSBs on health. We are specifically recruiting adults with overweight or obesity and who report a habitual daily intake of SSBs. Thus, our study population is those adults for whom the public health recommendations to reduce SSB intake may have the greatest impact and generalizability.

NN: Have you ever conducted a study like this in the past?

**DT:** SUBPOP is the first RCT for which I am PI, and it has been a really exciting learning experience. The Division of Preventive Medicine at BWH has extensive experience in conducting large-scale clinical trials, mostly double-blind placebo-controlled dietary supplements or pharmaceuticals. It's provided a fantastic training group and infrastructure. Our patient visits are conducted across the street from HSPH at 221 Longwood Ave in a BWH clinical trial clinic. I have really enjoyed exploring novel technologies and intervention delivery methods, and we've faced some challenges with COVID that have forced us to be even more creative. As a nutritional epidemiologist, it's been enlightening be involved in data collection in the context of a behavioral intervention.

#### NN: Where do you plan to go from here once the study is over?

**DT:** Nowhere! We have other exciting projects funded and I am looking forward to the next dietary interventions as well. There is a big gap between our understanding of what to eat to be healthy and how to actually do it, on a population level, and I think that is a big gap to continue tackling.

For more information: https://rally.massgeneralbrigham.org/study/soda

#### NEWS IN THE DEPARTMENT

#### **HONORS AND AWARDS**

**Dr Eric Rimm**, Professor of Epidemiology, was officially selected for the NIH Epidemiology Study section "Cancer, Heart, and Sleep Epidemiology B Study Section" for a 3-year term.

Mercedes Sotos-Prieto, PhD of the University Autonomous of Madrid in Spain has won an American Heart Association 2022 Paul Dudley White International Scholar Award for her abstract titled "Association Between The Quality Of Plant-based Diets And Risk Of Frailty". The award is presented to the primary author of the highest ranked abstract submitted from each country to the American Heart Association's EPI |Lifestyle Scientific Sessions 2022. This award is named for Dr. Paul Dudley White, who was a founding father of the American Heart Association and an early leader in preventive cardiology. It reflects Dr. White's vision for global excellence in cardiovascular science and medicine.

Her presentation discussed results of a research investigation in collaboration with University Autonoma of Madrid and the Department of Nutrition at Harvard. Mercedes was a former postdoctoral fellow of *Drs Frank Hu*, Professor and Chair, and *Josiemer Mattei*. She is still collaborating with the Department of Nutrition and is also an Adjunct Professor in the Department of Environmental Health.

#### **PUBLICATIONS**

**Dr Josiemer Mattei**, Donald and Sue Pritzker Associate Professor of Nutrition, and **Abrania Marrero**, PhD Candidate in Population Health Sciences | Department of Nutrition, and Graduate Fellow | Abigail Adams Institute, have published a paper in *The Lancet Planetary Health* entitled "Reclaiming traditional, plant-based, climate-resilient food systems in small islands." (https://doi.org/10.1016/S2542-5196(21)00322-3)

Small island developing states face challenges in cultivating healthy food systems and are currently bearing substantial burdens of obesity and type 2 diabetes. Local food production—rooted in collective local and Indigenous traditions, self-sufficiency, and climate-adaptive agricultural practices—has long

emphasised a fibre-rich, plant-based diet; however, common histories of dietary colonialism have replaced local, small-scale farming and fisheries with non-nutritive cash crops, intensive livestock operations, and high-quality food exportation. Along with declines in traditional food availability, the resulting food import dependence has fostered a diabetogenic ecosystem composed of energy-dense cereal products, animal-based fats, and processed foods. The destabilisation of local food sectors undermines small island social and cultural systems, contributes to impoverishment and food insecurity during natural disasters, and, ultimately, can reduce diet quality and increase type 2 diabetes risk. Despite ongoing marginalisation of traditional local food systems, locally produced foods such as starchy roots, legumes, fruits, and seafood persist as nutritious and ecologically relevant cornerstones of self-determined local economic productivity and dietary health. Findings from community and epidemiological work suggest that local food production—bolstered by local and Indigenous agroecological knowledge, cultural preservation, and collective agency—can aid in reclaiming healthy and climate-resilient small island food systems.

#### **PRESENTATIONS**

**Drs Eric Rimm, Walter Willett**, and **David Eisenberg** from the Department of Nutrition gave live and in-person talks together for the first time in 2 years at the Culinary Institute of America for their annual *Healthy Kitchens Healthy Lives* conference. The conference was attended by MDs, dieticians, and other medical professionals and chefs. Dr Rimm's two talks were titled "Deconstructing Popular Dietary Strategies for Weight Loss and Immune Function" and "Wine: The Latest Research on Health Impacts", respectively.

**Dr Willett** discussed "The State of Nutrition Science Before, During, and After the COVID-19 Pandemic", and **Dr Eisenberg** talked about "Healthy Kitchens for Healthy Lives: Take Home Messages and Teaching Kitchens of the Future".

## NEW FACULTY & RESEARCH SCIENTIST APPOINTMENTS AND REAPPOINTMENTS IN THE DEPARTMENT

**Dr Lu Qi** has been reappointed as Adjunct Professor of Nutrition.



**Dr Lilian Cheung** has received the new title *Director of Mindfulness Research* and *Practice in the Department of Nutrition*. **Dr Frank Hu**, Professor and Chair, states that "This title reflects Lilian's longstanding leadership role and continued contributions to mindfulness research and practice in our department and beyond, for which I'm extremely grateful."

When asked to comment on her new title and role, Dr Cheung replied that "I am delighted to begin my journey as *Director of Mindfulness Research & Practice* with my colleagues in our department and beyond. Although the science of mindfulness is quite young—less than 50 years—the practice is over 2,500 years old.

"I first learned about mindfulness practices including *Mindful Eating* in a weeklong retreat with Zen Master Thich Nhat Hanh in 1997. *Mindful Eating* is

about eating for our health as well as the health of our planet so that there will be enough food for future generations. I was really disturbed that this concept of *Mindful Eating* was not taught in any university courses that I took. Hence, I proposed to Thich Nhat Hanh that I co-author a book with him: <u>Savor - Mindful Eating Mindful Life</u>, released in 2010.

The warnings from the 2019 EAT-Lancet Commission Summary Report are clear: if most populations globally do not shift to a more plant-based diet, we would not have enough food to feed the 10 billion people worldwide in 2050. Furthermore, scientists have already warned us that we have only less than 9 years to turn around global warming before reaching tipping points that could make our planet uninhabitable. *Mindful Eating* should be the everyday norm for everyone worldwide.

Beyond eating, there is also good evidence that the routine practice of mindfulness can alleviate stress and improve our brain. We are brushing our teeth twice or more a day to take care of our teeth and gums so that we can enjoy our food. What are we doing to take care of our brain, our stress, and our anxieties so that we can live a happier and more fulfilling life while serving humanity? Within this new role, I look forward to exploring questions like these to advance the scientific evidence and practice of mindfulness."

#### 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 **1:00-1:50 pm** and are free and open to the public. Because of COVID-19, the seminars have been presented via Zoom since March of 2020, and this zoom format will continue for now. A zoom link for viewing will be available one week prior to each seminar.

#### The following speakers will present in March 2022:

- March 7 Dr Simone Passarelli, Research Fellow, Department of Nutrition, HSPH TBD NGHP
- March 14 SPRING BREAK
- **March 21 Dr JoAnn Manson**, Michael and Lee Bell Professor of Women's Health, HMS; Professor in the Department of Epidemiology, HSPH "VITAL, VIVID, and COSMOS: Trials and Tribulations"
- March 28 Dr Iris Shai, Professor of Nutrition & Epidemiology| Dept of Public Health, Faculty of Health Sciences, Ben Gurion University of the Negev; Adjunct Professor, Department of Nutrition, HSPH "The gut-fat-brain axis of dietary polyphenols / green-MED diet; The DIRECT PLUS"

#### NEW FACES IN THE DEPARTMENT!

The following people have recently joined the Department of Nutrition. Please be sure to welcome them when you see them!



Jesper Dahl, MD Visiting Scientist

I'm an MD from Norway who went to school in Tromsø (in the Arctic), and did a PhD on fetomaternal alloimmune responses after I finished medical school. Following my residency I started working as a post doc at the Norwegian Institute of Public Health, in a project that focused on immune responses and risk of hip fracture. During the pandemic, as we all had to expand our portfolio, I spent most of my time establishing and maintaining a national vaccine side-effect surveillance analysis.

During my time here at the department I am planning to use data from the NHS to look at the relationship between a dietary inflammatory index (EDII) and risk

of hip fracture, with good help from **Drs Teresa Fung, Walter Willett** and **Fred Tabung**.

My favourite thing about Boston so far is the Coolidge Corner Theatre, and my least favourite thing is the unimpressive snow removal.

#### Natalia Jimenez Cardozo Visiting Graduate Student

My name is Natalia Jiménez Cardozo and I´m a physician and Biomedical sciences PhD student at Universidad del Valle, Cali- Colombia. Currently, I´m working with Professor Jorge Chavarro on the impact of iron intake in female reproductive fitness. I came as a Fulbrighter, with a scholarship as a doctoral visiting researcher during spring semester. Happy to be here and enjoying very much to learn from all of you!





Dr Barbara Maria Arana Aragon Visiting Scientist

My name is Barbara Arana, a medical resident from Andalucía, Spain. I graduated from Seville Medical School in 2016 and started my training as a Preventive Medicine and Public Health specialist in 2019, after a brief time working as a General Doctor. I am really happy to have the opportunity to come here and work on my research project under the supervision of **Dr Jorge Chavarro**.

In my free time (if I get any) I like writing and dancing (a little bit of a flamenco dancer here) and I have always been a theatre kid. The truth is I have always wanted to be an actress, but I was afraid of not being tall enough for Hollywood.

I really hope to meet you all as soon as the situation allows it.

#### Hazel Seung Administrative Assistant

Please join us in welcoming Hazel Seung to the Nutrition Admin team!

Prior to joining SPH, Hazel worked in Cambridge for the Harvard Faculty Club, Harvard Housing, and the Department of Athletics. In her free time, Hazel enjoys practicing yoga, skating, and going on culinary adventures. Hazel will serve as general support to the department as well as assisting *Drs Ascherio, Davaasambuu, Eliassen, Golden, Isanaka, Sun* and *Lilian Cheung*.

Hazel's office is in Room 305. Feel free to stop by to say hello. Hazel is looking forward to meeting and working with you all!





#### Diana Cristina Soria, PhD Postdoctoral Research Fellow

I am from Guadalajara, Mexico. I have a MSc in Nutrition & Metabolism and a PhD in Population Nutrition. I got my PhD at the Mexican National Institute of Public Health.

I am a postdoc in the Training Program in Reproductive, Perinatal, and Pediatric Life Course Epidemiology, working under the mentorship of **Drs Jorge Chavarro** and **Emily Oken**. I am interested in understanding the effects of perinatal and reproductive factors such as pregnancy complications on women's long-term health.

Some non-work-related things about me: I love practicing yoga, and I have been doing this for almost ten years. I love spending time outdoors and hiking.

#### Zhila Semnani-Azad Postdoctoral Research Fellow

Hi! My name is Zhila and I am a postdoctoral research fellow under the mentorship of **Dr Frank Hu**. I recently received a PhD from the University of Toronto where my primary research focused on the epidemiology of adipose tissue inflammation, using a novel biomarker namely soluble CD163, in type 2 diabetes risk among at-risk Canadians. My postdoctoral research aims to further evaluate metabolic health and obesity, and its associations with type 2 diabetes and cardiovascular disease risk, as well as identify unique metabolites and metabolomic signatures to better understand the pathway to disease onset.



Outside of research, I enjoy dabbling in the kitchen (currently in the process of completing a culinary certificate!), traveling to new countries, backcountry camping, canoeing, and anything crafty – including pottery, candle and soap making, and embroidery. My current hobby is learning the Ukulele!

Looking forward to meeting everyone (hopefully in person)!



#### Dr Anne-Julie Tessier Postdoctoral Researcher

I am Anne-Julie Tessier, registered dietitian and PhD in Human Nutrition from McGill University, Montreal (Quebec, Canada). My research involved the interplay between nutrition, cognition and sarcopenia in aging. I am also the cofounder and CEO of Keenoa™, an image-based intelligent food diary tailored for researchers and dietitians. Keenoa™ currently serves over 50,000 users worldwide.

I am delighted to join the Department of Nutrition under the mentorship of **Dr. Marta Guasch-Ferré** and **Dr. Jorge Chavarro**. I will examine the associations between healthy lifestyle, metabolomics, longevity and mortality in the Harvard cohorts, and I

will validate the use of a mobile fragmented food frequency questionnaire in the Nurses' Health Study 3.

In addition to being a researcher and entrepreneur, I am a mom and third wave coffee enthusiast!

#### MORE DEPARTMENT NEWS

## DR CHRISTOPHER GOLDEN AND GRAD STUDENT HERVET RANDRIAMADY RESTORE CORAL REEFS IN MADAGASCAR

The work of **Dr Christopher Golden**, Assistant Professor of Nutrition & Planetary Health, and his team were featured in the Winter 2022 issue of *Harvard Public Health Magazine* and on the Harvard Chan website. Below are some excerpts on their work to restore coral reefs in Madagascar.

People in southwest Madagascar are increasingly consuming the bottom feeder *fiandolo*, which was formerly considered unfit for human consumption. Now *fiandolo* is common in local markets and becoming an important source of nutrition for the people living there. Because this region abuts a desert area, fisheries have become an essential source of food. Madagascar today has very high rates of child malnutrition, which is exacerbated by climate change-induced famine. Further environmental shifts associated with deforestation, mining and overfishing contribute to the crisis. Concomitantly, the coral reefs in this area have shrunk by 90% in the last 40 years. This has caused a plunge in biodiversity and degradation of local fisheries.

To determine if targeted interventions might mitigate these effects, an international group of scientists from Madagascar, Europe, and the U.S. are teaming up to analyze the environmental, economic, and public health potential of artificial reefs. The researchers will assess everything from experimental technologies aimed at bolstering biodiversity to the nutritional intake and physical and mental health of villagers who depend on the bay.

Formerly, most attention and foreign aid in Madagascar tended to focus on conservation and biodiversity, while human health and economic development took a back seat. The new five-year study, which takes a different approach to food security and climate change mitigation, is funded through the Belmont Forum and run by researchers from Harvard T.H. Chan School of Public Health, Harvard University, the University of Toliara, Sweden's Beijer Institute of Ecological Economics, France's Research Institute for Development, and Reef Doctor, aims to change that paradigm.

The new project being undertaken will consist of installing six artificial reefs, each spanning one hectare. Three of the reefs will be seeded with multiple autonomous reef monitoring structures (ARMS), while the other three will serve as control sites. All the new reefs will probably be closed off to fishing for one year—a process that will include significant input and collaboration with FIMIHARA. Among the questions the scientists hope to answer are: Do artificial reefs attract more fish and more types of fish to an area, and does the ARMS technique further increase yields?

A major unknown concerning artificial reefs is, if the fish come, where exactly are they coming from? Are they new to the fishery? Or are they simply swimming over from older, less healthy reefs nearby? "If it's the latter", warns **Dr Christopher Golden**, "then artificial reefs could cluster fish into a single area for fishers to target, worsening overfishing".



Harvard Chan School's Chris Golden and his graduate student Hervet Randriamady are studying multiple aspects of fisheries in Bay of Ranobe. Photo: Kent Dayton / Harvard Chan School.

Golden thinks it's unlikely this will happen in Bay of Ranobe, in part because the project isn't plopping down reefs where they didn't exist before. Instead, it's "extending and rehabilitating existing reefs," he says. Right now, the bay has only a handful of healthy reefs for fish to inhabit, so adding a few healthy artificial reefs "should extend the area where fish can live and survive."

Golden has conducted ecological and public health research in Madagascar since 1999. Until now, his work in the country has focused on its northeast region, which is mostly an evergreen rain forest and a far cry from the arid desert in the southwest. Golden is especially interested in parsing out how environmental changes affect local access to food and impact human health in the long run.

This new research project will look beyond traditional public health metrics and analyze factors including the mental health and economic challenges engendered by food scarcity and environmental changes. Golden's lab includes several Malagasy doctoral students who will be studying the relationship between the health of the reefs and that of the nearby villagers.

**Hervet Randriamady**, a doctoral student of Golden's and the national research director of Madagascar Health and Environmental Research, an organization Golden established, notes that "If you depend on the reef and you see it degrading and know it is going to get destroyed, that will have an impact on your mental health, especially for fishers". Randriamady grew up in the highlands near Madagascar's capital, Antananarivo. He is intrigued by eco-anxiety and solastalgia—a type of existential distress that stems from environmental changes. According to him, most fishers don't talk directly about climate change or environmental degradation. Instead, they'll lament that the fish were bigger and more plentiful in years past or that the cyclones weren't so strong. This type of occupational stress and accompanying economic uncertainty could affect a person's mental health, family relationships, and communities at large.

In order to understand how these issues are playing out along Bay of Ranobe and what might be done to mitigate them, Randriamady is working with Golden and Harvard Chan School psychological epidemiologists *Karestan Koenen* and *Christy Denckla* to develop a mental health assessment survey. He plans to administer it to fishers when the catch is plentiful and meager. He knows the stigma around mental health looms large in Madagascar, and is working to develop culturally appropriate strategies for discussing the issue.

Excerpted from: <a href="https://www.hsph.harvard.edu/">https://www.hsph.harvard.edu/</a> See also: <a href="https://www.hsph.harvard.edu/magazine/">https://www.hsph.harvard.edu/magazine/</a>

#### UPDATES FROM THE DEPARTMENT'S DIB COMMITTEE

(By Bristian Justice, Departmental Liaison Committee Member)

Welcome to the fourth of our monthly updates regarding Diversity, inclusion and Belonging within the Department of Nutrition! This column will provide updates regarding NUT-DIB committee efforts along with departmental wide updates for newest developments, changes, and initiatives. While we are currently establishing useful forms of communication to/from the committee, please feel free to submit anonymously via our Qualtrics form <a href="https://harvard.az1.qualtrics.com/jfe/form/SV-8D642fDG6wcRNUG">https://harvard.az1.qualtrics.com/jfe/form/SV-8D642fDG6wcRNUG</a>

The NUT-DIB Committee are happy to confirm all should have received their respective invitation for the upcoming ODI Unconscious Bias Training in March 2022. If you are unable to attend, please be sure to notify **Dr Erica Kenney** or **Bristian Justice.** (Their email contact information is provided below). We will be sending out reminders for all date(s) as they near closer. Please stay tuned as we will be implementing monthly suggestions for intuitive reads for Diversity, Inclusion, and Belonging. Please be sure to reach out to a Committee member if you have any questions or concerns.

Dr.Erica Kenney – <u>ekenney@hsph.harvard.edu</u> Bristian Justice – <u>bjustice@hsph.harvard.edu</u>

#### NUTRITION SOURCE UPDATES

#### Clean eating

Once just a buzzword, "clean eating" is now a popular eating style. But what it means will depend on who you ask. The term is not federally regulated in the U.S., so interpretation by consumers and the marketing of "clean" products by the food industry can vary widely: <a href="https://www.hsph.harvard.edu/nutritionsource/clean-eating/">https://www.hsph.harvard.edu/nutritionsource/clean-eating/</a>

#### Tips for staying heart smart

Learn about the many symptoms of heart disease, how you can assess your risk for developing heart disease, and four key lifestyle steps you can take to reduce your risk:

https://www.hsph.harvard.edu/nutritionsource/disease-prevention/cardiovascular-disease/

#### Food Feature: Dark chocolate

Learn more about dark chocolate and health, and get tips on purchasing, storing, and serving it up as a healthier dessert: <a href="https://www.hsph.harvard.edu/nutritionsource/food-features/dark-chocolate/">https://www.hsph.harvard.edu/nutritionsource/food-features/dark-chocolate/</a>

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/)

Join us on March 2, 2022 for the third annual Harvard T.H. Chan School of Public Health Giving Day! Make a gift between February 1<sup>st</sup> and midnight on March 2<sup>nd</sup> to support financial aid for our exceptional students, and fund innovative research in our department. To give, visit <a href="https://hsph.me/givingday">https://hsph.me/givingday</a>





## HARVARD Harvard Chan Research Scientist **Seminar Series**

Research Scientist Association



Kjetil Bjornevik, MD PhD Research Scientist Department of Nutrition



Marianna Cortese, MD PhD Research Scientist Department of Nutrition

### The role of the Epstein-Barr virus in multiple sclerosis

Multiple sclerosis (MS) is a chronic inflammatory demyelinating disease of the central nervous system. The Epstein-Barr virus (EBV) has long been a top suspect etiologic factor for MS. The proof of causality has, however, remained elusive. This talk will tell the story of how a 20-year collaborative research effort with the US military led to unraveling the link between EBV and MS in a cohort study of 10 million young adults on active duty in the US military and suggests EBV infection as the leading cause of MS.

#### Tuesday, March 15th 1-2 pm

Zoom link: https://harvard.zoom.us/j/97342092985?pwd=YjNDSTBubldVbkdJd2FGaWNrZ05TUT09

Dial in: +1 929 436 2866 +1 301 715 8592 +1 312 626 6799

Meeting ID: 973 4209 2985 Passcode: 708504

We cordially invite the entire Harvard T.H. Chan School of Public Health community to join us for the Research Scientists Association e-Seminar Series spotlighting exciting research from Harvard T.H. Chan Research Scientists.