Without further ado, our Department is very excited to announce that the Harvard T.H. Chan School of Public Health now offers a Master of Public Health degree in Nutrition. This is a first for the Department and will extend the reach of our education beyond research into clinical settings and public health organizations. Students will acquire skills in nutrition communication and practice, along with strong foundational knowledge in nutritional science, epidemiology and public health.

“The MPH Program in Nutrition is timely considering the growing needs of translating nutritional research into practice and policies,” said Dr. Frank Hu, Chair of Department of Nutrition. The program is designed to explore the role nutrition plays in the health and well-being of the world’s populations from a variety of vantage points, recognizing the vast array of influences on diet, nutrition, and health—including environmental, socioeconomic, political, and cultural factors. Core coursework emphasizes methodological strategies to develop, analyze, and evaluate interventions, programs, and policies typically used in public health nutrition. Beyond core requirements, students may also choose from a variety of electives tailored to personal career goals and interests such as nutrition policy, health disparities, nutrition epidemiology, global health, social and behavioral sciences, and sustainability. The program also offers a unique practicum experience that allows students to create projects with real-world application that cover a broad variety of interests, including culinary nutrition, national school and feeding programs, community nutrition, global health and opportunities in affiliated teaching hospitals.

The 65-credit program is 1.5 years (3 semesters) in length, beginning in September and ending in December of the following year and includes the summer practicum. The program is suitable for those early in their careers who wish to pursue a nutrition-related field or those already established in their careers seeking to develop expertise in nutrition to enhance their current practice.

Dr Vasanti Malik, Research Scientist in the Department, is serving as the Faculty Director for the program and together with Stefanie Dean, Academic and Educational Projects Coordinator, will welcome our first class of MPH Nutrition students in September 2019.

Visit https://hsph.harvard.edu/nutrition/mph for more details, or contact Stefanie Dean with questions at sdean@hsph.harvard.edu.
DR ERICA KENNEY TO JOIN NUTRITION FACULTY!

Erica Kenney, MPH, ScD, Assistant Professor of Public Health Nutrition, will join the Department of Nutrition’s faculty in July. Dr. Kenney is currently a research associate in the Department of Social and Behavioral Sciences working in the school’s Prevention Research Center on Nutrition and Physical Activity. She will collaborate with our public health nutrition faculty to expand research in this area and our educational offerings. Please take a minute the next time you see her to welcome her to our Department!

NN: Dr Kenney, can you please tell us a little bit about your background, both here at Harvard and prior to coming here?

EK: Sure. I have been at the Harvard Chan School now in some capacity for almost nine years – I completed a doctorate here in the Social and Behavioral Sciences department and then stayed on for a postdoctoral fellowship here, working at the Harvard Prevention Research Center on Nutrition and Physical Activity. Before I came to Harvard I earned an MPH at the Yale School of Public Health, where I worked at the then-Yale Rudd Center for Food Policy and Obesity. And before that, I was doing work in the education field, working on helping schools with supporting English language learners and creating hands-on science curricula for urban afterschool programs. So I had a little bit of a circuitous path to public health, as it seems many people do! I had originally wanted to work in education, but as I worked in so many schools I found myself increasingly concerned with children’s nutrition and health. I was working in schools that served very low income and vulnerable kids, and it just was so clear that they did not have access to healthy foods in the same way that higher income kids did, and that this was affecting their health in all kinds of ways. It made me want to focus my career on finding out ways to make children’s environments healthier so that they could actually access the healthy food that they needed.

NN: I see that you are trained in social epidemiology and planned behavior change. How has this helped to inform your current research?

EK: In my research, my goals are trying to figure out why people have difficulty eating healthfully, and how they can be helped to change their eating behavior. Because social epidemiology is an approach that focuses on what policies or social factors are driving population health, I feel that it really helps with answering the question of why a health problem is happening, and why some population groups are disproportionately affected. It helps for taking a step back and trying to focus on identifying root causes, which I think is really the key to figuring out what needs to be changed. For example, a nutrition education intervention for children trying to tell them that fast food is bad for them is probably not going to work on its own – we need to figure out what larger social forces (like cost, parents having limited time to prepare food because of work schedules, availability, social norms, marketing) are setting children up to be eating so much fast food in the first place. Similarly, I try to focus on using science on behavior change to figure out how to effectively help people change behavior. Changing habits is really, really hard, and it’s important to try to understand what people need to help them change beyond just education or information.
**NN:** Unfortunately, a key culprit in the childhood obesity problem is the wide availability of sugary drinks (SSBs) in children’s diets. How have you addressed this issue at the Prevention Research Center on Nutrition and Physical Activity?

**EK:** The first study I worked on at the PRC, when I was a doctoral student, was the Out of School Nutrition and Physical Activity (OSNAP) intervention study, which looked at engaging afterschool program providers in making policy changes to their program so that they’d provide healthier snacks and more physical activity opportunities. In OSNAP, the programs pretty much never served SSBs, fortunately – but students brought in a lot of them from home or outside the snack program. So I worked on studying what kind of impact that was having on kids’ diets during afterschool, and also worked on developing model policies for afterschool programs to limit SSBs from being brought into the program. I’ve also done some analyses of national data to look at racial/ethnic and socioeconomic disparities in healthy beverage consumption, to try to document where there are populations that are particularly vulnerable to drinking sugary drinks and possibly having less access to water.

Most of my work at the PRC, however, has been related to studying how to promote water as a healthy alternative to sugary drinks for kids. I’ve focused in particular on the school environment. A lot of my school water work has been in the Boston Public School district, trying to study how promoting better drinking water access in schools can help with reducing sugary drink consumption. I was fortunate a few years ago to team up with Drs Juliana Cohen and Eric Rimm in this department to tag along on data collection for the NOURISH study as well in order to try to document how limited drinking water access was for students throughout Massachusetts.

**NN:** Who are some of your community partners and how do you work with them?

**EK:** I have been fortunate to work with the Boston Public Schools and the Boston Public Health Commission over the past several years. It is really important to me to work with community partners because they have really insightful ideas for interventions, and have a really good sense of what kinds of interventions or policies are actually going to work and be feasible in the community. With BPS, the work has mostly been on improving safe drinking water access throughout the schools and helping them find ways to promote water consumption with students. We collaborated on a low-cost intervention a few years ago that promoted water at existing water sources for students in the school cafeteria, and found that it increased water consumption and also decreased sugary drinks. Currently I’m working with them on a study to document what students’ and teachers’ perceptions of drinking water are in Boston and how this is impacting what beverages they drink. With the Boston Public Health Commission, I’ve been collaborating with them to evaluate citywide interventions to improve child care providers’ nutrition and physical activity practices for obesity prevention.

**NN:** Could you please tell us a little bit about the Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES) Project and your work on this project? For example, I see that you have conducted a study to determine the frequency of the implementation of evidence-based obesity prevention programs in US schools. Your study also suggests that in the absence of such programs, other programs currently in use may be inadvertently promoting weight stigma. This sounds like a novel way to address this issue. Could you please tell us what you have found so far?
**EK:** Sure – for the CHOICES project, which is led by **Dr Steve Gortmaker,** I focus on our investigations into the cost-effectiveness of early childhood obesity prevention interventions. CHOICES examines interventions or policies that have evidence for effectiveness for preventing childhood obesity in the research literature, and then models out what would happen over ten years if these evidence-based interventions were actually implemented on a large scale—how many cases of childhood obesity would be prevented, how many children would be reached with healthier eating habits, how much the intervention would cost, what would be the cost savings, etc. We also partner with state and local health departments to help develop tailored models to their local populations. What I’ve mostly found so far in this work is that there is shockingly little research on how to actually help prevent obesity in very young children – they’re a population that hasn’t gotten a lot of attention, despite the fact that intervening in early childhood when children are forming habits can be so crucial. But we have identified a few strategies, like incorporating a brief screen time reduction intervention into WIC nutrition education visits that cost very little and can have a beneficial impact on childhood obesity.

The study on the implementation of evidence-based obesity prevention programs was actually not affiliated with CHOICES – we did this study through the Strategic Training Initiative for the Prevention of Eating Disorders (STRIPED) program that **Dr. Bryn Austin** oversees. We surveyed a random sample of public schools across the country to see how many of them actually use the obesity prevention interventions that public health researchers have spent so much time and effort developing – e.g. Planet Health or the CATCH program – and it was pretty grim. Only 3% used them! And instead, a lot of schools come up with their own programs, which could be problematic – one, because the programs are less likely to actually be effective, so it is kind of a waste of resources, and two, because well-intentioned folks often design obesity prevention programs that are stigmatizing. For example, many schools reported running "Biggest Loser" style weight loss competitions amongst staff members. And stigmatizing people based on their weight is linked with a whole host of health problems – but most relevantly, it is linked with increased overeating and weight gain, so it really backfires spectacularly. So we really need to find better ways to get the research that we do out into the hands of the people who need it – both so that we don’t waste these resources, but also so that potentially harmful programs aren’t put in their place.

**NN:** *How do you aim to explore the ways in which digital devices used by parents and children might influence obesity risk in addition to other health behaviors?*

**EK:** Food marketing is an important determinant of unhealthy eating patterns, and we have decades of research documenting how television-based food ads increase the risk of poor diet and obesity. But the ‘screen’ landscape is changing so rapidly, and we now spend so much more time staring at the screens on mobile devices – and we know very little about how these are being used to market foods and beverages to us and whether they impact our behaviors in the same way. I find this a little bit scary since youth spend upwards of 8 hours a day on these devices! So I am interested in studying how marketing on these devices is influencing our behaviors, what the marketing strategies are, whether there are interventions we can develop to block those influences.

**NN:** **Dr Kenney, we are very happy to have you as a new faculty member here. Welcome to the Nutrition Department! How do you plan to apply your background and research to the present and future needs of our Public Health Nutrition Program? What is your overall vision?**

**EK:** Thank you! I am happy to be here! I am hoping that I can bring some of my background and perspectives on researching social determinants of nutrition behavior and health equity issues to the Nutrition Department’s work. I am really hoping to partner with my new colleagues and learn from their expertise on what the optimal dietary patterns are for health, and help translate that work into a public health approach to change behavior so that people can adopt those optimal dietary patterns. I’m also really looking forward to working with the students in the department and helping them develop their ideas and skills.

**NN:** *It goes without saying that you will be very busy in your new position as Assistant Professor! However, everyone likes to take a little time off to relax sometimes. What do you like to do in your spare time?*
EK: I have two small children, so I’ve kind of lost all of the spare time I used to have—hopefully I’ll get some of it back one day! But they are a lot of fun, and we like to go on hikes and nature walks together, and my older son (4 ½) is just getting old enough where he can really get into helping with cooking and baking projects, which is really fun. I also love taking them to the beach or a lake to go swimming in the summer and am looking forward to doing that.

NEWS AROUND THE NUTRITION DEPARTMENT

Recruitment of NHS3 Participants Still Going Strong!
(By Audrey Gaskins, Research Associate)

Recruitment of reproductive aged male and female nurses into the Nurses' Health Study 3 is still ongoing. As of June 2018, more than 45,746 women and 648 men have joined the study! Unlike the previous renditions of the Nurses' Health Studies, our women tend to be younger at enrollment—the average age is 33 years (range 17-52 years) and the majority are premenopausal (88%). We also have a slightly higher recruitment of minority races (15%). Given the younger ages of our NHS3 participants, much of our ongoing research is focused on reproductive health outcomes. In fact, to date we have had over 7,000 pregnancies reported during follow-up (with an average of 1,000 new pregnancies reported per year). In the majority of these pregnancies, we have collected information on exposures experienced preconception as well as during the second trimester of pregnancy, including a full FFQ. In addition to pregnancies outcomes, now that many of our participants have been followed for 5+ years, we have also started to accrue an appreciable amount of cases of hypertension, asthma, high cholesterol, and benign breast disease which will pave the way for future research focused on chronic disease risk in these men and women. We have also recently started an mHealth sub-cohort where we will be passively collecting data from wrist-worn devices which can be used to assess physical activity, sleep, and detailed location information.

Want to read more about NHS3? Here are some recent publications:


Andres Ardisson Korat, doctoral student, successfully defended his dissertation titled “Dairy Products and Cardiometabolic Health Outcomes” on June 18, 2018.

Dr. Anne Lusk, Research Scientist, received one of the Harvard Chan Research Scientists Association Inaugural Awards for financial support to purchase equipment that will facilitate her research.
Fred K. Tabung, MSPH, PhD, Research Associate in the Department of Nutrition, will be leaving our Department on June 30 to begin a new position as Assistant Professor in the Division of Medical Oncology, College of Medicine, Ohio State University, on July 9, 2018.

Deirdre Tobias, ScD, Assistant Professor, HMS, received the 2018 Kenneth Rothman Travel Scholarship from the Society for Epidemiologic Research.

Edward Yu, doctoral student, successfully defended his dissertation titled “Macronutrient Composition and Plasma Metabolites in Relation to Cardiometabolic Disease” on June 6, 2018. He also first-authored the following manuscripts:


Kana Wu, Principal Research Scientist, participated in the Science to Solutions Dialogue 2 (SSD2): “Protein, People, Planet: What’s the plan?” in Washington, DC, April 24-26, 2018, which was attended by researchers, educators, business representatives and civil society representatives and organized by the World Business Council For Sustainable Development (WBCSD) and the Food Reform for Sustainability and Health initiative (FReSH).

Bike Patterns: A New Way of Presenting Bike Route Data

Anne Lusk, Ph.D. received funding to identify 9 safe bike routes to the Longwood Medical Area (LMA). Oversight for this research came from the Medical Academic and Scientific Community Organization, Inc. (MASCO). Yanping Li, Ph.D. also worked on the data analysis. Children’s Hospital, Dana Farber, Harvard Medical School/Harvard T.H. Chan School of Public Health, Beth Israel Deaconess, MassArt, and Brigham and Women’s Hospital provided tables or IDs so Dr. Lusk could place surveys near or in their bike cages. In total, 219 bicyclists marked their route sections as safe, less safe, and unsafe. While tools such as Strava and Map My Ride present bike route data in one thick single-colored line, in this research each respondent’s lines redrawn on a 4-by-6 foot map revealed highly-used routes plus bike patterns in three colors for safety. Bicyclists perceived riding over the Longwood Bridge as unsafe and safer river crossings appeared on Netherlands Road and the Chapel Street Bridge. With the bike patterns, a traffic signal at Netherlands Road over the Riverway and a V channel for bike tires on the stairs to Short Street or a ramp on the hillside became worth exploring. Ivy Street to Carlton and the bend at Carlton were red and orange compared with green in middle sections, highlighting the value of correcting those corners. Meetings have already taken place with MASCO, BostonDOT officials, and others about these and other improvements to the LMA bike routes. Discussions are underway for a Phase II of this project.
June 18, 2018 was a major milestone for the Department of Nutrition. The long-awaited US regulation mandating the complete removal of artificial trans fats (partially hydrogenated oils or PHOs) from restaurants and grocery stores and ensuring compliance from manufacturers that their products will no longer contain PHOs for uses that the FDA has not authorized finally comes into force. This ban has resulted from decades of research on the harmful effects of trans fatty acids by Drs Walter Willett (Professor of Epidemiology and Nutrition) and Alberto Ascherio (Professor of Epidemiology and Nutrition), and their colleagues. It took a long time since they originally sounded the alarm about artificial trans fats back in the 1990s—over 25 years ago.

Even more frightening, however, is that scientists had worried about trans fat for several decades before that! Beginning in 1980 Willett et al. (1) calculated the risk of trans fatty acids (TFAs) in foods by assessing dietary questionnaires that were completed by 85,095 women in the Nurses’ Health Study. Their findings, published in 1993, supported the hypothesis that consumption of partially hydrogenated vegetable oils may contribute to the occurrence of CHD. Then Ascherio et al. (2) and others at Harvard also published a case-control study comparing 239 patients from 6 Boston hospitals to 281 control subjects in their intake of TFAs, (estimated by using a previously validated FFQ). Their data also suggested that intake of PHOs contributed to the risk of myocardial infarction. Ascherio & Willett (3) also warned about the dangers of the metabolic and atherogenic effects of TFAs in an editorial they wrote for the Journal of Internal Medicine. In 1997, Frank Hu et al. (4) found that the types of fat were more important than the total amount of fat in determining risk of heart disease, and replacing trans fat with polyunsaturated fat substantially lowered risk of heart disease. Elsewhere, other investigators, such as RP Mensink, Martin Katan, PL Zock, and others conducted short term controlled feeding studies documenting that trans fats had multiple adverse metabolic effects that could account for the higher risk of heart disease.

Nutrition science has been around for a relatively long time. However, like most disciplines, it has taken a long and sometimes twisted evolutionary path into its present form. Science is often not a linear process; it builds on itself from previous ideas. While 25 years seems like a very long time for science to be translated into policy, some nutrition scientists were actually researching the dangers of trans fats in the late 1940s! Let's look at what was going on in the earlier days of trans fat science.

While trans fat was known as early as the turn of the century when a German scientist named Wilhelm Normann discovered that if you add hydrogen to vegetable oil through a process called hydrogenation, you can solidify the oil to make it more spreadable and increase its shelf life; Normann received a Nobel Prize for this. It wasn’t until the 1950s that scientists began to sound the alarm about potential harms of artificial trans fat (as opposed to naturally occurring trans fat found in the meat of ruminants such as beef, lamb, and deer, and butter fat). So just what, you might wonder, drew the attention of the earlier trans fat crusaders attention to this problem in the first place?

In the early 1950’s Dr Fred Kummerow and researchers at the University of Illinois conducted some scientific experiment in animals that raised his concern about trans fat. In 1957 Kummerow and colleagues sent a letter to Science in which they sounded an alarm about trans fat (5). The researchers had taken autopsy and biopsy material from 24 human cadavers to determine the presence of trans fatty acids. All of their tissue samples contained TFAs, including adipose, liver, heart, aortic and atheroma, from subjects who had died from atherosclerosis. Publication of their letter resulted in quite a hue and a cry from Kummerow's fellow scientists against his work, which didn't directly address whether the trans fat was causing the atherosclerosis. Kummerow's work was widely dismissed, and his detractors in an attempt to discredit him accused him of basing his research on animal models, which react very differently from humans, thus rendering his results invalid. Also, many of his studies did not have adequate controls, which made the research open to question.
One of Kummerow’s biggest opponents was Thomas H Applewhite, a consultant for the food industry. Applewhite not only attacked Kummerow, but went after others whose research supported harmful effects from trans fat such as Willett, Mensink, Zock, and Katan. Applewhite suggested that Willett’s data from the NHS cohort “did not appear accurate or credible” and his “measurements were weak”, although he didn’t base his accusations on any credible evidence. Applewhite then went on to attack epidemiological studies in general, stating “But we must resist the tendency to jump to conclusions based on epidemiological studies, particularly when such studies have major flaws” (6). Applewhite did not conduct any epidemiological or scientific studies himself—he was employed by companies like Kraft and Proctor & Gamble specifically to cast doubt on any studies connecting trans fats to major health problems. Thus, trans fat opponents from parts of the food industry during that era went to major lengths to discredit data supporting the deleterious effects of trans fats from ever coming to light.

As we have just seen, achieving this trans fat ban was a major long haul. It took years of hard work and diligence and is a case in point of how translating science into policy is not an easy process.


To read more about the recent trans fat ban:


Also, read this exciting overview on NutritionSource:

Nutrition Department Makes Excellent Showing at June ASN Conference!

Ming Ding, MD, ScD, Research Fellow, gave an oral presentation at the ASN 2018, titled "Genetic Variants Associated with Gestational Diabetes Mellitus (GDM)". This paper was also published in Diabetologia.


Aviva Musicus, doctoral student, won first place in the American Society for Nutrition Conference's Emerging Leaders in Nutrition Science Poster Competition, in the policy category for her poster titled "The Influence of Sodium Warning Labels on Restaurant Meal Choices, Perceptions, and Knowledge."

Feiby Laban Nassan Tawadros, Postdoctoral Research Fellow, gave a poster presentation titled "Intake of protein-rich foods in relation to outcomes of infertility treatment with assisted reproductive technologies". (Senior author was Dr Jorge Chavarro.)
Yu Han Chiu, Postdoctoral Fellow, gave both an oral presentation and presented a poster in the Emerging Leaders in Nutrition Science Poster Competition. Both were titled “Maternal Plasma Polyunsaturated Fatty Acid Concentrations during Pregnancy and Cord Blood DNA Methylation: An Epigenome-Wide Association Study”. The poster was second place winner in the Nutrient-Gene Interactions topical area of the Emerging Leaders in Nutrition Science Poster Competition.

Amanda C. McClain, PhD, MS, Postdoctoral Research Fellow, gave an oral presentation at ASN titled “Food insecurity and diet intake by Supplemental Nutrition Assistance Program receipt among Boston-Puerto Rican adults after the 2009 American Recovery and Reinvestment Act”.

Shilpa Bhupathiraju, Research Scientist, is on the Nutritional Epidemiology RIS Steering Committee and led a Nutritional Epi RIS Sponsored Mentoring Event at the ASN Conference. She also co-chaired the “Nutrition and Chronic Disease Epidemiology” minisymposium and presented a poster titled “Dietary Patterns have distinct metabolomic profiles among Asian Indian adults in the Metabolic Syndrome and Atherosclerosis in South Asians Living in America (MASALA) study”.

Ambika Satija, Yerby Postdoctoral Fellow, gave the following presentations at the ASN Conference:

**Emerging Leaders in Nutrition Science Poster Competition (Finalist):** “Changes in Intake of Plant-Based Diets and Weight Change among Men and Women in the US.” (Ambika Satija, Vasanti Malik, Eric B. Rimm, Frank Sacks, Walter Willett, Frank B. Hu.)

**Diet Composition and Obesity (Oral Presentation):** “Changes in Intake of Plant-Based Diets and Weight Change among Men and Women in the US.” (Ambika Satija, Vasanti Malik, Eric B. Rimm, Frank Sacks, Walter Willett, Frank B. Hu.)


**Challenges and Opportunities for Dietary Pattern Analysis in Different Populations: An International Forum (Speaker):** “Methods for Creating and Evaluating Dietary Patterns: Perspectives from the US and India.”

Changzheng Yuan, Postdoctoral Fellow, has received one travel award and a $300 prize from the North America Chinese Society for Nutrition, sponsored by the ASN. This award was based on the following study: “Long-term Intake of Carotenoids and Late-life Subjective Cognitive Function: a Prospective Study in U.S. Women” (Changzheng Yuan, Alberto Ascherio, Olivia I. Okereke, Francine Grodstein, Walter C. Willett).

Mercedes Sotos Prieto, PhD, Visiting Scientist, gave an oral presentation at the ASN titled “TCF7L2 Gene and Mediterranean Diet Interactions Modulating Anthropometric Factors in Puerto Rican Adults”. (Sotos Prieto, Chao-Qiang Lai, Jose M. Ordovas, Katherine L. Tucker, Josiema Mattei)

Gang Liu, Postdoctoral Fellow, has been selected as a finalist for the 4th Emerging Leaders in Nutrition Science Poster Competition (ELPC) for his presentation titled “Nut Consumption and Risk of Cardiovascular Disease among Patients with Diabetes Mellitus”.

Jake Beckerman, doctoral student, presented two posters at the ASN Conference: “Environmental and Economic Costs and Opportunities of Shelf-Stable Dairy and Soy Milk in School Meals”; and “Evaluating the Implementation of Communities for Healthy Living (CHL): A Family-Based, Participatory Intervention to Prevent Obesity in Low-Income Preschool Children”.
Claire Cadeau, Postdoctoral Fellow, presented a poster at the American Society for Nutrition Conference titled “Dietary and supplemental vitamin C intake and risk of breast cancer: evidence from the Nurses’ Health Studies” (Claire Cadeau, Walter Willett, Heather Eliassen for the NHS Research Group).

Ming-Chieh Li, Postdoctoral Fellow, had two poster presentations at American Society for Nutrition conference: (1) Intake of antioxidants in relation to outcomes of infertility treatment with assisted reproductive technologies; and (2) Men’s pre-treatment intake of antioxidants in relation to outcomes of infertility treatment with assisted reproductive technologies.

Vasanti Malik, Research Scientist, gave the following oral presentation at the ASN Conference: “Beverages as a Tool for Improving Nutrient Status and Health: A New Guidance System for Beverages”.

Natalia Palacios, Visiting Scientist, had the following poster presentation at the ASN: “Plasma vitamin B6 and cognition in the Boston Puerto Rican Health Study”.

Maryam Farvid, Research Scientist gave the following oral presentation at ASN: “Post-diagnostic fruit and vegetable consumption and breast cancer survival”. (Co-authors: Maryam S. Farvid, Michelle D. Holmes, Wendy Y. Chen, Bernard Rosner, Rulla M. Tamimi, Walter C. Willett, A. Heather Eliassen).

Faculty and Research Scientist Appointments

Dr Majken Karoline Jensen has been promoted to Associate Professor of Nutrition.

Ganmaa Davaasambuu, MD, PhD, has been reappointed as (Secondary) Assistant Professor in the Department of Nutrition.

W. Allan Walker, MD, has been reappointed as (Secondary) Professor in the Department of Nutrition.

Qi Sun, MD, ScD, has been reappointed as (Secondary) Associate Professor in the Department of Nutrition.

David M. Eisenberg, MD, has been reappointed as Director, Culinary Nutrition and Adjunct Associate Professor of Nutrition.

MondAy NutrIton semIars

There will be no Monday Nutrition Seminars during the summer months. Our regular seminar series will resume in early September. In the meantime, we will offer an occasional Special Nutrition Seminar.
MORE NUTRITION IN THE NEWS

DR FRED K. TABUNG DISCOVERS THAT DIETS WITH HIGH POTENTIAL TO CONTRIBUTE TO INSULIN SECRETION ARE ASSOCIATED WITH RISK OF COLORECTAL CANCER

A recent study published in the American Journal of Clinical Nutrition in June (https://academic.oup.com/ajcn/advance-article-abstract/doi/10.1093/ajcn/nqy093/5036567?redirectedFrom=fulltext) has found that a diet high in foods such as red meat, processed meat, butter, margarine and sugar-sweetened beverages has a high potential to contribute to insulin secretion, which in turn is associated with increased risk of developing colorectal cancer in women and men. This study is significant because colorectal cancer is a common cancer. Insulin response is believed to play a pivotal role in cancer development and can be influenced by what people eat; thus, diet is seen as a modifiable risk factor for preventing colorectal cancer.

The study, led by Fred K. Tabung, MSPH, PhD, Research Associate in the Department of Nutrition, analyzed data from 120,401 male and female health care professionals who were followed for 26 years in two long-term prospective cohort studies – the Nurses’ Health Study and the Health Professionals Follow-Up Study and who completed food-frequency questionnaires about which kinds of foods they ate. The researchers developed scores based on 18 food groups characterized for their insulinemic potential which were calculated from participants' food questionnaires; the outcome was based on new cases of colorectal cancer diagnosed during a 26-year follow-up period. Tabung et al. found that higher scores reflecting higher potential of the diet to raise insulin levels in the body, were associated with a higher risk of developing colorectal cancer in men and women; the risk appeared to be higher among men and women with low physical activity levels.

According to Tabung, “Diet is one of the factors that can constantly stimulate the body toward a hyperinsulinemic state.” The researchers found that those who ate diets with the highest insulinemic potential had 26% greater risk of developing colorectal cancer than those with low insulinemic diets. For example, a recent report from the American Institute for Cancer Research and World Cancer Research Fund (WCRF/AICR) found that high intake of and sugar-sweetened beverages along with high consumption of red meats such as beef, pork and lamb, as a usual diet may increase a person’s risk of colorectal cancer. Tabung goes a step further and suggests that the insulin secretion-promoting properties of these foods may be a key factor in this. The study’s authors found men eating the most hyperinsulinemic diets had a 33 percent higher risk of developing cancer relative to men eating the least insulinemic diets. For women, the relative risk increase — 22 percent — was smaller but still significant.

“The study shows us one potential mechanism through which diet influences cancer risk,” said Tabung, who added that more dietary intervention studies are needed to confirm and explore this link. There are many ways to control insulin secretion. A good amount of exercise, weight management, and diet can help. The idea behind low insulinemic diets is that they focus on foods that reduce too much insulin secretion in the body, and stave off illnesses like cancer and diabetes. The diets that were the most hyperinsulinemic tended to include high intake of processed meat, red meat, sugary beverages, butter, French fries, and margarine. They were also lower in wine, tea, coffee, and vegetable intake. Conversely, low insulinemic diets were higher in vegetable, coffee, tea, and wine intake, and lower in sugary beverages and red and processed meat intake.

Is Fast Food Responsible for Diabetes in India?

There are now approximately 73 million people in India who have type 2 diabetes, more than half of them undiagnosed, and the numbers are expected to rise sharply in the coming decades as the population ages. Dr Vasanti Malik, Research Scientist, was recently quoted in a June 4, 2018 article in Food Tank in which she discussed the factors behind the disease’s steady rise in India, including the role of genetics and diet. As diabetes is rising in both urban and rural settings in India, Malik discussed the connection between eating fast food and the risk of becoming overweight and developing diabetes.

Malik confirms that Indians may be more vulnerable to this disease. “Diabetes is increasing at an alarming rate in India in urban and rural areas,” she says. “And part of the reason is that South Asians tend to develop diabetes at a younger age and lower body mass index than Western populations.”

Why is this so?

Some consider that the growing incidence and prevalence of diabetes and prediabetes in India are due to decrease in physical activity and change in food habits.

For example, middle and upper-class Indians have swapped a primarily cereal-based traditional diet for highly processed foods over the past two generations. Along with this increased consumption of unhealthy foods has come a greater prevalence of obesity and rates of non-communicable diseases such as heart disease and diabetes. When compared with the dietary habits of their grandparents, Indians today eat more salt, refined carbohydrates (such as polished white rice), fat, and sugar. Many also regularly consume sugary, high-calorie drinks. This new eating pattern is deficient in fiber, a critical dietary component for preventing or managing diabetes. Fast food has also become an increasingly appealing option for busy professionals.

“There is a clear connection between intake of fast food and risk of becoming overweight and developing diabetes,” says Dr. Malik. Protecting children from the harmful effects of fast food is of the utmost importance. Dr. Malik suggested one strategy: “[the government] could implement zoning laws, which could limit the proximity of fast-food outlets to places, such as schools, where younger groups would be more likely to be.”

To read more:
Graphic Warning Labels May Reduce Sugary Drink Purchases

According to a new study by researchers from Harvard T.H. Chan School of Public Health and Harvard Business School, warning labels that include photos linking sugary drink consumption with obesity, type 2 diabetes, and tooth decay, may reduce purchases of the drinks. In a field study conducted in a hospital cafeteria, researchers found that graphic warning labels reduced sugary beverage purchases by 14.8%, while text warning labels and calorie labels had no effect.

Results from the study indicated that survey participants also said that the graphic warnings increased their negative feelings toward sugary drinks and prompted increased consideration of health risks. When told about the effectiveness of graphic warnings, survey participants supported putting graphic warnings on sugary drinks as much as they supported calorie labels or text warnings.

“Sugar-sweetened beverages are the largest source of added sugars in the American diet and reducing intake of these beverages could improve population health,” said co-lead author Laura Zatz, doctoral student in the Departments of Nutrition and Social and Behavioral Sciences at Harvard Chan School. “As policymakers search for ways to reduce excess consumption of sugary drinks, graphic warning labels merit consideration as a tool that can empower consumers with salient information to encourage healthier choices.”


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