

# NUTRI NEWS

## The Department of Nutrition

July 2018

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## Harvard Sugar Symposium Examines Sweetener's Effects on Human Body and Public Policy

The 19<sup>th</sup> Annual Harvard Nutrition and Obesity Symposium, ***Epidemiologic, Physiologic and Policy Considerations of the Sugar Epidemic***, was held on July 11-12, 2018 at the Joseph B Martin Conference Center at HMS. Event co-organizers **Steven Grinspoon, MD, MGH**, and **Frank Hu, MD, PhD** (Fredrick J. Stare Professor of Nutrition and Epidemiology; Chairman of the Department of Nutrition; Professor of Medicine) kicked off the event with a Welcome and Introductions. **Kelly Brownell, PhD**, Duke University, delivered a lively keynote address, "Connecting Science to Social and Policy Change: The Case of Sugar", in which he called for a new model of "strategic research" targeting scientific work as "change agents" and encouraging scientists to work with legislators, courts, the press, the public, and the food industry.



Kelly Brownell (from left), Barry Popkin, Frank Hu, and Michael Goran discuss sugar, health, and public policy at the Medical School on Wednesday.

(Photo by Nilagia McCoy/Harvard Chan School)

The first session of July 11<sup>th</sup>, moderated by Dr Hu, covered the *Epidemiology and Global Trends in Sugar Consumption*. **Barry Popkin, PhD**, University of North Carolina, first discussed global sugar intake patterns and policies with a focus on sugar-sweetened beverages—the largest source of added sugar in the diet. Popkin noted that while some countries, such as Mexico, have instituted a soda tax to reduce intake levels and generate revenue, the most promising strategies for sugar reduction at the population level thus far have been seen in Chile. This is because the Chilean government has aggressively regulated food marketing. For example, sugary products cannot be advertised on children’s television programming, the packaging cannot use kid-friendly characters, and black stop-sign-shaped front-of-package warning labels are included on packages to identify foods high in sugar, saturated fat, sodium and calories. “When you have preschool kids seeing these symbols on a product, and telling their mothers they shouldn’t buy it, you know you’re seeing a shift in norms,” Popkin said.

Hu then discussed the epidemiologic evidence and dietary guidelines exemplified by a report on the relation between sugary foods, particularly SSBs, and epidemiology. He pointed out that evidence shows a clear link between soda and childhood obesity, and the problem continues through adulthood. Hu further noted that the average American consumes 22 teaspoons of added sugar a day, and sodas are not the only culprits. Fruit juices may be healthier, but are considerably less healthy than whole fruits. And sports drinks are associated with a higher BMI (body mass index), a factor that’s not alleviated by playing sports.

**Michael Goran, PhD**, Children’s Hospital, concluded the Session by discussing the implications of the effects of early-life exposure to sugars, including non-nutritive sweeteners, on growth and development.

Session II was devoted to *Sugar and Metabolic Disease: Mechanisms and Interventions*, and was moderated by **David Ludwig, MD, PhD** (Professor of Pediatrics, HMS; Professor in the Department of Nutrition). The session began with a discussion by **Kimber Stanhope, PhD, MS, RD**, UC–Davis, on the metabolic effects of fructose vs glucose, while **Mark Herman, MD**, Duke University, elaborated upon fructose metabolism and insulin resistance. **Julie Mennella, PhD**, Monell Center, discussed the development of sweet preference in children and how this may impact metabolic health, while **Cara Ebbeling, PhD, MS**, Children’s Hospital, suggested various interventions for reducing sugar-sweetened beverage consumption.

The Sugar Symposium not only focused on the dangers of too much sugar, but also considered *Artificial Sweeteners*, which were covered in Session III. **Richard Mattes, PhD, MPH, RD**, Purdue University, discussed low-calorie sweeteners and body weight, while **Vasanti Malik, ScD** (Research Scientist; Adjunct Lecturer in Nutrition) expanded on artificial sweeteners and chronic disease risk and also moderated the session. Session III was wrapped up by **Eran Elinav, MD, PhD**, Weizmann Institute of Science, with a talk on personalized nutrition, sweeteners, and the microbiome, which generated a great deal of interest.

The Symposium concluded with the topic of *National Policies around Sugar Consumption*, which was moderated by **Walter Willett, MD, DrPH** (Professor of Epidemiology and Nutrition). **Steven Gortmaker, PhD**, Harvard Chan School, described his cost-effective analysis of SSB excise taxes, and **Sara Bleich, PhD**, also of the Harvard Chan School, discussed the labeling on sugar products and industry response.



(Panel members Steven Gortmaker, Eran Elinav, Richard Mattes, Vasanti Malik and Sara Bleich)

Photo courtesy of Brett Otis

The 19<sup>th</sup> Annual Harvard Nutrition and Obesity Symposium was very well attended. Grinspoon said that the audience was broad and included “clinicians, researchers, and students at different levels.” Notably missing, however, was any support from the food industry, nor was there any industry presence on the panels. “They are welcome to come as audience members, but we didn’t want to be influenced by the industry. I think we’ve got a very balanced and fair symposium,” Grinspoon commented.

**See also:** [https://news.harvard.edu/gazette/story/2018/07/examining-sugars-effects-on-human-body-public-policy/?utm\\_source=SilverpopMailing&utm\\_medium=email&utm\\_campaign=Daily%20Gazette%2020180713](https://news.harvard.edu/gazette/story/2018/07/examining-sugars-effects-on-human-body-public-policy/?utm_source=SilverpopMailing&utm_medium=email&utm_campaign=Daily%20Gazette%2020180713)

## NEW FACES IN THE DEPARTMENT



***Jean-Philippe Drouin-Chartier, PhD  
Postdoctoral Fellow***

Hello everyone!

My name is ***Jean-Philippe Drouin-Chartier*** and I am really excited to join the Nutrition Department as a postdoc in ***Dr. Frank Hu's*** group.

I am a registered-dietician, member of the Professional Order of Dieticians of Quebec, born and raised in the beautiful Quebec City (Canada). I hold a master's degree in nutrition and just completed my Ph.D. in experimental medicine at the Institute of Nutrition and Functional Foods at Laval University under the mentorship of Drs. Patrick Couture and Benoît Lamarche.

During my graduate studies, I worked on the impact of dairy product consumption on cardiovascular and cardiometabolic health as well as on the pathophysiology of dyslipoproteinemias associated with insulin resistance and familial hypercholesterolemia.

Here, I plan to explore mechanisms through which the consumption of dairy products influences cardiovascular and cardiometabolic health by using metabolomics profiling analysis.

I look forward to meeting you!

## GLOBAL EXPERTS REACH CONSENSUS ON 10 STEPS TO REDUCE RISK OF PREVENTABLE CANCERS IN NEW WCRF REPORT

A comprehensive analysis of research on lifestyle factors and cancer prevention was released internationally on May 23, 2018, confirming the critical links between cancer diagnoses and diet, physical activity and weight. Independent experts from across the globe reviewed decades of scientific evidence to develop the most reliable cancer prevention advice currently available, summarized in 10 cancer prevention recommendations. ***Dr. Edward Giovannucci***, Professor of Nutrition and Epidemiology, has been on their expert panel for the last 5 years.

*The Third Expert Report, Diet, Nutrition, Physical Activity and Cancer: A Global Perspective*, was released by the American Institute for Cancer Research (AICR) and the World Cancer Research Fund (WCRF). This Report presents evidence-based recommendations established from rigorous analysis of the science and shows that modifying what people eat, being more physically active, having a healthy body weight, and other health-related choices can prevent nearly half of all cancer diagnoses.

Data show that approximately 40 percent of men and women in the United States are diagnosed with cancer in their lifetimes, but experts are unequivocal that many of these diagnoses can be prevented. The recommendations in the Report include guidance on keeping a healthy weight; consuming a diet rich in whole grains, vegetables, fruits and beans; limiting the amount of sugar-sweetened and alcoholic beverages consumed; and others.

The updated Recommendations include these 10 preventable steps:

1. Maintain a healthy weight
2. Be physically active
3. Eat a diet rich in whole grains, vegetables, fruits and beans
4. Limit consumption of “fast foods” and other processed foods high in fat, starches or sugars
5. Limit consumption of red and processed meat
6. Limit consumption of sugar-sweetened beverages
7. Limit consumption of alcohol
8. Do not use supplements for cancer prevention
9. For mothers, breastfeed your baby if you can
10. After a cancer diagnosis, follow WCRF/AICR recommendations, if you can

**For more information, visit:** [www.cancerhealthcheck.org](http://www.cancerhealthcheck.org)

**To read more:** <https://www.prnewswire.com/news-releases/landmark-cancer-prevention-report-shows-consensus-among-global-experts-on-10-steps-to-reduce-risk-300653114.html>

<https://www.wcrf.org/int/blog/articles/2018/05/blueprint-beat-cancer>

**Link to full report:** <https://www.wcrf.org/sites/default/files/Summary-third-expert-report.pdf>

The AICR also launched Cancer Health Check – an easy-to-use tool, which shows how your lifestyle stacks up against known cancer risks and outlines the changes you can make to follow AICR's evidence-based Cancer Prevention Recommendations. AICR's New American Plate Challenge, led by registered dietitians, is a 12-week program providing information, recipes and the support of an online community to help participants incorporate changes into their daily routines. More than 5,000 individuals have already participated in the challenge.

**For more information, visit:** [www.cancerhealthcheck.org](http://www.cancerhealthcheck.org).

## NEWS AROUND THE NUTRITION DEPARTMENT

**Selma Gicevic**, SD candidate in Nutrition, successfully defended her doctoral dissertation titled “**Dietary Diversity, Dietary Quality, and Sustainable Dietary Surveillance**” on Tuesday, June 26<sup>th</sup>.

**Dr Gang Liu** et al. have recently published the following paper in JACC. Their findings have indicated that greater adherence to an overall healthy lifestyle is associated with a substantially lower risk of CVD incidence and CVD mortality among adults with type 2 diabetes (T2D). These findings further support the tremendous benefits of adopting a healthy lifestyle in reducing the subsequent burden of cardiovascular complications in patients with T2D.

Gang Liu, Yanping Li, Yang Hu, Geng Zong, Shanshan Li, Eric B. Rimm, Frank B. Hu, JoAnn E. Manson, Kathryn M. Rexrode, Hyun Joon Shin and Qi Sun (Senior author). Influence of Lifestyle on Incident Cardiovascular Disease and Mortality in Patients With Diabetes Mellitus. J Am Coll Cardiol. 2018;71:2867–2876

**Laila Al-Shaar** (Ph.D. candidate, Mentor: **Dr. Walter Willett**) was invited to serve as Member on the EPI Early Career Committee of the Council on Epidemiology and Prevention of the American Heart Association, for the term beginning 7/1/2018 and ending 6/30/2020.

**Alvin Tran**, SD candidate in Nutrition and SBS, will defend his dissertation titled "Body Image, Dating Apps, and Perceived Discrimination: Implications for Public Health Practice and Research" on Thursday, July 19<sup>th</sup> at 2:00 pm in Kresge 907.

## Alvin Tran Recognized for Body Image & Eating Disorder Advocacy



Alvin Tran, center, at the SPARK Impact Awards ceremony

**Alvin Tran**, SD '18, won a SPARK Boston Impact award for Activism and Advocacy at a June 21, 2018 ceremony. SPARK Boston is an initiative by Mayor Marty Walsh that aims to engage young civic leaders and social entrepreneurs in the work of city government. It honors millennials' contributions to the city of Boston. Tran was recognized for his work around body image acceptance and eating disorder prevention.

*From:* <https://www.hsph.harvard.edu/news/hsph-in-the-news/alvin-tran-spark-boston-award/>

*photo:* Neel Desai

**Dr. Josiemer Mattei**, Assistant Professor of Nutrition, was recently awarded a five-year R01 from the NIH-National Heart, Lung, and Blood Institute to establish PROSPECT: the Puerto Rico Observational Study of Psychosocial, Environmental, and Chronic Disease Trends. This will be the first island-wide, longitudinal population cohort in Puerto Rico, consisting of 2,000 adults (30-75y) recruited with probabilistic plus community approaches, and examined in a network of partner clinics across the island. The study will collect comprehensive data on multiple psychosocial, dietary and food-related factors, cardiometabolic risk factors (including creating a repository of biospecimens), and medical record data, with follow-up at 2-years; and will assess variations by urban-rural areas and trends after hurricane Maria. PROSPECT is being done in partnership with FDI Clinical Research of Puerto Rico and the University of Massachusetts-Lowell. They will collaborate with agencies in Puerto Rico to identify priorities for addressing chronic disease risk factors, and plan and implement tailored public health programs and policies to effectively improve cardiometabolic health in this high-risk, underserved group.



## Faculty and Research Scientist Appointments

**Deirdre Kay Tobias, ScD**, has been appointed as (secondary) Assistant Professor in the Department of Nutrition.

**Elsie Mireya Taveras Benavidez, MD, MPH**, has been reappointed as (secondary) Professor in the Department of Nutrition.

**Juliana F.W. Cohen, ScD**, has been reappointed as Adjunct Assistant Professor of Nutrition.

**Lilian Cheung, ScD**, has been reappointed as Lecturer in the Department of Nutrition.

## MONDAY NUTRITION SEMINARS

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.

## Nutrition Student Discovers Novel Way to De-Stress from Busy Day!



**Aviva Musicus** (SD 2020) has been carving fruit and vegetables for five years. Although she taught herself by using a small kitchen knife while watching YouTube videos, she now creates her own designs using Thai fruit carving knives and peeling and paring knives. Aside from fruit sculptures, Aviva also creates fruit platters and cakes made entirely from fruit, using watermelon as a base and arranging carved fruit around it. Although she mostly carves fruit for fun and then eats her work or gives it to friends and family, she also sells custom fruit sculptures, platters, and cakes for weddings, birthdays, and conferences. Aviva enjoys making desserts that are healthy, delicious, and beautiful, and has found that her creations are an excellent way of getting people of all ages excited about eating healthier treats (and forgoing baked goods!) for celebrations. If you're interested in learning more about her work or ordering a fruit cake, platter, or carving, please contact Aviva at [aam231@mail.harvard.edu](mailto:aam231@mail.harvard.edu).

## MORE NUTRITION IN THE NEWS

### Coffee Linked with Longer Life Whether Caffeinated or Not



According to a large new study, people who drink up to eight cups of coffee per day may slightly lower their risk of early death compared with non-drinkers. Furthermore, the study found that it doesn't appear to matter if the coffee is caffeinated or decaf, brewed or instant.

"There are many potential beneficial compounds in coffee," said nutrition expert **Dr Edward Giovannucci**, Professor of Nutrition and Epidemiology at Harvard T.H. Chan School of Public Health, in a July 2, 2018 WBUR article. Although Giovannucci was not involved in the study himself, he said that "People think of caffeine, but it's likely that some of the most beneficial compounds are not the caffeine."

The UK study analyzed data from about half a million Britons and found that the more coffee people drank, the lower their risk of dying during the 10-year study period. Drinking eight or more cups per day was linked with 14% lower risk compared with not drinking any coffee.

From: <https://www.hsph.harvard.edu/news/hsph-in-the-news/coffee-longer-life/>

## Artificial Trans Fats Now Banned in US!

In 2015 The Food and Drug Administration (FDA) ruled that artificial trans fats were unsafe to eat. It gave food-makers three years to eliminate them from the food supply with a deadline of June 18, 2018. According to **Dr Walter Willett**, Professor of Epidemiology and Nutrition, in a recent interview with the *Washington Post*, the ban could reduce the number of people who die from heart disease and curb the incidence of dementia, diabetes, and other metabolic diseases. Willett is one of the first researchers to discover a link between artificial trans fats and cholesterol and heart disease.

It should be noted that the FDA recently granted companies a one-year extension to use artificial trans fats in limited circumstances, including grease for industrial baking pans. "I would have preferred [FDA not give] the one-year extension because manufacturers have had plenty of time to eliminate the use of trans fat," Willett said. "However, these are small enough that we can say that industrial trans fat has been removed from our food supply."

**From:** <https://www.hsph.harvard.edu/news/hsph-in-the-news/us-bans-artificial-trans-fats/>



## #ByeTransFat: Celebrating a Public Health Milestone

It's official: As of June 18, 2018, artificial trans fats are banned from the U.S. food supply. In celebration of trans fat "elimination day," the department gathered colleagues (both locally and virtually) who played a role along the way to this major public health milestone.



**Martijn Katan**, Emeritus Professor of Nutrition at VU University Amsterdam, discussed his foundational feeding trial that exposed the adverse effects of trans fats in 1990.



**"This is a historic day."**

- **Walter Willett** opened the event acknowledging the many researchers, advocates, and other partners who have continuously worked towards the ban on artificial trans fats.

**"It's a testimony to the power of joining pure science...with those of us who turn science into action."**

- **Peter Lurie**, Executive Director and President, Center for Science in the Public Interest (CSPI).



After learning about the department's research on trans fat in the 1990s, **Roger Berkowitz**, President and CEO of Legal Sea Foods, persistently worked with suppliers to get his restaurants trans fat-free.

**Martin Breslin**, Director for Culinary Operations, shared that Harvard Dining Services is celebrating over 10 years of being trans fat-free.



**"Harvard was on the cutting edge of raising awareness that [trans fat] was a problem...this marriage between strong science and strong advocacy is saving tens of thousands of lives."**

- **Margo Wootan**, Vice President for Nutrition, CSPI



The day's events concluded with a Twitter Chat hosted by CSPI and joined by Walter Willett and The Nutrition Source Team, along with other national partners. The conversation reached nearly 2.9 million Twitter accounts.

**"The foundation of all this work over the past 25 years was having the scientific evidence from the clinical and epidemiological studies...[CSPI], the FDA, the food industry wouldn't have done anything without that scientific base."**

- **Michael Jacobson**, Senior Scientist and Co-Founder, CSPI

## Study Finds that Mothers Who Maintain Healthy Lifestyle Are Less Likely to Raise Obese Children

According to a new study led by the Harvard T.H. Chan School of Public Health, mothers who follow five healthy habits have children who are 75 percent less likely to become obese than children of mothers who do not follow any such habits. The researchers identified the five healthy habits as eating a healthy diet, exercising regularly, keeping a healthy body weight, drinking alcohol in moderation, and not smoking. Furthermore, when both mother and child adhered to these habits, the risk of obesity was 82 percent lower compared with mothers and children who did not.

"Our study was the first to demonstrate that an overall healthy lifestyle really outweighs any individual healthy lifestyle factors followed by mothers when it comes to lowering the risk of obesity in their children," said **Dr Qi Sun**, Assistant Professor in the Department of Nutrition and senior author of the study.

For this study, researchers focused on the association between a mother's lifestyle and the risk of obesity among her children and adolescents between 9 and 18 years of age. The researchers examined data from 24,289 children enrolled in the Growing Up Today Study (GUTS) who were born to 16,945 women enrolled in the Nurses' Health Study II (NHSII). They focused on the association between a mother's lifestyle and the risk of obesity among her children and adolescents between 9 and 18 years of age. Their findings indicate that 1,282 of the children, or 5.3 percent, developed obesity during a median five-year follow-up period. Maternal obesity, smoking, and physical inactivity were strongly associated with obesity among children and adolescents.

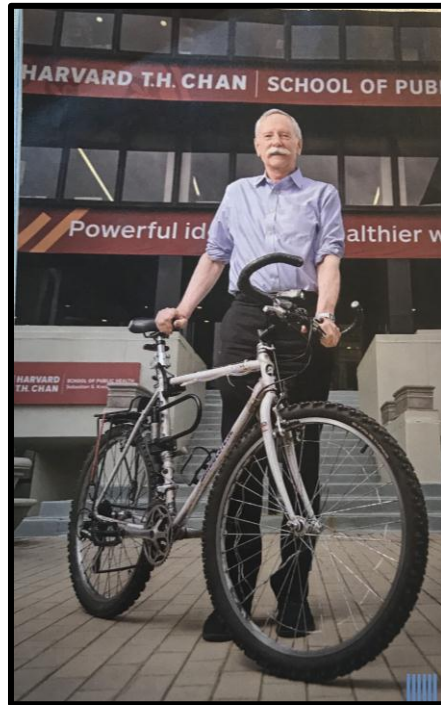
Surprisingly, mothers' dietary patterns were not associated with obesity in their children—possibly because children's diets are influenced by many factors, including school lunches and available food options in their neighborhoods. These findings highlight the crucial role a mother's lifestyle choices can have on her children's health and bolster support for family- or parent-based intervention strategies for reducing childhood obesity risk.

Dhana K, Haines J, Liu G, Zhang C, Wang X, Field AE, Chavarro JE, Sun Q. Association between maternal adherence to healthy lifestyle practices and risk of obesity in offspring: results from two prospective cohort studies of mother-child pairs in the United States. *Bmj* 2018;362. doi: 10.1136/bmj.k2486.

**From:** [https://news.harvard.edu/gazette/story/2018/07/moms-who-follow-5-healthy-habits-reduce-risk-of-raising-obese-kids/?utm\\_source=SilverpopMailing&utm\\_medium=email&utm\\_campaign=Daily%20Gazette%2020180706](https://news.harvard.edu/gazette/story/2018/07/moms-who-follow-5-healthy-habits-reduce-risk-of-raising-obese-kids/?utm_source=SilverpopMailing&utm_medium=email&utm_campaign=Daily%20Gazette%2020180706)

*Visit the Harvard Chan School website for the [latest news](#), [press releases](#), and [multimedia offerings](#).*

## Walter Willett Has Been Named a 2018 American Food Hero!



*EatingWell Magazine* has revealed the winners of its second annual American Food Heroes awards as part of its July/August 2018 issue. **Dr Walter Willett**, Professor of Epidemiology and Nutrition, was recognized along with 11 other Top Food Industry Leaders and Visionaries.

This year's awards honor the top visionary leaders and influencers within the food sector who are committed to making a difference in the biggest food, sustainability and nutrition issues of today. The magazine felt that because of so many positive changes happening in the food sector today, it is an ideal opportunity for them to acknowledge those doing extraordinary work on all fronts—whether it's through food policy, agricultural innovations, sustainability initiatives or life-saving nutrition research. Willett was honored for decades of tirelessly crusading against the deleterious effects of trans fats, as well as over 4 decades of research on a wide range of health topics, including the adverse effects of sugary beverages and the ways diet impacts cancer risk. He has also been a leader in shaping nutrition guidelines both in the US and worldwide.

**Evergreen Updates:** <https://sites.sph.harvard.edu/evergreen/about/>

**Email:** [EVERGREEN@hsph.harvard.edu](mailto:EVERGREEN@hsph.harvard.edu)

*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/>)

## RECIPE CORNER

### Vanilla Blueberry Chia Seed Pudding

*(By Paula Tocco, Research Dietitian)*



- Ready In 15 minutes
- Serves 4

#### *INGREDIENTS*

- **Ingredients for Pudding:**
- 2 1/2 cups coconut milk (Paula prefers 1 can of coconut milk)
- 1 cup chia seeds (Paula prefers 1/2 cup chia seeds)
- 1 tablespoon honey (optional)
- 3 tsp vanilla extract (Paula prefers 2 tsp vanilla)
- 2 tbsp MCT oil
- **Ingredients for Toppings**
- Handful of fresh blueberries
- 1/2 cup dried Goji berries
- Shredded unsweetened coconut

#### *Step 1*

Pour your coconut milk, 1 tablespoon of honey (optional), and 3 teaspoons of vanilla extract into a blender and blend until pureed.

#### *Step 2*

Pour the contents of blender into a bowl and gently whisk in your 1 cup of chia seeds.

### *Step 3*

Cover and place in fridge for 5 minutes.

### *Step 4*

When you plate individual puddings, garnish with fresh blueberries, a small handful of dried goji berries, a tablespoon of shredded coconut, and finish with a healthy pour of MCT oil.

Nutritional analysis per serving (without honey)

calories 473 • total fat 24 g • saturated fat 12 g • cholesterol 0 mg • dietary fiber 25 g • protein 16 g

***Photo and recipe adapted from:*** <http://drhyman.com/blog/2017/12/26/brain-fuel-desert-vanilla-blueberry-chia-seed-pudding/>