Dr. Christopher Golden joins Department as Assistant Professor of Nutrition and Planetary Health!

(By Hilary Farmer)

Dr. Christopher Golden, Assistant Professor of Nutrition and Planetary Health, joined the Department of Nutrition in August. Dr. Golden, formerly a research scientist in the Department of Environmental Health at the Harvard T.H. Chan School of Public Health, is an ecologist and epidemiologist who is interested in the interface of ecosystem service provisioning and human health, specifically in the context of global trends in biodiversity loss and ecosystem transformation. He will begin to implement the Department’s research and educational offerings that focus on nutrition and planetary health.
**NN:** Dr Golden, you are both an ecologist and an epidemiologist, which lends a rather unique perspective to your examination of global trends in planetary health. Can you please describe how these two research areas intersect in how you approach the human health impacts of ecosystem services?

**CG:** We are living in the midst of an ecological crisis. Biodiversity is threatened with species extinction rates more than 1,000 times higher than background rates. Freshwater scarcity, climate change, loss of arable soil, temperature increases on land and sea. All of these various environmental changes are driving changes in human health, many of which have negative impacts being borne by the poorest people in the world. My specific focus has been investigating the role of mass wildlife declines in affecting human nutrition, where a large proportion of the global population is reliant on wild-sourced meats from land and sea.

**NN:** I understand that you began your academic career here at Harvard College, then obtained two graduate degrees at UC-Berkeley. Can you tell us a little about your academic background?

**CG:** I’ve been interested in the intersection of health and the environment for a long time and wanted my studies to reflect that intersection. As an undergraduate at the College, I created my own concentration that included coursework in Ecology, Environmental Science, Medical Anthropology, and Development Studies. After I finished my undergraduate degree, I spent over a year in Madagascar conducting fieldwork which laid the groundwork for the cohorts that I am still working with today. At UC-Berkeley, I did my PhD in Environmental Science, Policy and Management and got an MPH in Epidemiology. My dissertation focused on quantifying the nutritional benefits of wild meats in the diets of local Malagasy people.

![Chris standing with a white-fronted brown lemur, an animal that is highly featured in the local Malagasy diet](image)

**NN:** Since 1999 you have been conducting environmental and public health research in the Republic of Madagascar, a large island country in the Indian Ocean with a very unique biodiversity that contains one-of-a-kind species that exist nowhere else in the world. Can you tell us something about your MAHERY project?

**CG:** MAHERY stands for Madagascar Health and Environmental Research and in the local Malagasy language, mahery means strength. I created this organization in Madagascar in 2004, and more recently have created an official 501c3 for MAHERY. MAHERY is a consortium of researchers from diverse backgrounds (animal biology, veterinary medicine, physicians, economists, sociologists, botanists, etc.) who are focused on challenge-oriented research to improve the health and environment of Malagasy people. Through this program, I have trained more than 30 Malagasy undergraduate and graduate students, physicians and vets, and more than 20 American undergraduate and graduate students.
**NN:** *In your investigation of the effect of terrestrial wildlife decline in Madagascar on food security and human nutrition, how would you suggest we best balance the need for maintaining local health, while at the same time preserving a very fragile and unique ecosystem and preventing further biodiversity loss and managing land-use change, on the other? This seems like a very difficult endeavor.*

**CG:** The ecological research that my team has done is quite clear. Malagasy wildlife cannot withstand current and future levels of hunting. This is specific to Madagascar’s ecological context. Madagascar was only settled by humans roughly 4,000 years ago and all of its wildlife was naïve to human predators. After human arrival, nearly 30 species of lemurs the size of gorillas, pygmy hippopotamuses, giant elephant birds, and carnivores the size of tigers went extinct. The remaining wildlife on the island is still vulnerable to human predation and will never survive if current hunting levels persist. Therefore, our team has been spearheading efforts to pair conservation and development initiatives together. Because chicken is a highly desired source of meat, we have helped to co-develop a thermostable vaccine used to prevent Newcastle disease, a viral infection that can wipe out 80-100% of chicken flocks seasonally. We have rolled out this vaccine campaign in 10 villages and are hoping to scale this effort in the future. Because chicken is preferred over wildlife, we are hoping that the increased productivity of chicken farming will wean pressure off the forest for providing food.

**NN:** *You are the Associate Director of the Planetary Health Alliance. Can you tell us about this Alliance?*

**CG:** The Planetary Health Alliance (PHA) is a consortium of more than 100 universities, NGOs and other partners with a shared mission – supporting the growth of a rigorous, policy-focused, transdisciplinary field that serves to decipher the links between accelerating global environmental change and human health. The PHA aims to support robust policy-making and public education around the world. Funded by the Rockefeller Foundation, this alliance is jointly based between the Harvard University Center for the Environment and the Harvard TH Chan School of Public Health. We would definitely welcome more HSPH faculty involvement so please e-mail me if you are interested!

Chris and his team of Harvard Planetary Health Scholars who traveled to Madagascar for 6 weeks to conduct hands-on research at his long-term field site.
NN: *Dr Golden, you are bringing a unique perspective to the Department of Nutrition with your new appointment here. What are your long-range goals for helping our Department develop an increasing emphasis on global and planetary health?*

CG: I am thrilled to be joining the department and to increasingly collaborate with the faculty and students of the department. I would like to create a community of practice of faculty, post-docs and students who are interested in planetary health and conducting empirical research. This will be based on harnessing my existing long-term field site and cohorts in Madagascar, and new populations in Kiribati, Fiji, and elsewhere. I would love to see the Department continue and expand research on sustainable food systems both domestically and internationally.

NN: *You are certainly very busy! What do you like to do when you get a rare moment of free time?*

CG: I love camping and hiking. Any chance I get I love to get offline, and disappear into the forest. I get some of my best research ideas while hiking. I also love to cook.

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**NEWS AROUND THE NUTRITION DEPARTMENT**

Dr Kirsten Davison and her CHL team

On the glorious morning of July 10th, *Dr. Kirsten Davison* and the Communities for Healthy Living (CHL) team decided to take some time off and enjoy Boston from the sea. They boarded a ferry in Boston’s Long Wharf bound for Spectacle Island. The weather was perfect and they largely had the harbor to themselves with few other boats on the water (an unusual treat for Boston Harbor). On Spectacle Island, the female contingent of the team waded through the water and collected sea glass while the male contingent decided the water was too cold (or at least that is how the female contingent interpreted it :) and opted for the higher ground. The team also hiked around the island and relaxed on a hilltop overlooking the Boston Harbor Islands (for those who haven't explored Boston Harbor, Spectacle Island is one of many islands in the harbor). It was a great opportunity to rejuvenate and we all came away thinking we should do this more often.
**Dr Christopher Golden**, Assistant Professor of Nutrition and Planetary Health, has published the following papers:


**Marta Guasch-Ferre, PhD**, Research Associate, began a 3-year project funded by the American Diabetes Association, titled *Mechanisms underlying metabolomics and type 2 diabetes in the context of dietary interventions*.

**Tayla Ash**, SD candidate in Nutrition and SBS, successfully defended her dissertation titled: *Infant Sleep Disparities: Examining the Emergence of Differences in Infant Sleep Outcomes by Race/Ethnicity and Socioeconomic Status, and Implications for Childhood Obesity* on Wednesday, July 25th.

**Alvin Tran**, SD candidate in Nutrition and SBS, successfully defended his dissertation titled: *Body Image, Dating Apps, and Perceived Discrimination: Implications for Public Health Practice and Research* on Thursday, July 19th

**Dr Frank Sacks**, Professor of Cardiovascular Disease Prevention, was awarded the Rank Lecture on Nutrition by the Royal College of Physicians. He gave the lecture at the Royal College’s 500th anniversary celebration, June 26, 2018.

**Dr Frank Sacks** was also appointed Vice-Chair of the Lifestyle and Cardiometabolic Health Council of the American Heart Association. He will serve a 2-year term followed by a 2-year term as Chair.

**MONDAY NUTRITION SEMINARS**

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

*The following speakers will discuss their work in September:*

Sept 3  **Labor Day—No Monday Nutrition Seminar**

Sept 10  **Dr Nilupa S. Gunaratna**, Assistant Professor, Department of Nutrition Science/Public Health Graduate Program, Purdue University—TBD. (NGHP)

Sept 17  **Dr Vasanti Malik**, Research Scientist; Adjunct Lecturer in Nutrition, TBD.

Sept 24  **Dr Benoît Lamarche**, Chaire de Nutrition, INAF; Architecte scientifique, PULSAR, Université Laval, Québec. "Are DHA and EPA created equal? Clinical and mechanistic perspectives".

*For more information:  hfarmer@hsph.harvard.edu*
NEW FACES IN THE DEPARTMENT

Areli Caballero-Gonzalez
Research Assistant

Hi everyone!

My name is Areli Caballero and I have just started working as a research coordinator in the Nutrition department with Dr. Josiemer Mattei. My family is originally from Mexico and I am fully bilingual in both Spanish and English. My research here includes working with the Latino community. My goal is to try and find the cultural perceptions that are tied to diet within this group.

I have recently graduated from Boston University with a bachelor’s degree in Health Science. During my undergraduate years my research was focused on the benefits of nutrition and exercise. Now working at HSPH I am happy to continue with my research in nutrition through a more qualitative approach.

Analuce Canha Gouveia
Visiting Graduate Student

I am Analuce Canha Gouveia, I am Portuguese, and I received a BSc and an MSc in Genetics and Biotechnology from University of Trás-os-Montes and Alto Douro, Portugal. I am now a PhD student in a Rep-Biotech Joint Doctoral program, which is a Marie-Sklodowska Curie Innovative Training Network in Biology and Technology of Reproductive Health (human and animal) research area, funded by the European Commission under the Horizon 2020 Programme. This network is composed of 12 leading academic research groups and 3 companies from 9 different countries: Spain, France, Ireland, Italy, Belgium, Germany, USA, Japan and The Netherlands.

My PhD project “Feasibility assessment for the creation of human biobanks of reproductive fluids” is a collaboration between the University of Murcia (Professor Pilar Coy and Professor Rafael Latorre), Harvard T.H. Chan School of Public Health (Professor Jorge Chavarro) and IVI Murcia Clinic. Our biggest goals are to develop an efficient method to collect human oviductal and uterine fluid, to characterize the proteomic profile of these fluids, and to establish correlations between diet, physical activity, sleep and other lifestyle factors and create a biological samples profile. I will be here in the Nutrition Department until 15th October 2018, under Dr Chavarro’s supervision, to acquire the necessary skills to analyze the data derived from Spanish versions of validated questionnaires to assess physical activity (International Physical Activity Questionnaire - IPAQ), food consumption (FFQ questionnaire) and smoking of patients and donors from the Assisted Reproduction Clinics – IVI Murcia.
My name is **Xiao Luo**, and I am a new postdoc who is doing research with **Professor Edward Giovannucci** and **Xuehong Zhang** in the Department of Nutrition.

I am originally from Harbin which is heralded as the Ice City for its well-known winter tourism and recreation in China. Before joining the Harvard Nutrition Department, I received my PhD in Biostatistics from Harbin Medical University and worked as a lecturer at China Medical University. My research focused on the investigation of the association of obesity with either atopic sensitization or allergic diseases. Furthermore, I tried to better understand various biological mechanisms by bridging lifestyle factors to certain diseases risk using -omics data.

At Harvard, I am planning to investigate the associations between diet and lifestyle factors (e.g., physical activity) and gastrointestinal cancers (e.g., liver cancer) using two large Harvard cohorts. In my spare time, I enjoy reading, trail running, and weight training. Let’s go and have fun!

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**MORE NUTRITION IN THE NEWS**

**Dr David Eisenberg Shares Helpful Meal Tips!**

In a July 26, 2018 *US News & World Report* article, **Dr David Eisenberg**, Director, Culinary Nutrition and Adjunct Associate Professor of Nutrition, and a number of other doctors, share helpful cooking tips. For example, Eisenberg suggests that readers start out by taking a cooking class, organizing their basic ingredients, and learning general cooking techniques as opposed to following step-by-step recipes.

Dr Eisenberg also recommends that people should cook tomato sauce at home because it’s cheaper and healthier than store-bought sauce. “If you look at any jar of tomato sauce on the shelf, it’s expensive relative to buying a can of tomatoes to which you add garlic, salt, pepper and some basil—and it’s also got tons more salt and sugar,” Eisenberg said. ”It takes about 15 minutes to make a fantastic tomato sauce.”

Read the *U.S. News & World Report* article: [9 Meal Tips From Doctors Who Are Also Experts in the Kitchen](https://www.hsph.harvard.edu/news/hsph-in-the-news/doctors-who-cook/)

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**Walnut Consumption May Benefit Heart Health**

Further evidence that nut consumption is beneficial for a healthy heart was found in a new large-scale review by researchers from the Harvard T.H. Chan School of Public Health.
The study was led by **Marta Guasch-Ferre**, Research Associate, and colleagues who reviewed 26 clinical trials with a total of 1,059 participants aged 22 to 75. The researchers compared the benefits of a diet rich in walnuts with low-fat, Western, Mediterranean, and Japanese diets. Results indicate that people on the walnut-enriched diets had a 3.25% greater reduction in total cholesterol levels, a 3.73% greater decrease in low-density lipoprotein (LDL) cholesterol (the “bad” cholesterol) and a 5.52% greater reduction in triglycerides (a type of fat found in the blood) compared to those on the other diets.

Heart-healthy benefits were noticed even among participants who ate fewer than 28 grams per day of walnuts. In addition, walnut consumption did not appear to adversely affect participants’ body weight or blood pressure.


**To Learn More:**
- Eating nuts linked with better heart health ([Harvard Chan School news](https://www.hsph.harvard.edu/news/hsph-in-the-news/walnuts-heart-health/))

**Preterm Birth Associated with Low Plasma Levels of Omega-3 Fatty Acids**

According to new research from Harvard T.H. Chan School of Public Health in collaboration with Statens Serum Institut in Copenhagen, pregnant women with the lowest plasma levels of long chain omega-3 (n-3) fatty acids—the kind found in fish oil—were at 10 times increased risk of early preterm birth when compared with pregnant women with the highest levels.

The study was led by **Sjurdur F. Olsen**, Adjunct Professor of Nutrition, and head of the Centre for Fetal Programming at Statens Serum Institut in Copenhagen, Denmark. Olsen said: “At a time when many pregnant women are hearing messages encouraging them to avoid intake of fish altogether due to mercury content, our results support the importance of ensuring adequate intake of long chain omega-3 fatty acids in pregnancy. Consumers should consult the guidance issued last year by the U.S. Food and Drug Administration and Environmental Protection Agency to make informed choices about the best types of fish to consume and avoid in pregnancy.”

The study is important because preterm birth is a leading cause of neonatal death; it is associated with cognitive deficiencies and cardiometabolic problems later in life among survivors. The researchers examined data and analyzed blood samples from the Danish National Birth Cohort, a nationwide study that follows 96,000 children in Denmark through questionnaires and registry linkages. Their findings suggest that, among pregnant women with low levels of EPA+DHA, eating more cold-water fish such as salmon or taking fish oil supplements may help minimize the risk of preterm birth. The authors cautioned, however, that broad generalizations about the study’s findings may be limited due to the fact that it was conducted in Denmark, where preterm birth rates are low. Thus, the results should be replicated in other populations. Further, the findings may not solely reflect a variation in diet; variation in underlying genetic factors may also play a role.
According to co-author Jeremy Furtado, Senior Research Scientist, "An effect of this magnitude is rare, but the precision of the estimate is tight, which supports the reliability of these findings. It will be important to replicate these findings in other populations, but the results of this study certainly suggest that assessment of plasma EPA+DHA status in women has the potential to be used in the future to help predict women's risk." Matthew Lopes, Research Assistant in Dr. Furtado’s lab, was largely responsible for the high quality of the data upon which this whole study has been based.

"Early preterm birth has immense health, economic, and emotional costs. Our findings are consistent with the results of most randomized trials of long chain omega-3 fatty acid supplements in pregnancy and support the importance of ensuring adequate intake of these nutrients during pregnancy, either through fish intake or supplements, to help prevent early preterm birth," said co-author Andrew Thorne-Lyman, an associate research scientist at Johns Hopkins Bloomberg School of Public Health who worked on this study while a faculty member at Harvard Chan School.


**Increased Short-term Diabetes Risk Linked to Weight Gain after Smoking Cessation**

According to a new study, people who gain weight after they quit smoking may face a temporary increase in the risk of developing type 2 diabetes, with the risk directly proportional to the weight gain. Nevertheless, quitters can reap significant health benefits, including lower risk of cardiovascular disease, cancer, and early death, regardless of weight gain.

According to Dr Qi Sun, Associate Professor and senior author of the study, "It’s been known that quitters may have an elevated risk of developing diabetes or worsening glucose tolerance in the first few years after quitting, and this may discourage smokers from quitting, . . . But our study shows that it is the weight change after quitting that determines diabetes risk—so as long as quitters minimize their weight gain, their diabetes risk will not increase and, over the long run, is reduced."

In this study, researchers looked at an average of nearly 19 years of data from 171,150 U.S. men and women enrolled in three cohorts—the Nurses’ Health Study, the Nurses’ Health Study II, and the Health Professionals Follow-Up Study—who filled out questionnaires about their health and lifestyle every two years. Those participants who quit smoking were identified and the researchers looked at associations between their weight gain and their risk of developing type 2 diabetes, as well as the impact of weight gain on the risk of death due to cardiovascular disease and other conditions.
Compared with current smokers, recent quitters had, on average, a 22% higher risk of developing type 2 diabetes. Their increased diabetes risk peaked 5-7 years after quitting, then gradually waned. It was found that the more weight people gained after quitting smoking, the greater their risk of type 2 diabetes. However, among those who did not gain weight there was no increased risk. The researchers also found that long-term smoking cessation was linked with a steady reduction in diabetes risk; among quitters who didn’t smoke for 30 years, diabetes risk dropped to that of people who had never smoked.

Among those who gained more than 10 kg (about 22 lbs), the risk of early death due to all causes or cardiovascular disease decreased, on average, by 50% and 67%, respectively, after quitting smoking. However, “Smokers shouldn’t be deterred by potential weight gain after quitting because the short-term and long-term reduction of cardiovascular disease risk is clear,” said co-lead author Yang Hu, a doctoral student in the Departments of Nutrition and Epidemiology. “[But] quitters may want to consider eating a healthful diet and engaging in physical activities to minimize weight gain to keep their diabetes risk at bay and to maximize the health benefits of quitting.”


**Policy Changes Necessary for People to Improve Diets, Lower Cardiovascular Disease Risk**

It has long been known that dietary changes such as eating more whole grains and vegetables and consuming less sodium and sugar-sweetened beverages will lower the risk of cardiovascular disease. Nevertheless, many people have difficulty following guidelines for healthy eating. A new review paper by researchers in the Department of Nutrition suggests that policy changes are needed to help people overcome the roadblocks to a healthy diet.

According to senior author Dr Frank Hu, Chair of the Department, “Eating habits are forged over a lifetime and are influenced by a multitude of factors from all levels of society including biological, economic, physical, social, and psychological determinants. The assumption that most people would replace unhealthy dietary components in light of new research is overly optimistic.”

Therefore, Hu and his co-authors suggest several policy strategies that may help boost healthy eating. These include improving nutrition labels, taxing sugar-sweetened beverages, providing economic incentives for the production of healthy foods, regulating food marketing, promoting healthy school and work environments, and funding educational campaigns.


Bike-sharing Gains Momentum in Boston

Dr Anne Lusk, Research Scientist, was recently interviewed by the Harvard Gazette about the progress of bike-sharing systems. Lusk, who is also a cyclist, studies bike environments, including safety and crashes. For example, she notes that bicyclists on shared bikes may be more timid because they are riding on what is perhaps an unfamiliar route and they are riding a heavier bike that is unfamiliar to them—thus, they are less prone to collisions with cars than regular cyclists. Lusk also discusses the issues of helmets, dockless electric scooters vs bikes, and taking a more aesthetic approach towards bicycle docking stations.

To read Dr Lusk’s full interview: https://news.harvard.edu/gazette/story/2018/08/insights-on-bike-sharing-from-harvard-researcher/?utm_source=SilverpopMailing&utm_medium=email&utm_campaign=Daily%20Gazette%2020180820

Visit the Harvard Chan School website for the latest news, press releases, and multimedia offerings.

EVERGREEN UPDATES

EVERGREEN, The EVidEnce-based Research GRoup to EvaluatE Nutrition policy, is an interdisciplinary research group at the Harvard T.H. Chan School of Public Health. It is led by Dr Eric Rimm and Dr Sara Bleich, and it evaluates the impact of nutrition policy on food purchased or consumed in supermarkets, restaurants, and schools. EVERGREEN also examines how these policies affect nutrition and health. Its primary strategic aim is to provide a strong evidence base to improve nutrition policies, which can lead to healthier environments and communities. EVERGREEN’s research group includes faculty from the Harvard T.H. Chan School of Public Health Departments of Nutrition, Epidemiology, and Health Policy and Management, as well as faculty from the University of New England. Our post-docs and doctoral students are from the Harvard T.H. Chan School of Public Health Departments of Nutrition, Epidemiology, Health Policy, and Social and Behavioral Sciences.

These are some of EVERGREEN’s latest research findings:

Health Warning Labels Correct Parents’ Misperceptions about Sugary Drink Options

In this study, Drs. Moran and Roberto found that front-of-package warning labels could correct parent misperceptions about sugary drink options and subsequently influence parents’ health beliefs, risk perceptions, and selection of beverages for their children.


**Increases in Sugary Drink Marketing During Supplemental Nutrition Assistance Program Benefit Issuance in New York**

Drs. Moran and Gorski Findling, ScD candidate Aviva Musicus, and coauthors discovered that the prevalence of sugary drink displays and advertisements may be higher during SNAP benefit issuance compared to other days of the month, particularly in neighborhoods where a large proportion of the population receives SNAP.


**Differences in the Neighborhood Retail Food Environment and Obesity Among US Children and Adolescents by SNAP Participation**

Drs. Gorski Findling, Bleich, and Rimm, and co-author Dr. Wolfson, determined that greater neighborhood access to store types with limited healthy grocery options such as combination grocery/other stores and convenience stores is associated with overweight/obesity for low-income children in particular, and children overall.


**100% Juice, Fruit, and Vegetable Intake Among Children in the WIC program and Nonparticipants**

Kelsey Vercammen, Dr. Alyssa Moran, Laura Zatz, and Dr. Eric Rimm found that children participating in WIC consumed significantly more 100% fruit juice than income-eligible nonparticipants and significantly less total vegetables than higher-income nonparticipants.


**Contact Us!**

Email: EVERGREEN@hsph.harvard.edu
https://sites.sph.harvard.edu/evergreen/
Straight Talk About Soy
Studies may seem to present conflicting conclusions about soy, but this is largely due to the wide variation in how this unique food is studied.
https://www.hsph.harvard.edu/nutritionsource/soy/

Coconut Oil
In recent years, the popularity of coconut oil has soared because of touted health benefits. But what does the research show?
https://www.hsph.harvard.edu/nutritionsource/food-features/coconut-oil/

Paleo Diet Review
See what current research says about a diet that aims to revisit the way humans ate over 2 million years ago.
https://www.hsph.harvard.edu/nutritionsource/healthy-weight/diet-reviews/paleo-diet/

Alcohol: Balancing Risks and Benefits
Moderate drinking can be healthy—but not for everyone. Learn more about weighing the benefits and the risks.

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**

**Kale-and-Chickpea Grain Bowl with Avocado Dressing**

By Julie Coleman, MS, RDN
Case Manager, The MIND Diet Intervention to Prevention Alzheimer's Disease

Active Time: 20 Mins
Total Time: 20 Mins
Yield: Serves 4 (serving size: about 1 1/4 cups bulgur mixture and 1 1/2 tablespoons dressing)

**Ingredients**

- 1 cup boiling water
- 1/2 cup uncooked bulgur

Photo by Caitlin Bensel
Directions

Step 1
Combine 1 cup boiling water and bulgur in a medium bowl. Let stand 10 minutes; drain well.

Step 2
Pat chickpeas dry with paper towels. Heat canola oil in a large skillet over high. Add chickpeas and carrots; cook, stirring occasionally, until chickpeas are browned, about 6 minutes. Add kale; cover and cook until kale is slightly wilted and carrots are tender, about 2 minutes. Add chickpea mixture, shallots, parsley, 1/2 teaspoon salt, and pepper to bulgur; toss.

Step 3
Process avocado, olive oil, juice, 1 tablespoon water, tahini, garlic, turmeric, and remaining 1/4 teaspoon salt in a food processor until smooth. Divide bulgur mixture among 4 bowls; drizzle evenly with avocado mixture.

Taken from: https://www.cookinglight.com/recipes/kale-and-chickpea-grain-bowl-avocado-dressing