NUTRIIONAL SCIENCES DIGEST

SPRING 2022 EDITION

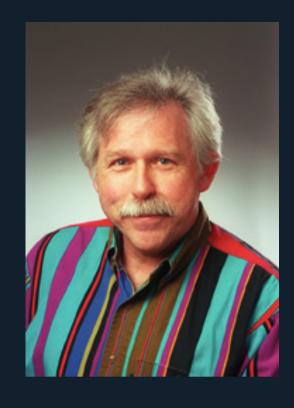
Department of Nutritional Sciences, University of Wisconsin-Madison

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ROGER SUNDE RETIREMENT

Doctor Roger A. Sunde, a vast asset to the Department of Nutritional Sciences, retired in the Fall of 2021. Roger came to the Department of Nutritional Sciences at the University of Wisconsin-Madison in 2003. Throughout his career, he contributed substantially to the growth and reputations of several institutions and to the field of nutrition. His contributions were significant in all areas of faculty involvement, including research, teaching, and service.



UW-Madison 2003–2021

Roger made a notable impact in research at the department. His research addressed the metabolism of selenium, mechanisms of selenium utilization, how selenium status controls gene expression, and the use of biochemical and molecular tools as biomarkers of selenium status in humans and other animals.

Besides his research, Dr. Sunde also taught multiple courses on campus. He was an innovative and dedicated teacher, a valued graduate research mentor, and an advisor of uncommon excellence.

Dr. Sunde made many important contributions to his home departments, colleges, campuses, and the national nutrition research community. He has provided selfless service to the departments he has led.

His outstanding contributions in research relevant to human nutrition, teaching with an emphasis on understanding key concepts, and service to his department, college, and campus, and the field of nutrition across the US and worldwide made him a key faculty member here at the Department of Nutritional Sciences.

We thank Roger for his 18 years in our department and wish him a happy and healthy retirement!





ERIKA ANNA

CALS awarded Erika with the 2022 CALS Equity and Diversity Award. The award recognizes contributions to activities and programs that advance the academic and professional climate of diversity, respect, inclusion and equity in CALS. Congratulations and thank you for all you do for our department, Erika!



ALICIA HENSON

Alicia is one of this year's Karls Scholarship Recipients! These scholarships are awarded to students to subsidize graduate tuition within the UW-Madison MS-CN and Capstone Certificate programs. Alicia is a Registered Dietitian with experience in kidney disease, critical care, and geriatrics and now is transitioning into pediatrics. Alicia has accepted a position as a clinical dietitian at UCSF Benioff Children's Hospital in Oakland, CA and is an adjunct nutrition instructor at College of the Sequoias in Visalia, CA. Alicia will graduate this spring from the MS-CN program. Congratulations, Alicia!



KELLY PETERSON

Kelly is one of this year's Linkswiler Scholarship Recipients! These scholarships are awarded to students to subsidize graduate tuition within the UW-Madison MS-CN and Capstone Certificate programs. Kelly has been a Registered Dietitian for the past 6 years. Kelly has enjoyed working for a local hospital and currently teaches dietetic students and interns as adjunct faculty at Idaho State University. Kelly is a recent graduate of the MSCN program. Congratulations, Kelly!





MAKAYLA Schuchardt

CALS awarded Makayla with the 2022 CALS Academic Staff Excellence Award. The award is presented to those who demonstrate excellence, often performing above and beyond expectations, taking initiative, being creative in problem solving and having a personal and positive impact on their work. Congratulations and thank you for all you do for our department, Makayla!



TRACY SOLOMON

Tracy is one of this year's Karls Scholarship Recipients! These scholarships are awarded to students to subsidize graduate tuition within the UW-Madison MS-CN and Capstone Certificate programs. Tracy is a Registered Dietitian in Columbia, SC. She was the first dietitian in 2017 at the Department of Pediatric Gastroenterology at Prisma Health Midlands where she continues to work today. Tracy will graduate this spring from the MS-CN program. Congratulations, Tracy!





ELIZABETH SPROULS

Elizabeth was awarded the Cargill Benevenga Undergraduate Research Stipend. This scholarship is offered to both graduate students and undergraduate students who wish to get a start in hands-on-research. Working in Sherry Tanumihardjo Lab's in the Department of Nutritional Sciences and majoring in Biology with a Global Health Certificate, Elizabeth graduated in the Fall of 2021. Congrats on all your hard work and achievements, Elizabeth!

Undergraduate Highlight JACOB BREIT

1.What are your majors/certificates?

I am pre-Med with majors in Nutritional Science and Global Health, and a certificate in Organic Agriculture.

2. Why did you choose UW Madison?

I chose the University of Wisconsin for that fact that it is one of the most central hubs of not only the mid-west, but one of the major hubs in the United States for my interests in biological sciences-based research. Coming to college was an endeavor that I have always dreamt of experiencing but due to the uncertainty of what college really has to offer being a first-generation student, I was happy to make the decision that was only a few hours from home.

3. What is your favorite memory from attending UW Madison?

One of dearest memories that I have while attending UW is the time that I get to spend on sustainability related activities. Slow Food UW brings me utmost joy for the fact that we are provided with donated local produce and we as students can come together to single handedly develop menus and make food that we are able to share with the amazing community around us. College can feel very fast paced and ostracizing, I love that we are able to share the joy of gastronomy with those around us for a few hours per week.



4. What inspired you to study nutrition/ what sparked your interest in nutrition? Food is at the very center of all. Through times of hardship, celebration, sickness, and health-- we all need to eat. Using food beyond a necessity, we are able to research its



compounds in the field of medicine and history, speak over it when connecting with old friends, and even begin to reconnect with the natural around us that we as society can often forget.

As a child I was always in the kitchen. It was a whole family event to tend to our garden and cook giant meals for family gatherings-- a place that sparked joy. Later I even began Jake's Bakes where I prepared a variety of culinary goods for farmer's markets, birthdays, and weddings. I loved that I was able to spark the joy of food.

5. Can you describe your work/research experiences?

Since Fall of 2019 I have been working at the Department of Nutritional Sciences in the Huichuan J. Lai lab studying pediatric cystic fibrosis, as well as, working in the Denise M. Ney lab studying Nutritional Management of PKU with

GMP. Splitting my time between data compilation and wet lab procedures, I greatly enjoy learning new procedures and aspects of medical research. It has been an incredibly rewarding experience to work with such intelligent and passionate researchers to provide me with countless educational and networking experiences. During my time at UW, a lot has changed in terms of the pandemic and academic interests, and I am very fortunate to have my boss, Dr. Sangita Murali, to support me and be the constant in my life, and assist me through these changes.

I was the creator of the UW Composting Coalition within the Student Organic Farm UW Organic Collaborative to aid in action to bring back of house composting back on UW's campus as well as provide educational coursework for not only UW students, but community members in the Madison area. The UW student organic farm is set to open in early May of 2022. I am currently the project director for the March 4th to Earth Day Documentary surrounding these sustainability topics. I am also the current Personal Relations Representative for the Dietetics and Nutritional Science Club. My time as a Student Technician in the Department of Clinical Nutrition at UW-Health was an incredibly rewarding experience to learn and engage in the field of Clinical Dietetics. Working with independence in this space allowed me to gain confidence in my clinical knowledge and learn approaches of integrating nutrition into a patient's medical treatment. I was the Northern Wisconsin Community Health Improvement Plan intern through the Department of Public Health for the year of 2021. This work focused on communitybased research and population statistical analysis.

I have greatly enjoyed my time publishing a poster presentation at the 2022 CUGH conference, representing the UW Global Health Innovation Club, as well as publishing my policy actions to integrate Artificial Intelligence technology into zoonotic disease prevention through The Wisconsin Ideas Project / Sifting and Winnowing publications. I have also been a Wisconsin Certified Nursing Assistant for five years, working in a variety of clinical practices.

6. What is your dream job after college?

Fighting to end Inequities affecting both marginalized people and the nature around us is what I am passionate about. My dream job is elevating the voices of these groups and empower equitable treatment for all. Throughout the rest of my life, I will continue to work at the both the national and international level to provide a voice for marginalized groups through biomedical research, policy, and community activism.

7. What do you like to do in your free time outside of work and school?

I still love to bake, and I still love to share the joy of food with those around me. Most evenings and weekends you can find me in my apartment kitchen with my friends baking sourdough bread, fermenting vegetables, and making homemade pasta. I also LOVE live performances, still playing trumpet in the University band.

8. Anything else you would like to share?

After my undergraduate studies I would love to work in community research and public outreach at a University or non-



profit organization either in the middle east, India, or Africa before beginning my doctoral studies and I would love to build my network connection of those in this field.

I am also pleased to be offered an internship for the Summer of 2022 through the School of International Training, working directly with the Center for Disease Control and Prevention in Kenya, Africa. Additionally, I am pleased to be in month three of filming for my documentary Earth Day which depicts the actions and conversations surrounding climate change, Madison's active work in the field, and the empowerment of young people. Earth Day is set to be released in Fall of 2022 in the Madison, WI area.

STAFF RECIPES



Green Bay Booyah

Recipe credit: Michelle Johnson

Prep Time: 20 minutes Cook Time: 4 hours Total Time: 4 hours 20 minutes Yield: about 8 quarts

Ingredients

- 3 tablespoons olive oil
- 1 1/2 pounds boneless, skinless chicken thighs
- 1 pound beef stew meat
- 1 1/2 cups chopped onion
- 1 heaping tablespoon coarse salt
- 1/2 teaspoon pepper
- 4 cups water
- 1 1/2 cups sliced celery
- 1 1/2 cups chopped carrots
- 1 1/2 cups shredded cabbage (or coleslaw mix)
- 2 2 1/2 pounds chopped potatoes
- 2 cans diced tomatoes
- 1 1/2 cups frozen cut green beans
- 1 cup frozen corn
- 1 cup frozen peas
- 4 cups water
- 2 bay leaves
- 1 tablespoon Worcestershire sauce
- 1/2 tablespoon soy sauce

Directions

- 1. In a large Dutch oven or stockpot, heat olive oil to medium-high. Add chicken, stew meat, and onion. Let the meat brown, stirring occasionally, for about 5 minutes.
- 2.Add salt, pepper and water. Stir to combine and bring to a boil.
- 3.Cover the pot and reduce heat. Simmer for two hours. Break up/shred meat, if needed.
- 4.Add celery, carrots, potato, cabbage, tomatoes, frozen vegetables, bay leaves, additional water, Worcestershire sauce and soy sauce
- 5. Cover pot and simmer for an additional two hours.
- 6. Remove bay leaves before serving.

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STAFF RECIPES



New Orleans Crawfish Bread

Recipe credit: Mary Lou Krase

Prep time: 30 min Cook time: 60 min **Yield: 6 servings**

Ingredients

- 2 tablespoons unsalted butter
- 1/2 cup finely chopped onion
- 1/2 cup finely chopped celery
- 1/2 cup finely chopped green bell pepper
- 1 1/2 tablespoons minced garlic
- 1 pound cooked Louisiana crawfish tails
- 1 teaspoon Worcestershire sauce
- 1/2 teaspoon hot sauce
- 1/4 teaspoon cayenne pepper
- 1/4 chopped green onions
- 1/2 cup mayo
- 1 teaspoon Creole mustard or other spicy mustard
- 8 ounces grated provolone or mozzarella cheese
- 2 (15-inch) loaves of poboy bread (or soft french bread)

Directions

- 1. **MELT** butter over medium heat in large skillet; when hot, add onion, celery, and bell pepper.
- 2. COOK, stirring occasionally, until vegetables have wilted, about 5 minutes. Add garlic; cool and stir for 2 minutes.
- 3. **ADD** crawfish tails, Worcestershire, hot sauce and salt; cook and stir until crawfish have warmed through and released any liquid and then evaporated, about 3 minutes. Stir in green onions, then set mixture aside to cool.
- 4. PREHEAT oven to 350.

- 5. **STIR** mayonnaise, mustard and cheese into cooled mixture until well combined. Taste and adjust seasoning if necessary.
- 6.**CUT** both loaves of bread nearly in half and divide mixture evenly on bottom portion of each loaf.
- 7. **FOLD** top portion of bread back over mixture, then wrap each loaf tightly in aluminum foil. Place on a baking sheet and bake until mixture is heated through and cheese is melted, 25 to 30 minutes.
- 8. SLICE loaves into desired portions and serve hot.

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STAFF RECIPES



Penne alla Vodka

Recipe credit: Joseph Rinaldi

Serves 4 to 6

Ingredients

- 3 tablespoons unsalted butter
- 2 large garlic cloves, finely chopped
 2 ounces thinly sliced prosciutto, cut
- into thin strips
- One 28 to 35 ounce can Italian peeled tomatoes, drained and coarsely chopped
- 1/2 teaspoon crushed red pepper
- 1/2 cup heavy cream
- 1/4 cup vodka
- Salt
- 1 pound penne
- 1/2 cup freshly grated Parmigiano-Reggiano

Directions

- 1. In a skillet large enough to hold the cooked pasta, melt the butter over medium heat. Add the garlic and cook until golden, about 2 minutes. Stir in the prosciutto and cook for 1 minute.
- 2. Add the tomatoes and crushed red pepper and simmer for 5 minutes. Stir in the cream and cook, stirring well, for 1 minute. Add the vodka and cook for 2 minutes. Season to taste with salt.
- 3. Meanwhile, bring at least 4 quarts of water to a boil in a large pot. Add the pasta and salt to taste. Cook, stirring frequently, until the penne is al dente, tender yet still firm to the bite. Drain the pasta, reserving some of the cooking water.
- 4. Add the pasta to the skillet with the sauce and toss the pasta until it is well coated. Add a little of the reserved cooking water if the sauce seems too thick. Add in the cheese and toss again. Serve immediately.

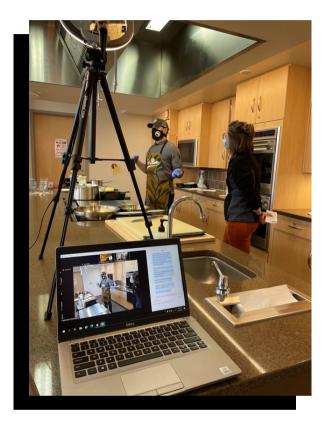
CELEBRATION OF AFRO-DIASPORIC FLACORS AND FOODWAYS WITH CHEF YUSUF BIN-RELLA

In honor of the March National Nutrition Month (NNM) theme, Celebrate a World of Flavors, teaching faculty from the Department of Nutritional Sciences worked in partnership with Wisconsin Academy of Nutrition and Dietetics Southern Region and UW Health to host Chef Yusuf Bin-Rella at UW Health East Madison Hospital for a virtual, and inperson cook-along focusing on Afro-Diasporic flavors and foodways.

In order to better serve the growing diversity and palates of our communities, Educating ourselves on the ingredients, recipes and traditional cooking techniques of the diasporas is key to Understanding The health benefits of our precolonial diets, And begin new dialogue on healthy eating.



Chef Yusuf is the chef at DeJope Residence Hall at UW, and is a cofounder of the nonprofit, TradeRoots, which explores the history of Afro-Diasporic foods. TradeRoots has grown several Afro-Diasporic crops in the Madison area.



Set up to host in-person attendees in the Learning Kitchen, and broadcasting live online, Chef Yusuf led participants through the preparation of fish and grits, promoting ingredients from local BIPOC (Black, Indigenous, and People of Color) vendors, and growers. A talented and engaging educator at the point of food preparation, Chef Yusuf expanded the cultural understanding of Afro-Diasporic culture and foodways, helped attendees apply a cultural lense to food procurement and preparation, and provided space to reflect upon one's own culture and degree of cultural humility in practice.

In the context of NNM and the theme, "World of Flavors", Chef Yusuf was asked why it is important that food and nutrition professionals familiarize themselves with a wide variety of produce, flavor profiles, herbs, and spices. He said, "XXX" Geared toward meeting Commission on Dietetic Registration (CDR) Competencies, Chef Yusuf's cook-along accomplished the following:

- 3.1.2 Fosters a culture in which diversity and crossteam collaboration are valued.
- 8.4.3 Uses a variety of cooking techniques, food preparation and production and delivery systems
- 9.4.6 Uses socially and culturally appropriate strategies in order to respect diverse cultures and values.





Nutritional Sciences Justice, Equity, Diversity, and Inclusion Committee Update

April marks a year since the Department of Nutritional Sciences Justice, Equity, Diversity and Inclusion (JEDI) Committee was formed. Over the past year, the responsibility of this committee has been to consider and recommend actions that can be taken by the department and the Interdepartmental Graduate Program in Nutritional Sciences (IGPNS) to improve the department's efforts surrounding justice, equity, diversity, and inclusion.

A diverse group of undergraduate and graduate students, instructional staff, nutritional sciences faculty, and faculty from other departments who are members of the IGPNS program, the committee has been working on a few key short- and longterm priorities surrounding community-building events, training and awareness, and hiring, recruiting and retaining a diverse faculty, staff, and student body.

Special thanks go to Dr. Adam Kuchnia for his leadership as chair of the JEDI committee this past year.



EARL'S PLACE

Earl S. Shrago, PhD was a well-known faculty and founding member of the Department of Nutritional Sciences. As a professor of Medicine and Nutritional Sciences, he worked at the University of Wisconsin-Madison for 37 years, greatly enhancing our reputation as an institution of higher learning. Even after his retirement, Earl still would come into his campus office almost every weekday. Earl passed away on January 14, 2021 at the age of 92.

It is our honor to keep his room in his memory.

Earl was a remarkable, caring person with a heartwarming way of connecting to people with a smile. In memory of Earl's contributions and friendliness to the department, Earl's room has been dedicated to his uplifting personality. The room is now officially "Earl's Place."

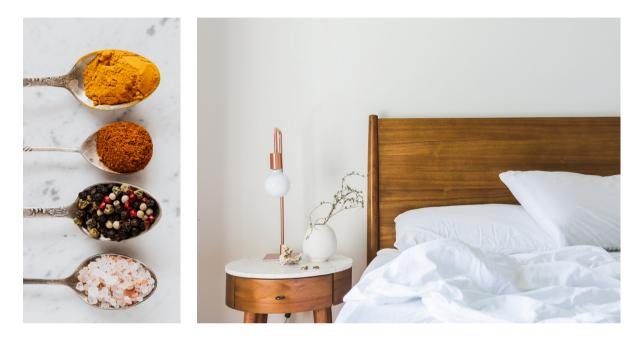


Reflecting on his heartwarming and caring personality, Earl's Place has become a safe space available for anyone in the department. The room now includes cozy chairs, puzzles, coloring books, and pictures to offer comfort and calmness for anyone who needs it. If you need a moment alone, Earl's Place will give you the opportunity to tune out your stressful work or school life and just relax.

Because of the department's thankfulness for Earl's faculty contributions and loving personality, it is our honor to keep his room in his memory. Thank you, Earl!

CALS News

UCHICAGO MEDICINE AND UW-MADISON RESEARCHERS SHOW GETTING MORE SLEEP REDUCES CALORIC INTAKE, GAME CHANGER FOR WEIGHT LOSS PROGRAMS



Note: This is a modified version of the original news release, changed with permission from the University of Chicago Medicine, the lead institution on the project.

A new study about how sleep affects caloric intake could change how people think about – and approach – weight loss. In a randomized clinical trial of 80 adults, a team of researchers from the University of Chicago Medicine and the University of Wisconsin–Madison found that overweight adults who increased their nightly sleep duration by about an hour reduced their daily caloric intake by an average of 270 calories, to the point where they were burning more calories than they were taking in overall.

The study's findings, published Feb. 7 in JAMA Internal Medicine, found that young, overweight adults who habitually slept fewer than 6.5 hours a night were able to increase their sleep duration by an average of 1.2 hours per night after a personalized sleep hygiene counseling session. The sleep intervention, which

was intended to extend time in bed duration to 8.5 hours, reduced participants' overall caloric intake by an average of 270 calories per day compared to controls.

"Over the years, we and others have shown that sleep restriction has an effect on appetite regulation that leads to increased food intake, and thus puts you at risk for weight gain over time," said lead investigator Esra Tasali, director of the UChicago Sleep Center at the University of Chicago Medicine. "More recently, the question that everyone was asking was, 'Well, if this is what happens with sleep loss, can we extend sleep and reverse some of these adverse outcomes?"

The new study not only examines the effects of sleep extension on caloric intake but, importantly, does so in a real-world setting, with no manipulation or control over participants' dietary habits. Participants slept in their own beds, tracked their sleep with wearable devices, and otherwise followed their normal lifestyle without any instructions on diet or exercise.

"Most other studies on this topic in labs are short-lived, for a couple of days, and food intake is measured by how much participants consume from an offered diet," said Tasali. "In our study, we only manipulated sleep, and had the participants eat whatever they wanted, with no food logging or anything else to track their nutrition by themselves."

Instead, to objectively track participants' caloric intake, investigators relied on the "doubly labeled water" method and change in energy stores. This urinebased test involves a person drinking water in which both the hydrogen and oxygen atoms have been replaced with less common, but naturally occurring, stable isotopes that are easy to trace. The use of this technique, which can measure every calorie burned over a one- to two-week interval, was pioneered in human subjects by the study's senior author **Dale A. Schoeller, professor emeritus of nutritional sciences at UW-Madison.**

"This is considered the gold standard for objectively measuring daily energy expenditure in a non-laboratory, real-world setting and it has changed the way human obesity is studied," said Schoeller.

Overall, individuals who increased their sleep duration were able to reduce their caloric intake by an average of 270 calories per day – which would translate to roughly 12 kg, or 26 lbs., of weight loss over three years if the effects were maintained over a long term.

Perhaps the most surprising aspect of the study was the intervention's simplicity. "We saw that after just a single sleep counseling session, participants could change their bedtime habits enough to lead to an increase in sleep duration," said Tasali. "We simply coached each individual on good sleep

CALS News

hygiene, and discussed their own personal sleep environments, providing tailored advice on changes they could make to improve their sleep duration. Importantly, to blind participants to sleep intervention, recruitment materials did not mention sleep intervention, allowing us to capture true habitual sleep patterns at baseline."

Even though the study did not systematically assess factors that may have influenced sleep behavior, "limiting the use of electronic devices before bedtime appeared as a key intervention," said Tasali.

Following just a single counseling session, participants increased their average sleep duration by over an hour a night. Despite prescribing no other lifestyle changes, most participants had a large decrease in how much they ate, with some participants eating as many as 500 fewer calories per day.

The subjects were only involved in the study for a total of four weeks, with two weeks for gathering baseline information about sleep and caloric intake, followed by two weeks to monitor the effects of the sleep intervention.

"This was not a weight-loss study," said Tasali. "But even within just two weeks, we have quantified evidence showing a decrease in caloric intake and a negative energy balance — caloric intake is less than calories burned. If healthy sleep habits are maintained over longer duration, this would lead to clinically important weight loss over time. Many people are working hard to find ways to decrease their caloric intake to lose weight — well, just by sleeping more, you may be able to reduce it substantially."

Ultimately, Tasali and her team hope to examine the underlying mechanisms that may explain these results, and believe this work should spur new, larger studies on weight control to determine if extending sleep can support weightloss programs and help prevent or reverse obesity.

"In our earlier work, we understood that sleep is important for appetite regulation," said Tasali. "Now we've shown that in real life, without making any other lifestyle changes, you can extend your sleep and eat fewer calories. This could really help people trying to lose weight."

The study, "Effect of Sleep Extension on Objectively Assessed Energy Intake Among Adults with Overweight in Real-Life Settings," was supported by the National Institutes of Health and the Diabetes Research and Training Center at UChicago (R01DK100426, CTSA-UL1 TR0002389, and ULTR002389). Additional authors include Kristen Wroblewski, Eva Kahn, and Jennifer Kilkus of UChicago and Dale A. Schoeller of the University of Wisconsin–Madison.





1.What originally inhabited the Nutritional Sciences Building?

- A. Wisconsin Historical Society
- B. Orthopedic Hospital
- C. Chancellor's Mansion
- D. Madison Funeral Home

2.Our Online Masters in Clinical Nutrition Program is ranked number 3 overall in the nation. 3.Which president's generous family donation allowed for a 3rd wing addition of laboratories?

A. Barack Obama B. George W. Bush C. John F. Kennedy D. Franklin D.Roosevelt

True/False?



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We welcome any questions or comments, please direct them to: editor Madelaine Triebold, student-staff@nutrisci.wisc.edu

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