

Center on Aging

Fall 2021 | musc.edu/aging

06 Have you heard of advanced glycation end products or AGEs? If not you will want to read about how they affect our health and what we can do to avoid them. Dr. David Turner, the latest recipient of the Center on Aging Pilot Grant, explains what you should know.

Fall | 2021



INSIDE:

- 02 Holiday Harvest Gala
- 03 OTD Students
- 04 Garden Project
- 05 Denture Technology
- 06 AGEs

For questions or comments about the Center on Aging Newsletter contact:
Kelly Franklin
Administrative Coordinator
dillonk@musc.edu

CoA Continues to Help Feed Seniors

The MUSC Center on Aging is once again excited to sponsor the 5th Annual Holiday Harvest Gala to support the Meals on Wheels of Charleston. This year it will be held on November 19th from 6:00 – 10:00 pm in the Cooper River Room at Mt. Pleasant's Memorial Waterfront Park.

Since 2016, the **Lowcountry Senior Network (LSN)** has organized the Holiday Harvest Gala and has raised nearly \$56,000, helping the program provide meal delivery services to 700 seniors PER DAY in the Charleston area. This fundraising event was conceived by members of LSN – the Lowcountry's premier networking organization committed to providing quality services to seniors, caregivers, and adult children – as a response to the staggering number of individuals in the area that were on a waiting list to receive Meals on Wheels services. Even as the pandemic rolls on, meal deliveries have continued without interruption despite uncertain times, and LSN wants to ensure that they will be sustained.

Meals on Wheels of Charleston, a Charleston Area Senior Citizens (CASC) program, not only provides a nutritious meal, but also a friendly visit and a safety check that helps keep over 700 seniors living independently in their own homes from the Cooper River to the Edisto. Funds raised by the gala directly allow the program to continue these services as the need continues to grow.

Event tickets are intentionally priced at \$55, which allows one couple (\$110) to feed a Meals on Wheels client for an entire month. Tickets include live music from Not So Serious, open bar, a raffle ticket to enter to win from an assortment of custom gift baskets, silent auction items, and the breathtaking views of the Cooper River Bridge from the venue. The heart of this fundraiser is centered around feeding people, and we are already hungry thinking about the rosemary bone in chicken with Dijon thyme sauce, braised short ribs with red wine demi glaze, grilled assorted vegetables, including rainbow carrots, Brussel sprouts, squash & zucchini with a fig balsamic glaze – just to name a few tasty options.

For tickets, visit: www.LowcountrySN.com



Pairing Older Adult Volunteers with Occupational Therapy Doctoral Students: A win-win for all!

As a part of their Topics in Aging coursework, MUSC's second-year Occupational Therapy Doctoral (OTD) students were fortunate to be paired with volunteers in the community, most of which are mentors associated with the University's Senior Mentor Program, for an interactive learning assignment.

The assignment was designed to develop interview skills and rapport-building, increase the student's awareness of issues relevant to older adults, and to promote reflection. Each student met via Zoom with their assigned volunteer. Using structured assessments and a provided template, the students interviewed the participants and administered assigned assessments. While the experience was structured, the students and volunteers were able to engage in the natural flow of conversation and connect with one another on a level that facilitated rapport-building.

The outcomes of the learning experience were exactly what we had hoped for! The OTD students gained skills, experienced "Aha" moments and of utmost importance, their lives and learning were enriched through their interactions with the volunteers. Not surprisingly, the volunteers enjoyed engaging with the OTD students and found meaning in the experience as well.

Here is what the participants had to say:

"They showed an eager interest in me, and I was grateful to have this opportunity! We even talked about meeting for coffee... just for fun!"

- A.W. (Volunteer)

"I felt very comfortable with the student. She was so easy to talk to. I felt like I had always known her! I hope that I helped her learn about aging. Her questions helped me think about my activity level in a different way."

- J. S. (Volunteer)

"As a result of these learning experiences, my conversations with J were most meaningful to me. I feel like we connected at the beginning of the interview by identifying things that we have in common. J. is a tremendous woman and our time together left me feeling uplifted, inspired, and encouraged. My biggest takeaway from this experience was that everyone has an interesting and unique story and if you prioritize the time and energy, you have the potential to learn a lot from their words and experiences."

- C. (Student)

"I think the most meaningful part of these learning experiences was having the opportunity to meet and engage with those who are aging. I was able to learn much more than I could imagine. I was able to learn from each conversation I had about life, aging, and all the in-between. The things I've learned in the last three weeks have greatly impacted my life for the better".

- F. (Student)

The OTD faculty, and our community volunteers, are looking forward to the interactive experience again next summer. We hope that you will consider joining us as well!

If you are interested in volunteering to work with the OTD students, contact:

Joy Crawford, OTD, MSRS, OTR/L
 Assistant Professor, Division of Occupational Therapy
 College of Rehabilitation Sciences
 Email: crawfore@musc.edu
<https://chp.musc.edu/academics/occupational-therapy>



Senior Mentor Program Calendar + Upcoming Events

GOT PLAN(T)S? FOR NOVEMBER 20TH?

MUSC family medicine interest group (FMIG) is partnering with The Villages at Summerville to cultivate a wellness garden for the residents to enjoy year round!

We need YOUR help to make it happen!

who: All vaccinated individuals are welcome & refreshments will be provided!!!

when: November 20th from 10am-12pm

contact: Mahvash Husain at husainm@musc.edu



This student project is operating on a small budget so in addition to volunteers, they are also seeking donations of compost, soil, seed, fertilizer, etc.

If you are interested in donating or volunteering please contact
Mahvash Husain at husainm@musc.edu

Denture Replacement 2.0

“I received a call from the senior care facility where my mother resides and was informed that her dentures were missing. I was reminded that new dentures require 4 to 6 dentist visits, take 5 to 8 weeks, and cost over \$1,500. The cost was challenging, but more concerning was my mother’s health. The last time she lost her dentures, she went without a set for two months and her nutrition intake and health deteriorated tremendously.”

The traditional denture replacement method is a burden to seniors and their caregivers due to the high costs and inconvenience. Out of 36 million Americans without natural teeth, it is not surprising that millions of people suffer with old or ill-fitting dentures.

According to the American Dental Association, good denture care and prompt replacement of ill-fitting or missing dentures have a significant impact on overall health. Dentures should be replaced every 5 years. The older the dentures are, the higher risk of oral bacterial infections, mouth sores, and gum disease. Over time, dentures also can become loose due to gum ridge shrinkage, which can irritate gums, impact speech, and create eating difficulties. Failure to maintain denture health can pose secondary health risks, like periodontal, metabolic, nutritional problems, and systemic inflammatory issues.

To prevent such health risks, dentures need to be cleaned properly after eating and upon removal at night. Dentures should be replaced every 5 years or when they no longer fit. Periods without dentures should not be greater than 1 week.



To help solve the problem of replacing dentures, Denture Care Shop created a new way that reduces the cost, time, and inconveniences. Using advanced 3D scanning and printing technology, Denture Care Shop provides new replacement dentures for \$300 or \$350 per plate in 1 week after 1 friendly visit to their North Charleston shop.

“We are changing the industry and ensuring that high-quality dentures are more accessible than ever before. Everyone deserves to be proud of his/her smile,” says Adam Bielsky, co-founder of DentureCare LLC.

Patients arrive to the shop for a free consultation, and only pay if they decide to purchase new dentures. Their existing dentures are scanned, customized with 3D design techniques, and printed using medical-grade, FDA-approved resins within 1 week. The digital records are kept on file so that anytime new dentures are needed, they can be delivered in 1 week. “We wanted it to be possible for everyone to have backup dentures at home, just as you would have spare reading glasses,” says Bielsky.

Denture Care Shop also partners with senior care operators to provide convenience to their residents. 3D scanning of dentures is done on-site at the facility and spare dentures are delivered quickly.

“Since launching in April 2021, the Denture Care Shop has delivered hundreds of replacement dentures, and we’re ecstatic about how happy our customers have been. There have been a lot of happy tears and hugs,” says Steven Kleiman, co-founder of DentureCare LLC.

To learn more about the Denture Care Shop or their senior care partnerships, visit www.DentureCareShop.com or call 843-400-3042.

Research: Nutrition can eat at your lifespan

Have you heard of advanced glycation end products or AGEs? Not many people have but they are part of our everyday lives and are a known contributor to the aging process and its associated chronic diseases.

The **MUSC Center on Aging** recently funded a pilot research proposal that examines the impact of these little heard of group nutrition associated metabolites on the aging process.

The lead investigator, **Dr. David P. Turner** explains, AGEs are created in the body as we break down nutrients to provide the energy required for our bodies to function. In a process known as glycation, AGEs form in the body via a series of chemical reactions that occur when sugar comes into contact with our proteins, fats and DNA.

As we grow older, AGEs attach to our tissues and organs which causes them not to work as well as they used to, sound familiar? For example, AGEs attach to the protein collagen in the skin which over time contributes to wrinkle formation. If you can imagine the same thing happening to all your tissues and organs, that's the damage AGEs can cause. Indeed, high AGE levels in the body is associated with most chronic conditions associated with growing older including cardiovascular disease, cancer, diabetes, osteoporosis, as well as neurodegenerative disorders.

Dr. Turner's concern is that due to the excessive consumption of high fat, high sugar, and highly processed food, we are now consuming ever increasing amounts of AGEs as part of a modern diet. Even the way we cook our foods can increase the amount of AGEs it contains. This is because the high dry heat associated with grilling,

broiling and frying, causes the glycation reaction to occur much more quickly. It is estimated that for every 10 degree increase in heat you double the AGE content in the food.

Dr. Turner's study proposes to use state of the art technologies and experimental models to examine if the high levels of AGEs we consume each day can accelerate the aging process to promote chronic diseases. Based upon what is known about the AGEs that occur naturally in the body, he will examine the effects of AGE consumption on tissue inflammation and how that causes

the tissues functional decline to accelerate the aging process.

Dr. Turner believes that if we are now consuming more of these AGEs which are known to be involved in the aging process then it follows that they may be contributing to the chronic conditions associated with growing older.

If successful, this study will lay a foundation for future studies. If AGEs accelerate aging by increasing

inflammation in our tissue and organs, then education, lifestyle intervention, and therapeutic strategies aimed at reducing our exposure to nutritional AGEs may become a standard practice in the prevention and treatment of many chronic conditions.

By reducing our exposure to AGEs associated with nutrition we may delay the onset or reduce the severity of chronic conditions associated with growing older, but what can we do? Dr. Turner says while you cannot avoid our exposure to AGEs completely, you can adopt certain habits when making food choices.



Reduce AGEs with increased consumption of natural grains, vegetables, and fruits.

Healthy habits to reduce exposure to AGEs

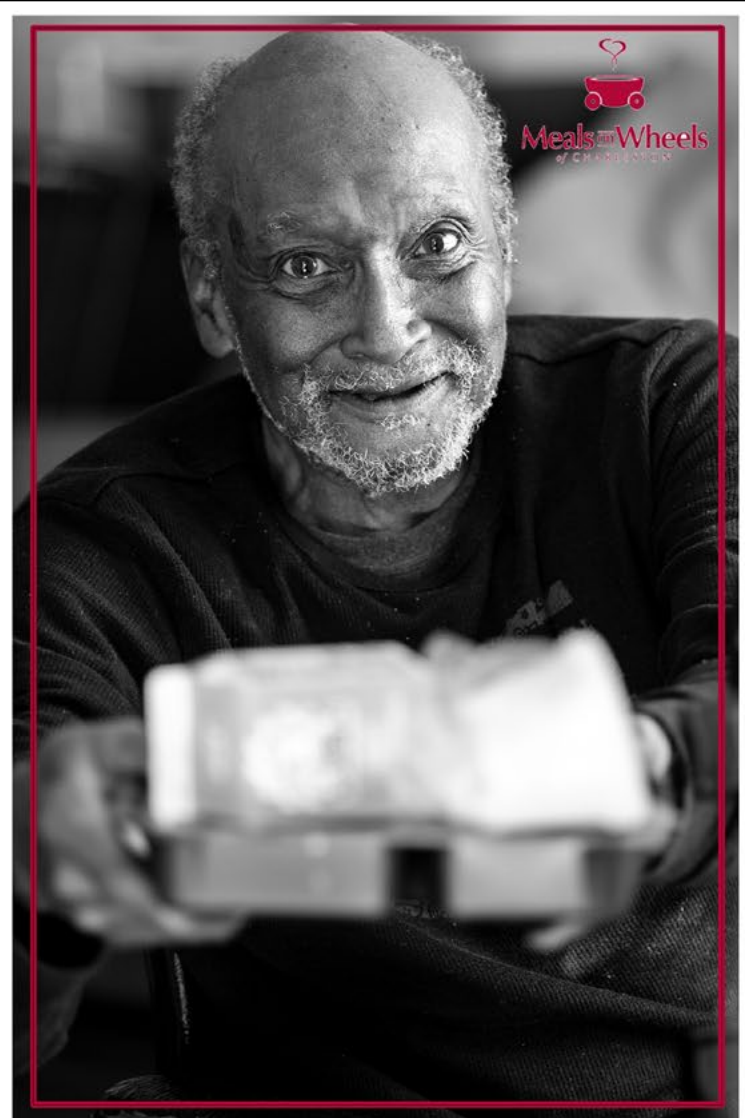
- Avoid/cut down on foods high in protein, sugar and fat as well as processed foods
- Increase intake of natural grains, vegetables and fruits
- Substitute high-sugar, oil-based marinades with lemon juice, vinegar, and tomato juice and experiment with different spices and rubs for enhanced flavor

Change how we cook foods:

- Cook foods at lower temperatures for longer periods of time (slow cookers are great for lowering AGEs and maintaining flavor)
- Cook over ceramic surfaces instead of metal, which will lower AGE formation during cooking
- Use a food thermometer to ensure you don't overcook meats
- When preparing dishes that call for browning meat, such as stews or roasts, skip the browning step

For further information visit The Anti-A.G.E. Foundation at: <https://anti-ages.org/>

Also be sure to check out Dr. Turner's TEDx talk at: <https://www.youtube.com/watch?v=LvwMXqyrKG0>



FIFTH ANNUAL
Holiday Harvest Gala
Lowcountry Senior Network

November 19th (6-10pm)
Cooper River Room, Mt. Pleasant

A fundraising event to benefit
Charleston Area Meals on Wheels
Tickets: LowcountrySN.com



280 Calhoun Street, MSC 142
Charleston, SC 29425
Phone 843-792-0712
Email dillonk@musc.edu

MUSC Center on Aging
musc.edu/aging

THE MEDICAL UNIVERSITY OF SOUTH CAROLINA

Founded in 1824 in Charleston, The Medical University of South Carolina is the oldest medical school in the South. Today, MUSC continues the tradition of excellence in education, research, and patient care. MUSC educates and trains more than 3,000 students and residents, and has nearly 13,000 employees, including approximately 1,500 faculty members.

The Center on Aging is a research, service, and education center at the Medical University of South Carolina. The center was approved by the South Carolina Commission on Higher Education December 3, 1987, giving it the status of the oldest research center at the University.

Under the leadership of Interim Director, Dr. Heather Boger, the Center on Aging is committed to promoting health, longevity and improving the quality of life for South Carolina's seniors.

Changing What's Possible