October 2018

Boomers, Elders, and More E-Newsletter

200 Appleton Place
Nashville, TN 37212
https://www.vanderbilt.edu/child-family-center/services/

Message from the Director of the Vanderbilt Child & Family Center

I appreciate your understanding in allowing the Vanderbilt Child & Family Center time to assess our Elder Care support activities. VCFC will continue ongoing evaluation to understand the express needs of the Vanderbilt University community, and our role in supporting VU employees to manage work-life balance. I am grateful to Stacey Bonner for her generosity in sharing her expertise, and her ongoing outreach and support of our VU Elder Care community.

I am pleased to announce that VCFC has hired Alice Shi as our new Family Services Coordinator. Alice earned her MS in Family and Child studies from Texas State and graduated cum laude with her BS in Child Development: Medicine, Health & Society from Vanderbilt University. She onboards this month and will be coordinating activities throughout this year.

Sincerely,

Kathleen Seabolt, M.Ed

If you need information or resources to assist you in your caregiving role, contact Alice Shi, Family Services Coordinator, at alice.shi@vanderbilt.edu.

Greetings to my new Vanderbilt family! My name is Alice Shi and I am pleased to introduce myself to you as the new Family Services Coordinator for the Vanderbilt Child & Family Center. As a Vanderbilt alum, I am passionate about fostering a community that cares deeply for each other and will go above and beyond to help solve challenges and overcome barriers we may face while striving to find a balance between work and life.

In my professional career, I trained and worked as a certified child life specialist at several pediatric hospitals helping patients and families navigate the stress and anxiety that comes with medical experiences. I am excited to transition into this role, as the Family Services Coordinator, where I can have a more community-minded and resource-focused opportunity to be an advocate and source of help to you as a caregiver and a parent.

One of my goals for the coming months is to use my "newness" to the community as a way to analyze and gather information on current and additional services VCFC can offer. These services include events and services such as:

- A monthly Caregiver Support Group
- A monthly Lunch & Learn Speaker Series on various topics related to Elder Care
- The annual Summer Camp Fair
- Maintaining inventory and access to Lactation Rooms across campus to support women and their return to work.
- Consultations and assistance to faculty, staff, and students looking for community resources or assistance.

My role as the Family Services Coordinator is to serve and care for you - the Vanderbilt community. So I'd love to hear from you and get your thoughts and suggestions! If you would like to join the support group or attend a Lunch & Learn, what days and times of the week work for you? What kind of resources do you need help locating? Any questions, comments, or concerns are welcomed. Please do not hesitate to reach me at Alice.Shi@Vanderbilt.edu.

I look forward to meeting many of you in the months to come!

Sincerely,

Alice Shi

NEWS HIGHLIGHT

Study provides robust evidence of sex differences with Alzheimer's gene

vanderbi.lt/efoc8

May. 7, 2018, 3:10 PM

The *APOE* gene, the strongest genetic risk factor for Alzheimer's disease, may play a more prominent role in disease development among women than men, according to new research from the Vanderbilt Memory and Alzheimer's Center.

The research confirmed recent studies that carrying the *APOE* ε4 allele has a greater association with Alzheimer's disease among women compared to men, and went one step further by evaluating its association with amyloid and tau levels.

The study published May 7 in *JAMA Neurology* adds to mounting evidence that the higher prevalence of Alzheimer's disease among women may not simply be a consequence of living longer.

Almost two-thirds of Americans with Alzheimer's are women. The research, based on a meta-analysis of both cerebral spinal fluid (CSF) samples from study volunteers from four datasets and autopsy findings from six datasets of Alzheimer-diseased brains, is the most robust evidence to date that the *APOE* gene may play a greater role in women than men in developing Alzheimer's pathology, said Timothy Hohman, PhD, assistant professor of Neurology and the study's lead author.

"In Alzheimer's disease, we have not done enough to evaluate whether or not sex is a contributing factor to the neuropathology," Hohman said. "We haven't fully evaluated sex as a biological variable. But there is good reason to expect in older adulthood that there would be hormonal differences between the sexes that could impact disease."

The study looked at whether *APOE* in men and women was primarily associated with the amyloid pathway — the proteins that form plaques in the brain — or with the tau pathway — the proteins that form tangles in the brain.

The association with the amyloid pathway was the same in men and women. However, the *APOE* association was much greater for women with the tau pathway. This is opposite of what researchers expected because of APOE's established role in amyloid processing.

"The prevailing hypothesis of disease in Alzheimer's is that amyloid comes online first and downstream is where we see tau changes that ultimately drive neurodegenerative changes," Hohman said.

Further analysis revealed that the sex difference with tau levels was present in amyloid-positive individuals — those with higher levels of amyloid plaque as determined by their CSF amyloid levels. The research suggests that *APOE* may modulate risk for neurodegeneration in a sex-specific manner, particularly in the presence of amyloidosis.

The greater association with tau occurred in CSF samples, but not with the autopsy datasets.

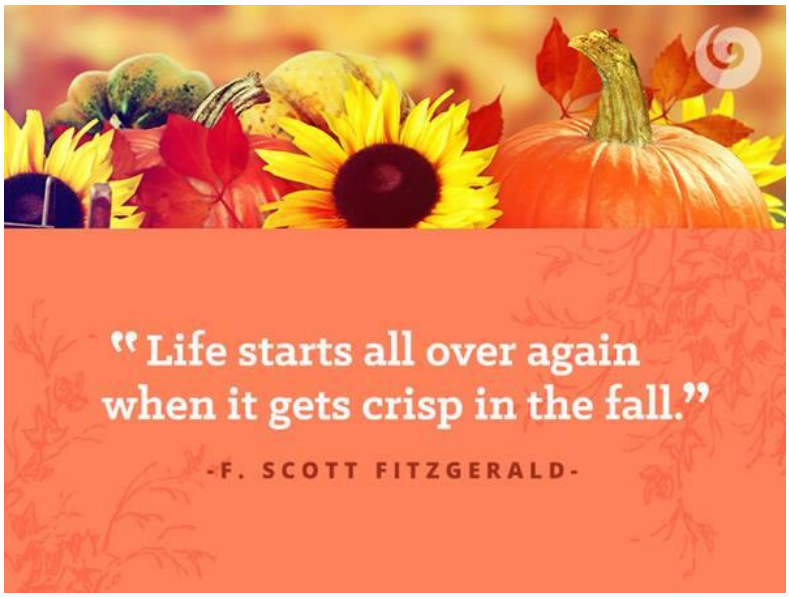
The reason for the contradiction between CSF samples and autopsy datasets could be because Braak staging — the method for quantifying the degree of tau tangle pathology at autopsy — measures a different aspect of tau pathology than what is measured in CSF .

“The way Braak staging works is you are actually looking at where in the cortex you see tangles at autopsy,” Hohman explained. “So it is not a measure of how many tangles are there. It is a measure of where those tangles are located.”

Another possibility is that CSF tau may be an indicator of a more general neurodegenerative process that is not specific to tangle pathology.

“This study is at least moving toward bringing sex as a biological variable into our analyses and thinking about sex differences. Do we see differences in disease that could tell us something about the biology of the disease and could help both sexes in terms of coming up with treatment approaches? I think that the right treatment approach for a female above the age of 65 may end up being different than what it is for a male. Really the only way to find out is to look.”

The research was supported by the National Institutes of Health, the Alzheimer’s Disease Genetics Consortium (funded by the National Institute on Aging) and the Vanderbilt Memory and Alzheimer’s Center.



Research links heart function to brain's memory center

Nov. 8, 2017, 3:01 PM

Research by a team of Vanderbilt University Medical Center (VUMC) scientists suggests that older people whose hearts pump less blood have blood flow reductions in the temporal lobe regions of the brain, where Alzheimer's pathology first begins.

The brain, which accounts for only 2 percent of total body weight, typically receives 12 percent of blood flow from the heart — a level maintained by complex, automatic processes, which maintain consistent blood flow to the brain at all times.

> Angela Jefferson, Ph.D.

Angela Jefferson, Ph.D., director of the Vanderbilt Memory and Alzheimer's Center, and colleagues investigated whether lower cardiac index (the amount of blood flowing out of the heart adjusted for body size) correlated with lower blood flow to the brain.

The purpose of the study was to better understand whether reductions in brain blood flow might explain clinical observations in prior research that have linked heart function to cognitive impairment, Alzheimer's disease and dementia.

"We currently know a lot about how to prevent and medically manage many forms of heart disease, but we do not yet know how to prevent or treat Alzheimer's disease," Jefferson said.
"This research is especially important because it may help us leverage our knowledge about managing heart health to address and treat risk factors for memory loss in older adults before cognitive symptoms develop."

The study, published online in *Neurology* Nov. 8, involved 314 Vanderbilt Memory and Aging Project participants with an average age of 73. Thirty-nine percent had mild cognitive impairment, a condition that increases the risk of developing Alzheimer's disease or dementia, while the remaining participants had normal cognitive function.

Cardiac index was measured with echocardiography, and blood flow in the brain was measured with magnetic resonance imaging (MRI).

The magnitude of the association between lower cardiac index and lower cerebral blood flow in the temporal lobe, a brain region critical for memory processing, was estimated to correspond to 15 to 20 years of advancing age.

"One way to put these results into a meaningful context is to define how one year of aging relates to blood flow in the brain," Jefferson said. "Then, we compare the effect of one year of aging to the effect of lower cardiac index. When we do that, we find that the effect of cardiac index on blood flow in the temporal lobes corresponds to 15 to 20 years of age."

The individuals who participated in the research are part of a longitudinal study that will continue to track their health and cognitive abilities.

The study raises questions about whether autoregulation of blood flow in the brain is less effective as people age, Jefferson said, as well as the greater role that vascular health may play in exacerbating Alzheimer's pathology or clinical symptoms of dementia.

"It is now clear from a growing body of research evidence that there is a strong connection between heart health and brain health," said Maria Carrillo, Ph.D., chief science officer of the Alzheimer's Association, which helped fund the study.

"We are pleased to have provided the initial seed funding for this intriguing science that is beginning to identify and investigate the mechanisms behind that connection. Those mechanisms, once confirmed, may hold the key to effective treatments and prevention strategies for Alzheimer's disease and other dementias."

Jefferson is the lead author of the study with 13 Vanderbilt colleagues as co-authors from neurology, radiology and radiological sciences, cardiovascular medicine, geriatrics and biostatistics.

The study was funded by the Alzheimer's Association, the National Institute on Aging, National Institute of Neurological Disorders and Stroke, American Heart Association, Paul B. Beeson Career Development Award in Aging, Vanderbilt Clinical Translational Science Award and the Vanderbilt Memory and Alzheimer's Center.

VCFC UPCOMING EVENTS

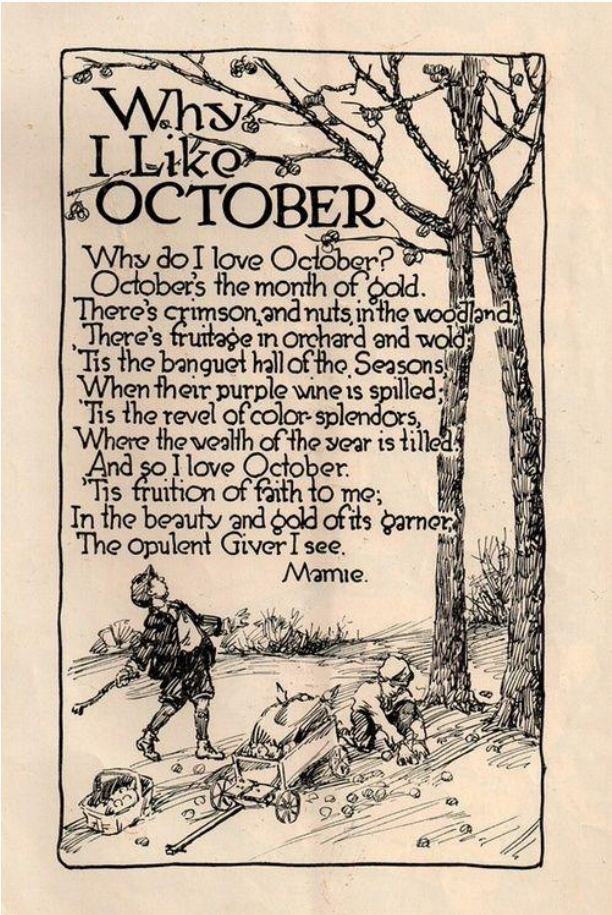
November

Vanderbilt Family Resource Center's Caregiver Support group will be held on Wednesday, November 14, 2018 from 12 p.m. to 1 p.m. in Light Hall, Room 437

November

Boomers, Elders, and More Lunchtime session will be held on Wednesday, November 28, 2018 from 12 p.m. to 1 p.m. in Light Hall, Room 411

The caregiver support group is a time to share information and openly discuss your problems without judgment, to process your feelings, and to hear others talk about their expectations.



If you have a loved one living with Alzheimer's disease and you are feeling a little nervous about how they will react on Halloween, then follow these 9 tips to reduce stress, anxiety and confusion in your loved one.

1. Keep decorations to a minimum. Decorations that change the look of the house may lead to anxiety and confusion.
2. Avoid the scary Halloween doormat. If it scares a 6-year-old, it will scare a person with dementia.
3. Don't put out a fake cemetery and hanging goblins in the front yard. Decorations may get you in the holiday spirit but don't be surprised when your loved one refuses to walk in or out of the house.
4. Avoid night time use of flashlights, candles and light-up pumpkins. A person with dementia will have visual perception changes and the eerie glow that they cast can lead to high anxiety.
5. Stay away from the malls while the little ghosts and goblins are trick or treating. It may be a safer way for the kids to enjoy the holiday but for a person with dementia it will just add to the confusion and anxiety.
6. Put the candy in a safe place. Avoid leaving the treats by the front door. Your loved one with dementia may not know that he/she has dietary restrictions. Save yourself a trip to the hospital and lock the candy in a safe place.
7. Keep furniture in its place. Consequently, your loved one will not become confused or even worse, bump into things and fall. Alzheimer's affects balance and perception. Watch out for low-lying candles! It's always easier to prevent than to treat.
8. Avoid rigging up strange sounds like ghostly laughter or creaking doors. Avoid these because they bombard people with too much stimuli.
9. Let neighbors know that candy will be placed outside the door. So that children will not keep ringing the doorbell and frightening your loved one. Or put up a note on the door with instructions for trick or treaters.

Halloween can be tweaked and personalized to communicate a meaningful updated ritual. Both you and your loved one will enjoy the current anticipation as you tap into a positive memory of past celebrations. Make decorations together to maximize the occasion. Art therapy provides positive stimulation and creative self-expression. And while you are coloring and pasting, play music in the background, preferably from your loved one's time period, for happiness synergy.

https://alzheimerscareresourcecenter.com/alzheimers-halloween-9-tips-to-make-it-less-frightening/