

Cognitive Aging and Optimizing Cognitive Health

Applications from the [GSA KAER Toolkit for Primary Care Teams](#)

GSA Momentum Discussions Podcast from The Gerontological Society of America

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Host:

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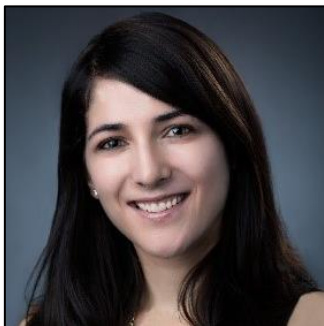
Guests:

Allison Brashear, MD, MBA

Vice President for Health Sciences

Dean, Jacobs School of Medicine and Biomedical Sciences

University of Buffalo



Angelika Schlanger, PhD

Executive Director, McKnight Brain Research Foundation

Jen Pettis:

Welcome to this GSA Momentum Discussion Podcast titled, *Cognitive Aging and Optimizing Cognitive Health*. Momentum Discussions highlight topics experiencing great momentum in the field of gerontology. We're grateful to Genentech, Lilly, Eisai, and Otsuka for their support of the GSA KAER Toolkit for Brain Health and today's podcast episode. My name is Jen Pettis, and I'm the Director of Strategic Alliances at The Gerontological Society of America or GSA. I'm pleased to serve as the host for today's Momentum Discussion. I'm delighted to be joined by two guests for this podcast episode, Drs. Angelika Schlanger and Allison Brashear. Dr. Schlanger serves as the Executive Director of the McKnight Brain Research Foundation, whose specific goal is to better understand and alleviate age-related cognitive decline in memory loss. Dr. Brashear is an NIH-funded neurologist. She serves on the Board of Trustees for the Foundation and is the University at Buffalo's Vice President for Health Service Health Sciences, and Dean of the Jacobs School of Medicine and Biomedical Sciences. Dr. Schlanger and Dr. Brashear, thank you for taking time out of your busy schedules to share some of the insights into cognitive aging and optimizing cognitive health.

Dr. Angelika Schlanger:

Thank you, Jen. I'm really excited to be here and participate in this conversation with you and Dr. Brashear.

Dr. Allison Brashear

Thank you, Jen. This is exciting. We're looking forward to a great discussion.

Jen Pettis:

We're starting to hear about how important it is to take steps to promote brain health, yet in the title of the podcast episode we refer to cognitive health. Dr. Brashear, from your perspective, what do you see as the key differences between brain health and cognitive health? Does one term seem to resonate better with patients and others?

Dr. Allison Brashear:

We think cognitive health is one aspect of overall brain health. It's really your ability to think clearly, learn, and remember; it's an important component of everyday activities. Brain health is how well your brain functions across several areas including how well you think, which is cognition, how you think clearly learn and remember, your motor function or how you move and control your body, including balance, which is important in aging. It also includes your emotional function or how you interpret and respond to emotions, and, of course, that suggests wellness. Tactile functions are how well you feel and respond. These refer to physical senses like pleasure, pain, temperature. We tend to find that brain health resonates better with patients as it's a broader term, and most people are interested in keeping their brain healthy as a way to stay sharp as they age.

Jen Pettis:

Dr. Schlanger, let's turn to you now and ask if you could share about cognitive aging, including whether cognitive aging is something we can prevent.

Dr. Angelika Schlanger:

Cognitive aging is a natural process that starts at birth and continues throughout the lifespan. It's a normal part of getting older, which includes subtle changes that happen to your brain as you age. Some things improve with age like wisdom and expertise, but there are other abilities like processing, speed, decision making, and some types of memory that may decline with age. While you can't prevent your brain from getting older, there are steps that you can take to maintain your brain and cognitive health later in life. The good news is that these are the same strategies that contribute to an overall healthy lifestyle, like getting enough sleep, exercising regularly, eating a healthy diet, staying engaged socially and intellectually, and managing your risk factors for cardiovascular disease.

Jen Pettis:

Dr. Brashear, how do changes associated with normal cognitive aging differ from changes in cognitive function due to mild cognitive impairment or dementia?

Dr. Allison Brashear:

Many adults worry about changes in their memory and their thinking abilities. Usually, these changes are associated with mild forgetfulness or normal changes in the brain that occur with aging. Symptoms vary from person to person, and what is normal for one person may not be normal for another. Signs of normal aging include making a bad decision occasionally, or missing an odd monthly payment, losing track of time, not being able to find the right word, and losing your keys around the house. In comparison, signs of a memory problem like mild cognitive impairment or dementia can make it harder to complete everyday tasks. These could include asking the same question repeatedly or getting lost in familiar places. We frequently see this as an issue with driving regarding not being able to follow directions or instructions or being confused about time, people, and places.

Jen Pettis:

In follow up, Dr. Brashear, what steps can someone take to optimize their cognitive health and overall brain health, regardless of their age? Dr. Schlanger referred to a few but what are some other steps you might recommend?

Dr. Allison Brashear:

As Dr. Schlanger said earlier, the steps to optimize your cognitive and brain health are really the same things that help keep you overall healthy, like diet, exercise, and sleep. But we also recommend a couple of other important things. Getting routine medical care and making sure that your body is functioning at its best and managing your blood pressure, weight, and cholesterol to reduce and manage your risk for cardiovascular diseases. Talking with your family members or a medical professional about any changes you notice with your memory, staying socially and intellectually engaged, such as by working on crossword puzzles and online games you can play on your phone, trying new things, and challenging your brain to make new brain connections. It is important to manage stress and seek medical attention for any symptoms of depression, anxiety, or other mental health concerns.

Jen Pettis:

Many of the activities we can do to keep our heart healthy will keep our brain healthy too. I'd like to hear from both of you about ongoing research. Dr. Schlanger, tell us some of the current research underway around age-related cognitive decline, especially across the McKnight Brain Institutes that are funded by the Foundation. Dr. Brashear, we'd also love to hear from you about the research happening at the University of Buffalo. I'll invite you both to share what's happening out there.

Dr. Angelika Schlanger:

There is a lot of exciting research happening in the field of cognitive aging. I thought it might be helpful to first share a little bit about the Foundation and how it has championed the field of cognitive aging, and then give some examples of current research that's underway. Since 1999 the McKnight Brain Research Foundation has funded more than \$180 million in research, specifically targeting cognitive aging, age-related cognitive decline, and memory loss. These investments have been made through direct contributions and strategic initiatives in partnership with our four McKnight Brain Institutes, as well as the National Institute on Aging, the Foundation for the National Institutes of Health, and other important partners. Through these investments and initiatives, we've elevated the topic of cognitive aging as part of our national dialogue and help to differentiate the field of cognitive aging from neurodegenerative diseases.

The McKnight Foundation's history is extensive and includes [national summits](#) and a [report published by the National Academies of Medicine](#). I encourage anyone looking to learn more to visit our website on McKnightbrain.org. I would love to share some of those innovative research projects from the Institutes that I think your listeners may enjoy learning about. We have four McKnight Brain Institutes at the University of Alabama at Birmingham, the University of Arizona, the University of Florida, and the University of Miami. Collectively, they include several hundred researchers who collaborate to translate basic science into clinical applications that can help delay and ameliorate cognitive decline across the population. One example of an exciting research project happening at the Institute level is called the [Precision Aging Network](#). This is a \$60 million NIH-funded initiative led by our McKnight Brain Institute at the University of Arizona, in partnership with our Institute at the University of Miami and other collaborators.

The Foundation provided seed funding for the project, which takes a precision medicine approach to personalize solutions and plans that can help individuals optimize their brain health. We're looking to attract 1 million participants across diverse populations. What makes this effort quite different is that anyone interested in participating can start by taking an online memory test at mindcrowd.org. You get your test results instantly, and then you can also learn about how to participate in the research project from the website.

Another exciting example of research underway is the [Brain Health Advocacy Mission](#), which is led by our McKnight Brain Institute at the University of Alabama. This is a pilot program where patients coming into two local clinics for their annual wellness visit are connected with a nurse investigator who helps them identify lifestyle modifications that they can make to benefit their brain and overall health. The nurse follows up with the patient and provides support and measures the individual's positive improvements over time. What's unique here is that it integrates brain health education and coaching into the primary care setting. Finally, at the University of Florida, one of many innovative studies underway is called Augmenting Clinical Training in Older Adults (or ACT). This is a study that follows 360 adults, and it pairs Transcranial Direct Current Stimulation (or tDCS) with cognitive training exercises to help the participants improve their working memory and processing speed. We're really excited to see the outcomes of this cutting-edge research. Finally, the University of Florida also has researchers exploring diet-based interventions like following a ketogenic diet to see if it can improve cognitive outcomes in older adults. I've offered some snapshots of the research happening across our four Institutes, and I'll turn it over to you, Dr. Brashear, to share about some of the initiatives happening at the University of Buffalo.

Dr. Allison Brashear:

Separate from the research from the Foundation, at the University of Buffalo, we are exploring ways to prevent delay or slow cognitive related decline, including Alzheimer's disease. It's a high priority for us here at the University of Buffalo. We have an aging population, and we're really putting a big focus on studying the aging brain. We are exploring the link between infectious diseases and Alzheimer's disease. We're looking at new drugs to slow disease progression and onset. We're also looking at combined movement and art therapy to preserve physical and cognitive function. We're committed to expanding the depth and breadth of our aging program across all the schools at the University of Buffalo to improve the health of our patients in Western New York. It's an exciting time for research in cognitive decline. These and other efforts are really helping us understand the aging brain and the steps that we can take to support our cognitive health for as long as possible.

Jen Pettis:

There is great research and the diversity of all the work that you're conducting among the Institutes and there at the University of Buffalo is incredible. I'd like to spend our last few minutes together talking about two key areas that you mentioned, and that's diet and physical activity. While recognizing that individuals should consult with their healthcare provider to determine specific exercise and diet plans that best meet their needs, please share some general recommendations around diet and physical activity that individuals may consider for optimizing their brain health. Dr. Schlanger, please share some recommendations from the Foundation around physical activity.

Dr. Angelika Schlanger:

Physical activity is an important part of an overall body wellness plan, and it's also associated with a lower risk of cognitive decline. We strongly encourage individuals to speak with their healthcare professional before starting any new exercise routine. It's thought that cardiovascular exercise, which elevates the heart rate, helps to increase blood flow to the brain and body, and it has been found to be more beneficial to cognitive health than non-aerobic stretching and toning exercises. Aiming to move for about 30 minutes, about five days a week is shown to be most beneficial. But short bursts of exercise, even 10, 15 minutes a day can have a positive impact. Current research does suggest that several types of movement like walking, dancing, tai chi, yoga, and high-intensity interval training all have unique benefits for the brain. You can really find the exercise that gets you motivated and excited. Our website has more information on the [specific benefits of different types of exercises for cognitive aging](#). We encourage you to visit mcknightbrain.org to learn more.

Jen Pettis:

Dr. Brashear, would you share some of the recommendations around diet, based on your work at the University of Buffalo and the McKnight Brain Research Foundation?

Dr. Allison Brashear:

Research on the relationship between diet and cognitive function isn't definitive. There are two diets that can reduce heart disease and may be able to reduce the risk of cognitive decline, the Dietary Approaches to Stop Hypertension or DASH diet and the Mediterranean diet. The DASH diet is intended to reduce blood pressure and is a diet that is low in saturated fat, total fat, and cholesterol and high in fruit, vegetables, and low-fat dairy. It includes consuming whole grain, poultry, fish, and nuts while decreasing the intake of fat, red meat, sweets, sugar beverages, and sodium. The Mediterranean diet focuses on fruit, vegetables, nuts, and grains, replacing butter with healthy fat like olive oil, limiting red meat, using herbs for flavor in place of salt, and eating fish and poultry at least twice a week.

Jen Pettis:

This was a great discussion. I appreciate you both sharing your time and your insights. A few key points I heard include that cognitive health is one aspect of brain health, but brain health is so much more than just cognition. We can't stop our brains from aging, but we can do a lot to help them age well. One of the studies that you mentioned, Dr. Schlanger, at the University of Alabama, where they're looking at making lifestyle changes and the nurses are following up and really looking at how cognition is changing. You stress the point that even if someone has some cognitive changes, these healthy things that they can do for their brain can perhaps slow those changes or can impact those changes. You also mentioned short bursts of exercise. The 10- or 15-minute walk of the dog a few times a day makes a difference. Particularly for older adults, we want to stress that those short sessions of exercise are important. What are some key points you'd like to leave our listeners with Dr. Schlanger?

Dr. Angelika Schlanger:

While we covered a lot of ground today, I want to leave your listeners feeling empowered that there are steps they can take to protect and preserve their cognitive health. We encourage listeners to visit our website at mcknightbrain.org to learn more. We know that the GSA has some great resources as well.

Jen Pettis:

Dr. Brashear, do you have any closing thoughts?

Dr. Allison Brashear:

As a neurologist researcher, I'm committed to helping people understand cognitive aging and the importance of proactively maintaining their brain health. It's key to helping our communities age successfully.

Jen Pettis:

Drs. Schlanger and Brashear, thank you much for joining me and for such a great discussion. Before we conclude, I want to mention that we have integrated some of the Foundation's resources into our KAER Toolkit for Brain Health. Our listeners can also learn more at the website. Thank you to those listening to this episode of the GSA Momentum Discussion Podcast.

Announcement:

To learn more about The Gerontological Society of America, visit geron.org. The Gerontological Society of America was founded in 1945 to promote the scientific study of aging, cultivate excellence in interdisciplinary aging research, and education to advance innovations in practice and policy. For more information about GSA, visit geron.org.