

# Aging & Brain Health

Newsletter of the Aging & Brain Health Alliance

*Rutgers University – Newark*

## Our Second Issue

With this second issue of our Aging & Brain Health newsletter, we bring you more helpful information you can use to improve your brain health while aging.

In the previous issue you read about how exercise can maintain brain health. We will begin a study this spring at Rutgers University-Newark to advance our understanding of how different types of exercise affect brain function and Alzheimer's risk. With funding from a new five-year grant from the National Institute on Aging (NIA), we seek participants who are African American, age 60 or older, and currently sedentary most of the time. Participants should be willing to commit to six months of a three-times-weekly exercise program at community sites in and around Newark, New Jersey. See back page for information.

## Manage Diabetes to Reduce Risk for Alzheimer's Disease

Dr. Mark Gluck

**What is diabetes?** A condition where blood sugars (glucose) are high. If your blood sugar gets too high, this can damage blood vessels and lead to high blood pressure or strokes. Insulin is a hormone that plays a key role in allowing sugar to enter cells and keep them functioning. People with diabetes do not make or use insulin properly. There are two types of diabetes: Type 1, often called juvenile diabetes, results from an inability to produce enough insulin and can only be treated by medications. Type 2 is more common in older adults. It is caused by insulin resistance, the inability of cells to respond properly to insulin; it can be treated by both medications and lifestyle changes. Type 2 diabetes is especially common in African Americans, with the rate of diabetes in African Americans rising in recent years. Why do African Americans have such high rates of diabetes? We don't know yet the full answer but high rates of obesity, poorer access to quality nutrition, higher levels of chronic stress, and lower levels of physical activity may all be contributing factors.



**How does type 2 diabetes affect the brain and Alzheimer's risk?** People with type 2 diabetes have double the risk for Alzheimer's disease, and are more likely to develop dementia (loss of memory and cognitive function) at an earlier age. This occurs for several reasons. First, episodes of hypoglycemia (too low blood sugar) can occur in people being treated for diabetes, damaging the hippocampus, a key brain region for storing new memories. Damage to the hippocampus can increase your risk for dementia. Second, high blood sugar can damage blood vessels in the brain leading to cognitive impairments. Third, high levels of insulin resistance in those with diabetes can directly lead to an increase in plaques and tangles among our brain cells, a hallmark sign of Alzheimer's.

**If you have diabetes, or pre-diabetes, what can you do to protect your brain health?** There are steps you can take now to reduce your risk of Alzheimer's disease and other forms of dementia. These include: engage in regular aerobic (cardio) exercise; eat a Mediterranean-style diet focusing on fruits, vegetables, and whole grains; maintain a healthy body weight; treat high blood pressure; treat high cholesterol; and don't smoke. Studies have also shown that a drug called metformin can help manage diabetes and may also reduce the risk of Alzheimer's disease and other forms of dementia.



**RUTGERS**  
UNIVERSITY | NEWARK

[www.brainhealth.rutgers.edu](http://www.brainhealth.rutgers.edu)

# Activities for Brain Health

## Brain Healthy Cooking

By Delores "Cookie" Hammonds

Enjoy a healthier version of **Fried Chicken** by baking it in the oven, rather than a pan. Use:

- 2 cups breadcrumbs
- 1 tablespoon of dried parsley
- ½ cup reduced fat, grated Parmesan cheese
- 2 ½ lbs. of chicken (cut into pieces)
- 2 teaspoons of olive oil
- Salt and pepper to your taste
- 1 cup 2% buttermilk
- 1 tablespoon of paprika

Heat oven to 350 degrees; line a baking sheet with baking paper. Put breadcrumbs, parsley, and cheese in plastic bag. Brush chicken with oil, salt and pepper. Put buttermilk in bowl and add chicken. Place chicken one piece at a time in plastic bag; shake to coat evenly. Afterwards, place on a baking sheet; sprinkle with paprika. Place in oven. Cook for about 45 minutes or until done. Yummy and crispy; so good and healthy!

## The Neuroscience of Bible Study: Practical Tips from Brain Science for Memorizing Scripture

By Dr. Mark Gluck & Reverend Dr. Glenn Wilson, Sr.

Memorizing scripture, or any new material, is challenging, especially as we get older. In each issue of this newsletter, we will bring you another tip from brain science about how to memorize scripture with topic-relevant passages from the Bible. In the previous issue we brought you Tip #1, *Think About Meaning*. This issue's tip is:

### Tip #2. Start Small

**Don't overload** your brain with too much information at once. A **slow steady stream** will allow you to keep adding more and more.

**Short-term memory** is like a waiting room for information on the way to long-term memory. It is limited in capacity. Research has shown we can only keep between **5 and 7 new items** in short-term memory:

☞ *Break a long verse into chunks of 5 words or less.*

***For by grace are ye saved, through faith; and not of yourselves: it is the gift of God: not of works, least any man should boast.*** Ephesians 2:8-9

That is 26 words long; far more than our short-term memory capacity! Cut it down into seven bite-sized **chunks** of five words or less:

***For by grace  
are ye saved,  
through faith;  
and not of yourselves:  
it is the gift of God:  
not of works,  
least any man should boast.***

Step by step, you can learn it all.

Not ready to memorize a long verse? Begin with a **short verse**. This is one of the shortest and easiest:

***Pray without ceasing.*** 1 Thessalonians 5:17

## Brain Teaser Puzzle: Ten Healthy Foods to Eat

By Zuzanna Osiecka

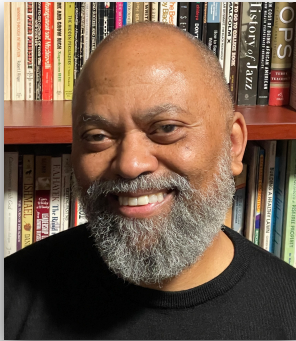
A E T S P K J F E X V Y F Y C  
 P N X A L Q F G G T K S Q K C  
 P W G L H C S R C Y A W O H U  
 L K Z M S J A S O F L M N C P  
 E Y X O C F Y R P V N K U T G  
 K B T N P A F J R I R F T N Y  
 V H R H Y O B G P O N K S F G  
 E N K O U Q E A I W T A D M H  
 H F P J C Q A Q I D V S C R Y  
 V H H W V C O B H H J O D H O  
 W I F V Z O O I L L K X V E G  
 N L M J Y T H L T W Z W I E U  
 W H O L E G R A I N S Q W K R  
 A J C P O A T M E A L G Z F T  
 S C V B M A Q M A V O C A D O

Brain Teaser Answers: WHOLE GRAINS, BROCCOLI, AVOCADO, CARROTS, SPINACH, OATMEAL, NUTS, SALMON, YOGURT, APPLE

# Community Brain Health Profiles

## Willie Davis

**VIP (Very Important Participant)  
since 2019**



“I came of age living in an impoverished environment, surrounded by violence and hopelessness. As a young boy, the black men I encountered were primarily concerned with survival, not health! For myself, I had little, if any, knowledge of how to care for my mental, physical, emotional or spiritual health. I made a solemn promise to myself at an early age to change these circumstances. When in 2019 I was made aware of the Rutgers University *Pathways to Healthy Aging in African Americans* study, I jumped at the opportunity to participate. Now, at the age of 70, I want to inspire current and future generations to pursue health knowledge. I am particularly interested in the human brain, because through its preservation, it helps us know who and what we are and what is possible for us to become”

## Carmelo & Edwin Ortiz

**Returning Citizens Support Group  
Community Partner**



“The mission of the *Returning Citizens Support Group* is to help men and women successfully transition home to their family and community after completing their prison sentence. This includes helping them find jobs, housing, clothing and other essential resources to meet their reentry needs. We also partner with other organizations to provide services and care to the returning citizenry. Because African Americans are both disproportionately among the returning citizens of Essex County, and are so frequently affected by Alzheimer’s disease, we have partnered with the *Rutgers Aging & Brain Health Alliance* to promote the brain health of our membership. In addition, our partnership with Rutgers University-Newark has provided our members with job opportunities, educational opportunities, guidance on housing, and support with modern digital technologies like smartphones and computers.”

## Gwen Garretson: *Exceptional African American SuperAger*



“I joined this brain study because of the importance of cognitive health: how well you think, learn, and remember, and how well you make and control movements including balance. After a very close friend was diagnosed with dementia and placed in a nursing facility, I felt it would be beneficial to me to change my lifestyle, keeping my mind active, eating healthy, and becoming physically active. I have always been active in my church and I now also belong to two book clubs and recently joined a senior volunteer group. I feel the combination of these healthy lifestyle behaviors helps reduce my risk for dementia and Alzheimer’s disease. I recommend the *Pathways to Healthy Aging in African Americans* study not only because you learn new ways to be physically active, but also because it contributes useful information to help in our overall well-being for better memory and self-esteem.”

# Pathways to Healthy Aging in African Americans: A University-Community Collaborative Study

## What is the Purpose?

- We seek to understand why many African Americans are at elevated risk for Alzheimer's disease as compared to other individuals, while some African Americans live very long lives without any cognitive impairment.
- By studying how health, lifestyle, environment, and genetics interact in different people, we may learn why some people develop Alzheimer's disease, and others live into their 80s and beyond with strong, clear minds.
- What we learn will guide the development of novel treatments to help people stay brain-healthy and avoid Alzheimer's disease.

## What is Involved?

- **First visit:** Saliva and blood collection, to measure your immune health, Covid-related antibodies, hemoglobin A1c (diabetes risk), brain health, and genetics.
- **Second visit:** Tests of memory and thinking, lifestyle questions, physical fitness. We will train you to use a **sleep monitor** for home use during this study to measure sleep patterns.
- **Third visit.** If you are medically able, return for brain imaging (MRI) to show us the size and activity of the different regions in your brain.

*Return every two years to repeat.*

**To learn more about becoming a paid participant in research on aging and brain health, please call:**

**(973) 353-3673**

## Who is Eligible to Join?

- You identify as Black or African American.
- You are age 60 or older.
- You speak English fluently.

## What are the Benefits?

- With your permission, we can give copies of your brain imaging (MRI), sleep monitoring, and other tests to your doctor as a free "Rutgers Brain Checkup."
- If you show signs of serious memory decline in future years, we will pay for an initial full clinical evaluation by local doctors.
- You become a Rutgers VIP — *Very Important Participant* — and get invitations to free Zoom-based home wellness classes, updates on brain health news, and invitations to community health lectures and other events.
- You contribute to your community by helping us understand how African Americans age, and what might work to reduce the high rates of Alzheimer's disease.
- You can earn up to \$250, plus transportation costs, for your time and effort.
- **Starting Spring 2023:** We will begin enrolling participants into our our new NIH-funded study of exercise and brain health. Take a free 3x-weekly exercise class for at least six months (or longer if you wish). Earn up to \$600.

**RUTGERS**  
UNIVERSITY | NEWARK

[www.brainhealth.rutgers.edu](http://www.brainhealth.rutgers.edu)