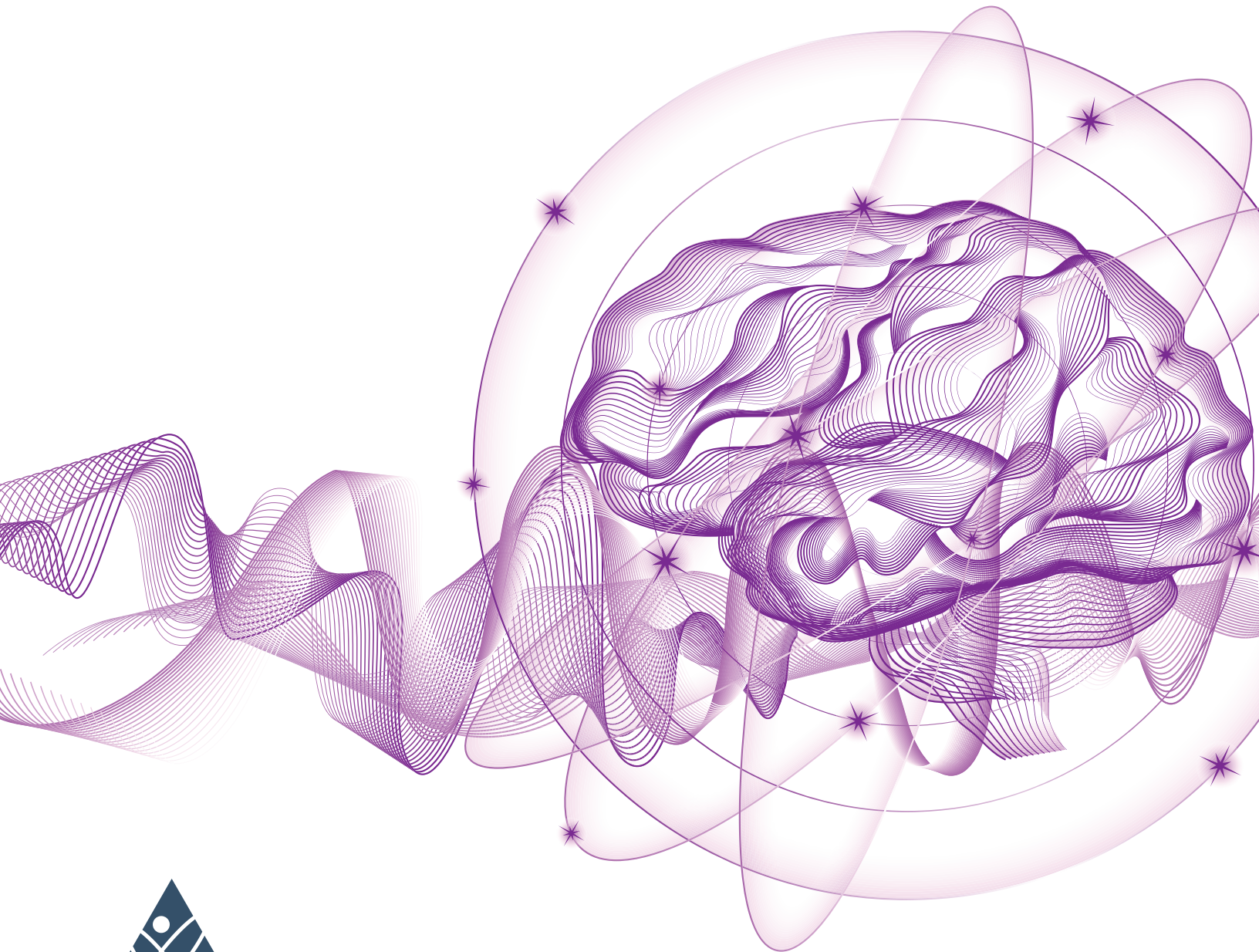


2024 WINTER THINK TANK PROCEEDINGS

Brain Health and the Aging Workforce
February 26 – February 27, 2024



BRAIN HEALTH AND THE AGING WORKFORCE

By Karen Moseley, HERO President and CEO, and Paul Terry, PhD, HERO Senior Fellow

HERO appears to be building an uncanny track record of seeing into the future. Early last year, we decided to address ESG factors in our learning agenda, that is, issues relating to environmental, social and governance accountabilities in business. But we wondered if the topic was ready for prime time. By the time we convened our Forum in the fall to discuss how ESGs could be integrated with other health and well-being strategies, the ESG topic had become a lightning rod attracting charges of woke capitalism and climate activism. Nevertheless, more and more businesses are focusing on ESG factors. Although lately, ESG factors are more often simply referred to as responsible or sustainable business practices.

We also wondered if we were making too much of a stretch for our employer members when we decided to feature brain health and the aging workforce in our learning agenda. But by February of 2024, when we hosted our HERO members in Nashville, Tennessee, brain health had become an issue that was commanding daily attention throughout the nation. It appears these new debates about what constitutes cognitive decline will rage on in the months ahead. As you will see in these Think Tank Proceedings, there was nothing new about this topic for the esteemed faculty we recruited to join HERO at the Meharry Medical College. We are grateful that **Dr. Kevin Billups**, Executive Director of the Meharry Men's Health Program and Professor of Medicine at Meharry Medical College attended and welcomed HERO. Dr. Billups shared [Meharry history](#) and many commented on the close alignment between Meharry's commitment to health equity and HERO's vision of well-being for all.



Affirming how timely this topic was, both in the science community and the popular press, two studies garnered considerable attention in the month of the Think Tank.

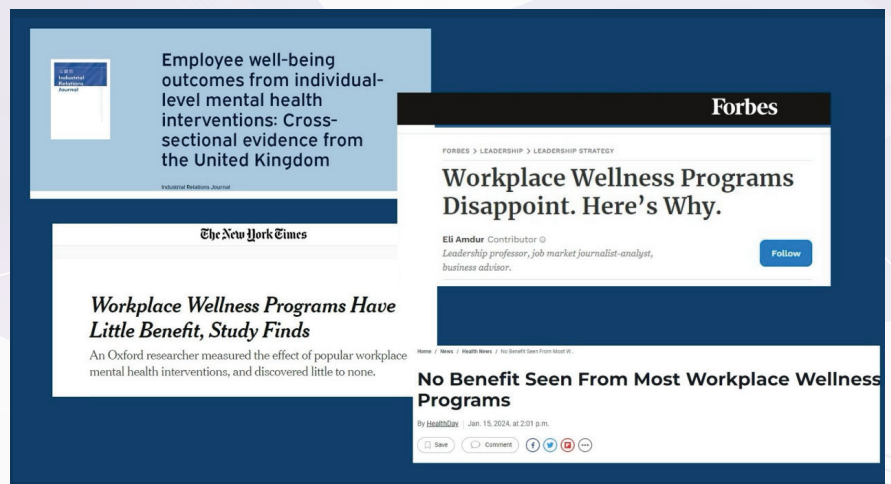
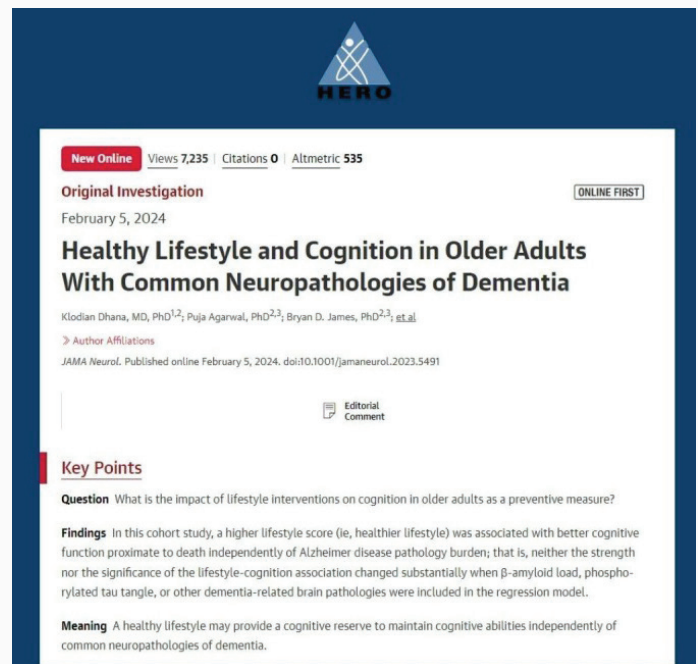
The *Journal of the American Medical Association* published a study considered to be the first to show that healthy lifestyle practices can help maintain cognitive functioning even in older adults with Alzheimer's. Research has long shown that physical activity plays a big role in preventing and managing depression. More recently, brain scientists have been examining the role of a healthy lifestyle in supporting mental acuity.

This latest study used 24 years-worth of autopsy data from more than 700 deceased patients and linked higher and lower healthy lifestyle scores to dementia related brain pathologies. Researchers concluded that lifestyle builds a cognitive reserve that can help maintain cognitive abilities in spite of the pathologies related to dementia. It is hopefully one of more studies to come that should elevate health promotion practices to be a central part of a standard of care related to delaying and reducing Alzheimer's disease.

A common theme throughout this Think Tank was how the lifestyle pillars that bolster heart health and prevent cancer are the very same pillars that support brain health and mental health. Another study that offered insights and examples of the cautions we should take in developing brain health best practices in workplace settings was published in the *Industrial Relations Journal*. It was a study of British employees in more than 200 organizations that found that participants in individual level mental health interventions were 'no better off' than non-participants.

HERO Senior Fellow Paul Terry published a [review of the research](#) that parses out the limitations of the study's methods, not the least of which is that the data available offered no information about the scope or frequency of the interventions. Still, there are useful learnings from this kind of research that can help inform brain health interventions and practices going forward. Here are just three:

First, too often we consider program effectiveness without consideration of a program's reach. Similar to the struggles American companies have had with employee engagement, this British study of individual level mental health interventions found that fewer than 5% of employees took advantage of offerings such as stress management classes, sleep programs or online coaching. More troubling still, older workers, employees of color and lower income employees were least likely to participate. As we consider brain health initiatives, we need to invest in doses strong enough to be impactful but we also need to make reach and equitable access central in our approaches. As with the challenges we have faced related to mental health interventions, we won't solve for reach until we solve for stigma. AARP research shows that people who report they have experienced age discrimination is at an all-time high and, no doubt, stigma and discrimination are intimately related.



Second, are individual interventions occurring within the context of workplace well-being best practices? A quip we heard at our last HERO Forum was: ‘you can’t Yoga your way out of a terrible work environment.’ Though the mental health intervention researchers stated an interest in exploring ‘what works for whom in what circumstances’, they simply did not have a data set up to the task of answering that vital question. In HERO’s partnership with NIOSH, we have been promoting the use of the NIOSH WellBQ survey of individual level worker well-being. Once we routinely combine such individual level data with organizational level data about culture, policies and environmental supports, such as is found in the HERO Health and Well-Being Best Practices Scorecard in Collaboration with Mercer© (HERO Scorecard), only then will we be able to answer questions about the right balance between individual and organizational level interventions.

Third, right from the get-go in our brain health promotion efforts, how can we better amplify the role of social connections and belongingness alongside other proven pillars like diet and exercise? The most effective intervention uncovered in the British mental health study, a finding that was glossed over by the researchers and journalists alike, was the positive mental health impact of volunteerism. Volunteerism attracted more participation than any other offering, albeit, a modest ten percent. But results showed participants reported both significant improvements in subjective well-being as well as improvements in subjective accounts of the work environment. Increases in a sense of purpose, accomplishment and social resources were all well-being byproducts of volunteering. These benefits affirm the investments HERO researchers have made in integrating Diversity, Equity and Inclusion related scoring into the HERO Scorecard.


Our **learning objectives** for this Think Tank were:

1. Explain the demographic shift in the U.S. labor market with the aging Baby Boomer generation and the implications for workplace health and well-being initiatives.
2. Identify the professional, personal, and societal factors that contribute to delaying retirement among older workers.
3. Describe case examples of organizations that have improved their organizational effectiveness in adapting to the needs of an aging workforce.
4. Discuss common forms of ageism experienced by older workers and develop strategies to diminish age discrimination in the workplace.
5. Evaluate the role of lifestyle factors, including sleep, diet, stress management, social connections, and physical activity, as they affect brain health and cognitive functioning in older employees.
6. Assess the evidence and effectiveness of mental health support and cognitive training programs for improving the well-being and enhancing the cognitive abilities of aging workers.





BRAIN HEALTH AND THE AGING WORKFORCE



The Baby Boomer generation makes up nearly thirty percent of the U.S. labor market, and a major transformation is afoot with about 10,000 people turning 65 each day for the next two decades. Long life spans, the need to keep socially active, and financial considerations are personal reasons for staying at work. What's more, most employers covet the expertise and experience of older workers and the benefits of age-diverse teams in fostering innovation. With an aging workforce comes greater sensitivity to the role of brain health in employee performance. Debates about the mental acuity of our aged national political leaders are a prime example of the concerns attendant to brain vibrancy. Related to this, two out of three workers over the age of 45 say they have seen or experienced age discrimination, and the perception of age discrimination is much higher for women.

Brain health relates to our abilities to contribute productively at work and in our communities. This includes mental health, coping, and resiliency, as well as brain health practices that reduce cognitive decline and prevent neurodegenerative diseases such as Alzheimer's disease and dementia. In this Think Tank we explored the role of employers in supporting the lifestyle factors like sleep, diet, stress management, social connections, and physical activity that impact emotional well-being and cognitive functioning. The most common type of age discrimination is simply that of hearing negative comments about a worker's age. In our small group discussions we examined this and other common forms of ageism experienced by workers. We also reviewed the evidence on the impact of mental health support, cognitive training programs such as memory games and problem-solving tasks, and the role of mindfulness exercises and flexible work arrangements that empower employees to improve self-care of brain health.

Expert Presentations and Small Group Discussion Highlights

HERO members note that recorded presentations along with copies of the slides are available in the [HERO Hub](#).

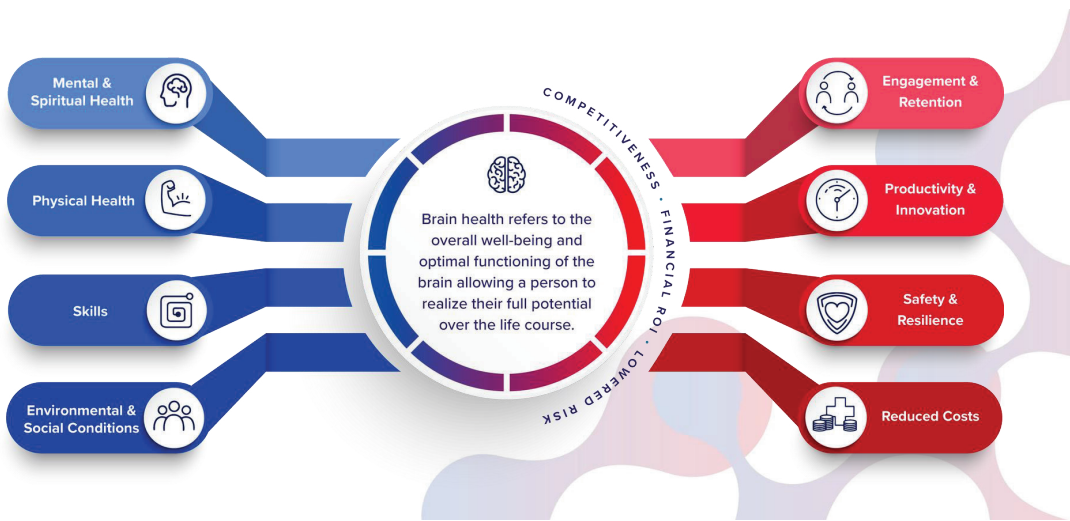
For assistance with log in general navigation support through this comprehensive library, contact: info@hero-health.org. The biographies and organizational contacts for our expert presenters are hyperlinked to their names below.

What is Brain Health and why it Matters for Employers and the Economy

"Building brain capital" is the opportunity presented by our Think Tank's opening speaker, [Kelly O'Brien, MPA](#), Vice President, Prevention at UsAgainstAlzheimer's and Executive Director of the 'Brain Health Partnership.' O'Brien featured the work of the [Business Collaborative for Brain Health](#). The goal of this initiative is to unite leading organizations to "optimize cognitive health for better business results and healthy longevity."

Key points from O'Brien were:

- Employers can play a vital role in optimal functioning that has been shown to improve competitiveness, financial ROI and lowered risks.
- The balance sheets of the S&P 500 have shifted markedly from the provision of equipment and property to the sale of services, brand value and patents.
- The World Economic Forum rates top skills needed today as analytic thinking, creativity, flexibility and tech literacy.
- Older Americans want to participate more which aligns with better health.
- Reaching people in mid-life is the best time to mitigate risk factors for dementia.



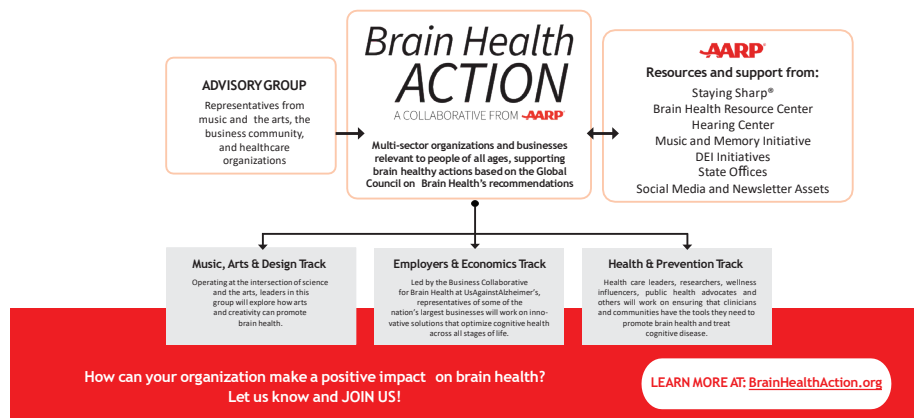
Healthy Aging Policies and Programs/Breaking the Stigma

“Knowing and sharing that cognitive decline is not an inevitable part of aging are the first steps toward achieving healthier brains” according to speaker **Sarah Lenz Lock, JD**, Senior Vice President for Policy at AARP and Executive Director of the Global Council on Brain Health. Indeed, Lenz suggests that “modifiable lifestyle factors can reduce risks of cognitive decline at the population level by up to 40%.” Macro issues such as stigma, equity and COVID-19 have all been shown to affect brain health, but controllable factors such as exercise, sleep, nutrition and social engagement can mitigate these influencers.

Key points from Lenz were:

- Per social stigma, cognitive impairment ranks high in stigma, following only addiction, obesity, mental illness and speech impairment.
- Younger adults are more pessimistic about losing cognitive function.
- Nearly everyone, 98%, agrees brain health is very important, but only 56% are doing the most important activities to support brain health.
- The Global Council for Brain Health names “employers and the private commercial sector” as a key audience for advancing the knowledge, motivation and confidence to address brain health behavior change.
- AARP provides extensive resources such as a ‘Brain Health Resource Center’, DEI initiatives, and ‘Staying Sharp©’

The Brain Health Action™ collaborative is bringing together a wide range of organizations and leaders to transform the current fatalistic narrative around dementia into a more action-oriented, constructive, and realistic one focused on building our brain health—at every age.



Learning and Communicating about Aging and Brain Health

“Raise your hand if you have a proactive plan for aging?” This was the question posed at the outset of presentations by [Cathy Maxwell, PhD, RN, FAAN](#), a professor at Vanderbilt University School of Nursing, along with [Deborah Lee, PhD, RN, NBC-HWC](#) who serves as the NHC Chair of Excellence in Nursing and Director of the Positive Aging Consortium at Middle Tennessee State University. Almost no one at this Think Tank raised their hands, affirming the need for us to learn more from these scholars about how to educate the workforce about taking a more proactive approach to aging. This begins, we learned, by simply engaging older workers in conversations about healthy aging. Key points from Drs. Maxwell and Lee were:

- The ‘elephant in the room’ is the need for a paradigm shift in how individuals are taught to think about older adults.
- Age-related pathologies can be reversed or slowed via ‘mitochondrial fitness.’
- Maxwell reviewed contents of her booklet on “Aging: Important things to know” which covers frailty, energy engines and eight areas for planning.
- A plan for aging includes assessing how satisfied you are in areas such as safety, nutrition, physical activity, relationships, sleep, finances and mind/body.
- Planning conversations should be about guiding rather than telling or directing.
- Motivational interviewing is client-centered with open questions, affirmations and reflections.

Brain Health, Physical Activity and Nutrition

To achieve the protective effects of nutrition and physical activity, starting early is best but “it is never too late to start,” and exercise and healthy eating have positive benefits at any age. Such was the common thread that connected presentations by [Nico Pronk, PhD, MA, FACSM, FAWHP](#), President of the HealthPartners Institute and the Chief Science Officer at HealthPartners, along with [Jamie Pope, MS, RDN, LDN, FAND](#), Assistant Professor of Nutritional Sciences at Vanderbilt University School of Nursing. When considering the factors that impact cognitive performance, Dr. Pronk quoted one of his conclusions from a paper he wrote for the American Journal of Clinical Nutrition: “*The way we think, feel, and function is malleable. Energy flows and transformations in complex systems maintain a level of dynamic stability – referred to as homeodynamics – and occur across the lifespan. In effect, structure matches function.*” Or, more simply, Pronk cites Walter Bortz who said: “We become what we do.” And, per Pope, we are what we eat.

Key points from Dr. Pronk and Ms. Pope were:

- Exercise prescription guidance for occupational physical activity and brain health needs to be specific to the job role and the work environment.
- Given the ‘physical activity paradox’ that links occupational physical activity to increased mortality, we need better assessment of the workplace environment and specific job roles.

Association of dietary characteristics and foods with cognitive function and/or decline

Associated with **reduced risk of cognitive decline/better cognitive function**

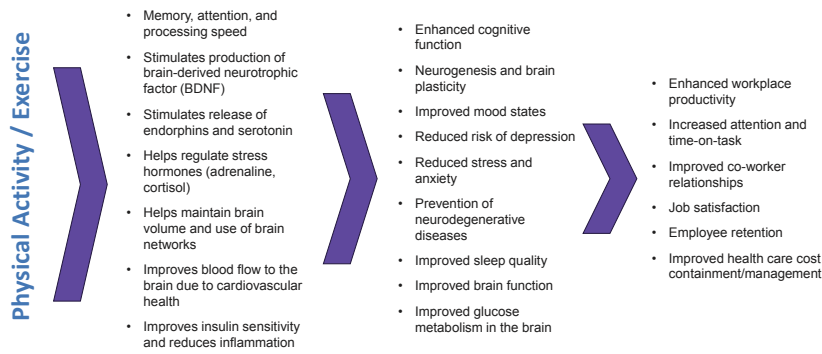
- Higher dietary quality and variety
- Intake of vegetables and fruits
- Adequate micronutrient intake including B-vitamins, C, D, E, magnesium, and iron
- Lower saturated fat vs. unsaturated fats
- Omega-3 fatty acids
- Fish intake
- Unrefined grains
- Certain plant foods like avocados, blueberries, walnuts, and olive oil
- Green leafy vegetables
- Polyphenols (flavonoids)
- Curcumin in turmeric
- Green tea, coffee, and cocoa
- Probiotics/prebiotics

Associated with **increased risk of cognitive decline**

- Lower dietary quality and variety
- Nutrient deficiencies
- Higher intake of ultra-processed foods
- Low intake of vegetables and fruits
- Higher saturated fat
- High intake of protein and fat vs. carbohydrate
- Low intake omega-3
- Refined grains



Strength of Associations and Intervention Effects



2/29/2024

From: Whitsel, et al. *Am J Health Promot.* In press 4 | HealthPartners Institute

- Leading a healthy lifestyle, including regular exercise, eating fruits and vegetables, and minimal alcohol consumption, is associated with better cognitive function in older adults.
- Evidence of an association between nutrition and cognitive outcomes is stronger for healthy dietary patterns, such as the Mediterranean-type diet, than for individual nutrients and food groups.
- The MIND diet, a hybrid of the cardiovascular Mediterranean and DASH diets, was developed based on an exhaustive review of studies to identify the nutrients, foods and dietary patterns related to brain health and dementia.
- Adherence to the MIND diet score was associated with a slower rate of cognitive decline equivalent to 7.5 years of younger age.

Are Health Coaches Equipped to Support Brain Health?

Most of the HERO member companies attending this Think Tank provide health coaching services or offer these services to their employees. Accordingly, we sought an expert's take on whether traditionally trained health coaches are well equipped to support and advance brain health. We benefited from the research background and practical coaching experience of **Ruth Q. Wolever, PhD, NBC-HWC**, Professor and Director of Vanderbilt Health Coaching at the Osher Center for Integrative Health at Vanderbilt University Medical Center. Wolever is also a Scientific Advisor for Wondr Health. Citing her own research into the effectiveness of a diabetes health coaching intervention, Wolever showed several positive outcomes from coaching relating to patient activation, health behaviors, quality of life and the reduction of HbA1c. Relative to whether health coaches are ready to support brain health, Wolever spoke to the importance of CMS approved, national board-certified credentials. Presently, the 'National Board for Health and Wellness Coaching' has certified over ten thousand coaches in every state and has approved more than 122 training programs.

VANDERBILT UNIVERSITY
MEDICAL CENTER

Training & Education Standards

Transition Phase: 2017 –2020	2.0 Standards
<ul style="list-style-type: none"> • 30 hours live training in HWC coaching competencies • Practical skills assessment 	<ul style="list-style-type: none"> • Announced 2019, and phased in now • 60 hours training in HWC coaching competencies including 40 live hours and at least 3 mentored coaching sessions • 15 hours education in healthy lifestyle knowledge • Training incorporates Practical Skills guidelines developed by NBHWC • Pass/Fail practical skills assessment

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What have we learned? Our thanks to our employer reactor panel and all Think Tank participants.

A key feature of HERO Think Tanks, something that distinguishes this learning event from conferences, is the active, frank and open small group discussions. We consider our presenters ‘conversation starters’ and our experience shows that much of the learning at these gatherings comes about via HERO members sharing their stories and learning from each other. We fielded a closing ‘what have we learned panel’ and we are grateful to these HERO members for braving the challenge of summarizing key learnings:

Our closing panel chair was [Roshi Fisher, MPH](#), Blue Communications and she was joined by [Brad Awalt, MS, ACSM](#), Vanderbilt University Medical Center; [Jaime Gatford, bp](#); and [Tonya Vyhldal, MEd](#), Pfizer.

Though the panelists shared much in common relative to their roles as leaders of health and well-being initiatives in each of their organizations, we learned that there is a wide range of approaches and priorities. The following questions and comments offer a sampling of issues employers are addressing: What are non-discriminatory approaches to the development of health and well-being initiatives tailored to the needs of older workers? What ages, occupations or criteria would you consider candidates for cognitive, mental acuity testing? “Nothing about me without me” is a bromide that calls for participant centered approaches to program planning. It is vital to have the values, preferences and views of employees informing your approach to health and well-being in your organization.

The Supreme Court Affirmative Action Ruling and national culture wars have had a chilling effect on ‘Diversity, Equity and Inclusion’ (DEI) investments for many organizations. New approaches to DEI are needed and ageism should be considered a feature of future DEI initiatives. Many are concerned that a brain drain is looming given the ages of both Boomers and Gen-Z. Retirement and ‘flectirement’ policies need to be updated. The pillars for brain health (fitness, nutrition, social connection, sleep) are well aligned with traditional wellness program offerings. Nevertheless, these offerings could be enhanced to appeal to older workers.



Readings and Video Recommendations from HERO Think Tank faculty for “Brain Health and the Aging Workforce.”

1. Lock, S.L., Chura, L.R., Dilworth-Anderson, P. et al. [Equity across the life course matters for brain health.](#) *Nat Aging* **3**, 466–468 (2023).
2. Rajiv Ahuja and colleagues, The Milken Institute, “Better Brain Health through Equity.” [PDF download.](#)
3. Dr. Cathy Maxwell, [“Aging Matters/Aging and Injury.”](#) PBS Video.
4. Dr. Deborah Lee, NHC Chair of Excellence in Nursing. [“Second Acts”](#) Aging Matters Video Series.
5. Paul Terry, Ph.D., [“Why Not Offer Routine Screenings for Brain Health?”](#) American Journal of Health Promotion. Nov. 2023.
6. Dr. Ruth Wolever and colleagues. [“Health Coaching and Genetic Risk Testing: Randomized Controlled Trial.”](#) Health Psychology. 2022. APA PsycNet.
7. Wendy Suzuki, [“The brain-changing benefits of exercise.”](#) TEDWomen, Nov. 2017 (16 million views).
8. Dr. Bill Thomas, [“What are the Best Books on Aging?”](#) (Top 50 Pro-Aging List).

