

Equity across the life course matters for brain health

Sarah Lenz Lock, Lindsay R. Chura, Peggye Dilworth-Anderson & Jonathan Peterson



The Global Council on Brain Health summarizes disparities that occur among the opportunities of different groups for adopting and sustaining brain-healthy behaviors across the lifespan. Here, we highlight challenges for people to maintain a healthy mind throughout their lives and suggest solutions for society to help people to achieve greater equity in brain health.

The vision of the Global Council on Brain Health (GCBH) is for ‘a world in which people’s minds can flourish, and the barriers to better brain health are eliminated; a world free of discrimination, stigma and misinformation’, such that all people can have the opportunity to experience better brain health as they age. The GCBH is an independent collaboration of more than 200 experts convened by AARP to educate the public on what works to promote older adults’ cognitive well-being. The GCBH’s consensus recommendations are based on expert review of high-quality interdisciplinary evidence from around the world. The GCBH study ‘How to Sustain Brain Healthy Behaviors’ from March 2022 highlighted the important role that lifestyles can have in optimizing or undermining brain health¹. This study further emphasized the influence of social and environmental factors in shaping lifestyles, pointing out that personal behaviors develop in a broader context that may encourage, discourage or even preclude healthy choices. The GCBH pointed to disparities in health and access to care that have negative effects on underserved communities and disadvantaged groups. Hearing loss, hypertension, obesity and depression are examples of conditions that can have a major effect on brain health, but for which access to quality healthcare varies markedly among different communities. These disparities underscored the need for the GCBH to deeply examine the barriers that people face in adopting brain-healthy lifestyles and behaviors around the world. Knowing these barriers present greater challenges for more-vulnerable groups, the GCBH sought to illuminate solutions that can support equity in building and maintaining cognitive health and resilience. The GCBH defines brain health equity as the fair and just opportunity to have a healthy mind throughout a person’s life.

Here we provide a summary of the findings and recommendations of the GCBH’s forthcoming report (in spring 2023), which discusses challenges to opportunities for people to maintain a healthy mind throughout their lives and suggests proposed solutions for achieving greater brain health equity.

Cognitive decline is not inevitable as we age

Many factors across a lifetime influence health, including brain health. It is important to recognize that cognitive decline is not inevitable

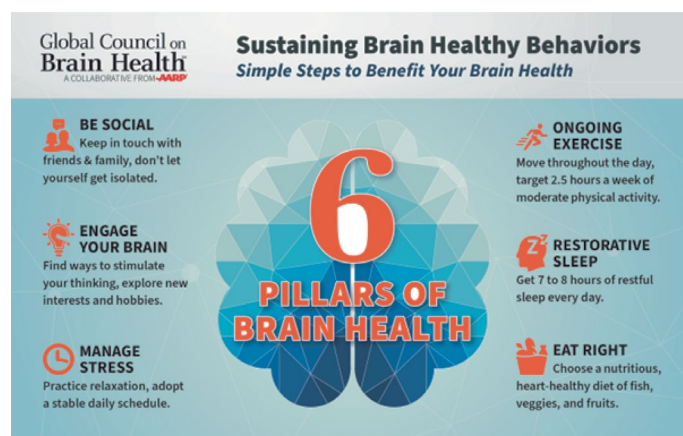


Fig. 1 | Modifiable lifestyle behaviors based upon the recommendations of the GCBH. Used with permission from AARP.

as we age, and that the rate of decline is not the same for all individuals². Personal modifiable factors can have a critical role in brain health³. The Lancet Commission – an international research group – has suggested that as much as 40 per cent of dementia cases could be prevented or delayed if individuals controlled several modifiable risk factors, including hypertension, smoking, obesity and social isolation⁴.

On the basis of the GCBH’s analysis of modifiable risk factors that contribute to brain health (examined in several reports), AARP has highlighted the ‘Six Pillars of Brain Health’ that can support the ability of individuals to positively affect their brain health risks^{1,5} (Fig. 1). These pillars are a set of modifiable lifestyle activities that have been shown to benefit older adults. The essence of the six pillars – although they are based upon copious underlying evidence – is simple and straightforward.

- (1) Physical activity: move throughout the day and aim for two and a half hours of moderate exercise per week.
- (2) Intellectual stimulation: explore new interests and find ways to stimulate your mind.
- (3) Sleep quality: aim to get seven to eight hours of restful sleep on a regular basis.
- (4) Stress management: practice relaxation and take time for yourself.
- (5) Social engagement: keep in touch with friends and family and avoid isolation.
- (6) Nutrition: adopt a heart-healthy diet that emphasizes fish, vegetables and fruits.

Simple as they may sound, however, many obstacles can prevent well-meaning individuals from embracing the six pillars.

Societal challenges to sustaining brain-healthy lifestyles

The GCBH has identified major structural barriers and other aspects of society that must be addressed to give all people the opportunity to enjoy the best possible brain health. Such barriers to better brain health are deeply rooted and affect people from birth to death and all of the years in between. Different cultures bring different life experiences to cognitive decline and dementia^{6–8}. The state of a person's brain health in late life – for better or worse – is affected by the culmination of many years of lived experience. Indeed, a wide set of social, economic and political forces that help to shape our daily surroundings and personal options can be as important (if not more so) than genetics, medical care or lifestyle choices. Failings in the healthcare system are a major factor in disparities in brain health. But there are many other societal forces at play, including socioeconomic status, education, local resources, and the physical⁹, built^{9,10} and policy environments that shape the lives and choices of people.

Income and financial security, education, early childhood development, working conditions, housing, environment, access to nutritious food and opportunities for recreation are among the factors that influence cognitive resilience. These factors can provide essential support to human development or can contribute to vulnerability and illness. The World Health Organization estimates that such 'social determinants of health'¹¹ drive 30–55 per cent of health outcomes globally.

Residential segregation can isolate racial and ethnic groups from healthful resources, such as access to healthy food. A lack of affordable insurance coverage, including for mental health services, further undermines cognitive well-being. Immigration policies that discriminate against particular groups of people result in stress and fear, blocked access to services or avoidance, fractured families and social isolation.

The COVID-19 pandemic has provided the latest evidence of disparities in health outcomes, as low-income individuals and underserved communities faced greater difficulties in securing treatments and vaccines¹². Similar obstacles apply to brain health and mental well-being. When it comes to dementia care, "racial and ethnic minorities, persons with lower socioeconomic status, sexual and gender minorities, and rural populations experience greater challenges accessing and receiving quality services ..."¹³.

Improving brain health requires healthcare systems to treat all communities equally. Yet professional and learned practices in healthcare delivery systems and research institutions perpetuate inequities. Too often, a lack of cultural humility, inclusiveness and respect for diversity perpetuates substandard healthcare and distrust among the underserved – exacerbating disparities.

Expectations of bias probably dissuade engagement with healthcare providers. People who experience symptoms of cognitive decline may be unwilling to seek services owing to a lack of trust in the healthcare system or a lack of faith that they will benefit. For the same reasons, family caregivers may be reluctant to interact with healthcare providers as they try to protect their loved ones. As a consequence, a disease may advance and reach a point at which treatment options are limited and quality of life suffers.

GCBH recommendations for healthy brain aging

Fostering equitable access to healthcare is very important for better brain health across the lifespan. But we must also understand the many nonmedical forces that are rooted in societal norms and practices that result in racial and ethnic discrimination and ageism and that often affect health and well-being outside of the health system. Strategies to

optimize cognitive wellness must address the social and environmental context in which individuals make decisions and maintain long-term habits. Public policy and private sector innovations are part of the answer. Technology, environmental design, local services, zoning and access to the many resources that promote health and longevity can all contribute to cognitive wellness.

For these reasons, the GCBH believes that efforts to improve brain health should be a holistic, coordinated and mutually reinforcing approach across varied sectors, including public, private, faith-based and nonprofit advocacy groups. Communities must be engaged in ways that optimize their current strengths and build new approaches to sustaining brain health across the lifespan. None of this is meant to minimize the importance of individual choice. Rather, it is a way to build a foundation in all communities that empowers health-fostering actions and the ability to sustain those actions at the individual level.

The local natural and built environment is a crucial factor¹⁰. Neighborhood design and planning can affect brain health for better or worse. Consider the importance of schools, parks and recreational facilities, transportation, and businesses that provide products and services. Are they affordable, accessible and appealing? Do they encourage engagement and active living? Architects, urban and rural design planners and other local officials can be highly influential in shaping an environment that supports cognitive resilience.

Technology is another underutilized solution to enhance brain health and encourage equity. Consider all the people in the world who possess smartphones. At the tip of their fingers, they have access to platforms such as YouTube and TikTok that could provide access to videos that raise awareness of brain health issues in a manner that is educational and entertaining. The simple ability to push out a message may be all the nudge a person needs to remind them to move rather than sit.

Continued efforts to promote basic brain health are needed. At the same time, widespread misconceptions – such as the mistaken view that dementia is an inevitable feature of aging – need to be addressed. Greater community engagement should be part of the answer. Community leaders can step up their advocacy for brain health and have a larger role in raising awareness of brain health within their constituencies. They also can serve as resources for information and connections to services. Innovative new initiatives, campaigns and partnerships are required to raise public awareness and knowledge – efforts that must be culturally appropriate and grounded in science.

However, initiatives in education, outreach and communication must be crafted and delivered in a manner that resonates with the target audience to be effective. Messages should be simple and straightforward, avoiding language that may sound like gobbledygook to much of the public. Communications about brain health and cognitive impairments also should be culturally sensitive. Content should recognize important community values, such as how a community wants to treat older individuals, how it views the responsibilities of family members and whether care may seem undignified or disrespectful to those receiving it.

Within the healthcare system, providers should prioritize prevention and establish brain health baselines and evaluation as a routine part of check-ups for aging adults and others who may be at risk. People who require long-term care support owing to cognitive impairments often do not know where to turn for help, even when services are available. Healthcare providers working along with social workers should be aware of community-based resources so they can make referrals. And those community-based resources need adequate funding.

Empowering family caregivers is another underutilized way to strengthen brain health and assist individuals who need care. In many cultures, concerns of stigma and shame may inhibit families from seeking outside help for issues of cognitive decline or mental illness. Community leaders and influencers can do a great service by trying to counteract these harmful attitudes.

When family caregivers do connect with the healthcare system, providers should treat them as vital members of the healthcare team. Employers can further support family caregivers through leave policies and flexible work arrangements that enable them to help at home while keeping up with their job duties.

Achieving equity calls for transforming the paradigm of how society thinks about challenges to brain health. Public policy and cultural values will have to change. Scientific research must adapt in a way that recognizes population diversity – an awareness that applies to funding opportunities and participation in clinical trials. Scientists should establish standard health equity and quality measures that provide meaningful data on brain health across communities. Although we already have substantial scientific knowledge about brain health, much more remains to be learned about the barriers to cognitive well-being that are faced in distinct communities and how to address them.

Conclusion

Since launching in 2016, the GCBH has reached millions of people providing consumer-friendly information in 12 reports on what works to reduce risks to brain health as you age¹⁴. Public awareness, research and policy efforts have substantially increased since that time. In the USA, a new national goal to promote healthy aging within our federal dementia plan was established in December 2021, recognizing the need to address the disproportionately high risk for dementia that Black, Hispanic and Native American individuals and those of lower socioeconomic status face¹⁵. The GCBH wants to seize this momentum to urge collaboration with all segments of society to build better brain health for the most-vulnerable groups, so that we all have an equal opportunity to flourish as we age.

Successful policies and strategies to promote brain health must integrate many elements, and they must recognize the importance of the local environment and the cultural and societal forces that influence cognitive wellness throughout life.

Everyone may follow an individual path that helps to determine their health and well-being. But everyone deserves the same opportunity for the best possible outcome. Societies around the world should

recognize brain health as a vital aspect of public health and prioritize the strategies that further this goal in all communities. Better brain health and cognitive well-being will enable many millions of people to live more-rewarding lives across their life course.

Sarah Lenz Lock^{1,2}✉, Lindsay R. Chura^{1,2}✉,
Peggye Dilworth-Anderson^{1,3} & Jonathan Peterson⁴

¹The Global Council on Brain Health. ²AARP. ³Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA. ⁴Getter Peterson Consulting Group.

✉e-mail: Slock@aarp.org; LChura@aarp.org

Published online: 18 May 2023

References

1. Global Council on Brain Health. *How to Sustain Brain Healthy Behaviors: Applying Lessons of Public Health and Science to Drive Change* (GCBH, 2022).
2. Dilworth-Anderson, P. & Moon, H. *Generations Today* **42**, 1 (2021).
3. Global Council on Brain Health. *Engage Your Brain: GCBH Recommendations on Cognitively Stimulating Activities* (GCBH, 2017).
4. Livingston, G. et al. *Lancet* **396**, 413–446 (2020).
5. Global Council on Brain Health. Choose brain-healthy habits. *aarp.org*, https://www.aarp.org/content/dam/aarp/health/brain_health/2022-09/gcbh-behavior-change-infographic-english.doi.10.26419-2Fpia.00106.008.pdf (accessed 28 March 2023).
6. Mahoney, D. F., Cloutterback, J., Neary, S. & Zhan, L. *Gerontologist* **45**, 783–792 (2005).
7. Cipriani, G. & Borin, G. *Int. J. Soc. Psychiatry* **61**, 198–204 (2015).
8. Lee, S., Kim, D. & Lee, H. *Int. J. Environ. Res. Public Health* **19**, 8865 (2022).
9. Centers for Disease Control and Prevention. Healthy aging & the built environment. *cdc.gov*, <https://www.cdc.gov/healthyplaces/healthtopics/healthyaging.htm> (accessed 3 March 2023).
10. Centers for Disease Control and Prevention. Built environment: NCCDPHP's program successes. *cdc.gov*, <https://www.cdc.gov/chronicdisease/healthequity/sdoh-and-chronic-disease/nccdphp-and-social-determinants-of-health/built-environment.htm> (accessed 3 March 2023).
11. World Health Organization. Social determinants of health. *who.int*, https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1 (accessed 3 March 2023).
12. Wouters, O. J. et al. *Lancet* **397**, 1023–1034 (2021).
13. Aranda, M. P. et al. *J. Am. Geriatr. Soc.* **69**, 1774–1783 (2021).
14. Global Council on Brain Health. Resource library. *aarp.org*, <https://www.aarp.org/health/brain-health/global-council-on-brain-health/resource-library/> (accessed 4 March 2023).
15. US Department of Health and Human Services. National plan to address Alzheimer's disease. A 2021 update. *aspe.hhs.gov*, <https://aspe.hhs.gov/reports/national-plan-2021-update> (2021).

Acknowledgements

The authors acknowledge the members of the GCBH and the liaisons who have been working together on recommendations to build brain health equity.

Competing interests

The authors declare no competing interests.