

Using the SAFEST BRAINS Framework to Promote Brain Health

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Brain health focuses on maintaining optimal neurologic function to support physical, cognitive, and social well-being across the lifespan, from early development through older adulthood.¹

The **SAFEST BRAINS** mnemonic highlights key domains of prevention and ongoing care that may support healthy brain development, reduce the risk of neurologic disease, and slow progression when conditions are present.² While not exhaustive, this framework, developed by the American Academy of Neurology (AAN), offers a practical way to organize evidence-based strategies and integrate brain health into routine clinical care.



Table 1. SAFEST BRAINS Mnemonic To Support Lifelong Brain Health

Domain	Description
S leep	Sleep supports synaptic remodeling, glymphatic clearance, and healthy cerebrovascular function.
A ffect	Addressing mood and affective disorders may improve treatment adherence, enhance quality of life, slow disease progression, and support better neurologic outcomes.
F ood, Diet, and Supplements	Food insecurity is associated with higher rates of chronic neurologic conditions, including dementia and cerebrovascular disease.
E xercise	Regular physical activity supports brain health across the lifespan, though optimal type and duration continue to be defined.
S upportive Social Interaction	Positive social relationships are associated with a lower risk of cognitive decline and dementia.
T rauma Avoidance	Preventing traumatic brain injury may reduce the risk of stroke and neurodegenerative disorders.
B lood Pressure	Maintaining systolic blood pressure below 130 mm Hg supports long-term brain health.
R isks: Metabolic and Genetic Factors	Metabolic factors (e.g., high cholesterol, inactivity, elevated body mass index, diabetes) may contribute to atherosclerosis, neuroinflammation, impaired neuroplasticity, and neurodegenerative disease. Genetic screening can help with early identification and management of inherited neurologic conditions.
A ffordability and Adherence	Rising out-of-pocket costs can limit access to care and reduce adherence to diagnostic and treatment plans.
I nfection	Preventing infections, including through vaccination, helps protect brain development and reduces the risk of neurologic complications, such as encephalitis, post-viral neuroimmune injury, and febrile seizures.
N egative Exposures	Tobacco, alcohol, substance misuse, and environmental toxins (e.g., lead, mercury, phthalates, pesticides, and manganese) contribute to neurologic illness and affect brain development.
S tructural and Social Determinants of Health	Social and structural factors, including socioeconomic status, education, and access to care, strongly influence health outcomes across the lifespan. Structural inequities often lead to higher rates of neurologic disease and mortality due to limited care access and adverse living conditions.

For more information, access Cardi-OH's expanded resource on [brain health and the heart](#) and the AAN [Brain Health Initiative](#).

References

1. American Academy of Neurology. AAN Brain Health Initiative. Accessed February 14, 2026. <https://www.aan.com/tools-resources/brain-health>.
2. Selwa LM, Banwell BL, Choe M, et al. The neurologist's role in promoting brain health: emerging issues in neurology. *Neurology*. 2025;104(1):e210226. doi:10.1212/WNL.00000000000210226.

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