

brainH.E.A.L.T.H.™

SIMPLE STEPS TO PREVENT, STABILIZE & RESTORE COGNITIVE DECLINE



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Central Alabama

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Kristine Lokken, PhD, is a functional neuropsychologist with a passion for helping people restore brain health. Her extensive background in clinical research, medical neuropsychology, and holistic wellness merged together when she co-founded a precision brain health clinic in Birmingham. In the Fall of 2019, she relocated to Seattle to open the Brain Health and Research Institute. Alzheimer's of Central Alabama funded her grant, The brainH.E.A.L.T.H. protocol: development, implementation and evaluation of psycho-educational health intervention for dementia caregivers and persons at risk.

New research suggests that lifestyle factors can influence dementia risk. Simple changes can help prevent, stabilize, and restore cognitive decline. Prevention is key for those with a strong family history of Alzheimer's disease (AD) and also for dementia caregivers, who may themselves be at higher risk for developing a dementia. For individuals already experiencing cognitive impairment, lifestyle changes can impact the progression of cognitive decline, enhance positive mood, decrease behavior problems, and help maintain independence.

At the Brain Health Institute (BHI) in Birmingham, AL (www.bhibrainhealth.com), our mission is to empower individuals to achieve optimal brain health, both in terms of treating disease and maximizing potential. Using the latest clinical research, we developed the brainH.E.A.L.T.H.™ intervention to assist in lifestyle change. Below

is an overview of six pillars of the brainH.E.A.L.T.H.™ intervention.

The brainH.E.A.L.T.H.™ Intervention:

H: Healthy Eating.

Healthy eating is essential to optimal brain health. At a fundamental level - food is information. What we put into our bodies provides the raw materials to build and repair our mitochondria - the structural building blocks of our DNA and brain cells. If we fail to provide the right building blocks for our mitochondria, ultimately our brain (and body) will go into disrepair. A brain healthy diet focuses on:

- A diet based on whole "real" foods (not processed foods)
- Plenty of healthy fats (think olive oil and avocados)
- Reducing sugar and eliminating artificial sweeteners
- Reading labels to make informed dietary decisions

Look to resources such as the MIND diet, Whole30, The Institute of Functional Medicine's Mito Food Plan, or a medically supervised Alkaline Ketogenic Diet as springboards to use healthy eating

to boost cognitive function.

E: Emotional Regulation.

Our emotions can have a big impact on brain health. Stress causes the release of a hormone called cortisol. Too much or too little cortisol can cause damage to cells in the hippocampus - our brain's memory center. Chronic low mood, or depression, can mimic symptoms of a dementia, and ongoing depression is associated with pre-mature aging of the brain. We can practice daily rituals to promote our emotional health by:

- Socializing, cultivating meaningful relationships, and sharing challenges
- Getting outside! Fresh air, green spaces, and sunshine boost mood
- De-stressing with Epsom salt baths, listening to music, or journaling
- Practicing daily meditation

Look to sources such as the apps Headspace, Calm, and 10% Happier if you are new to meditation. If stress, anxiety, or depression persists even with the practice of daily self-care rituals, it is important to seek the help of a qualified health care provider.





A: Activity and Leisure.

Really consider how you are spending your time. Are you carving out time for exercise? Exercise and movement are foundational to a healthy mind and body. Are you getting enough sleep? During sleep, our bodies literally “take out the trash,” flushing out cellular debris from the brain, including the chemically sticky beta-amyloid plaque thought to play a role in AD. Try the following:

- Get moving! Pick an exercise you enjoy so you stick with it
- Add intense bursts of cardiovascular activity to your exercise routine
- Note: Tabata-type exercise or High Intensity Interval Training (HIIT), have shown the most beneficial effect on increasing Brain Derived Neurotrophic Factor (BDNF), which contributes to the growth and survival of nerve cells. Of course, it is always important to check with your physician before engaging in any type of exercise program
- Create a nighttime ritual during the “golden hour” before bedtime
- Focus on getting a minimum of 7-8 hours of sleep each night

Does your life have meaning, joy, and purpose? Sketch out how and where you are spending your days and see if this aligns with the life you want to live. Examine your intentions before committing to activities.

L: Learning Strategies.

Continue to challenge yourself mentally on a daily basis. Research is mixed; however, there is some evidence to support that solving crossword puzzles and engaging in other brain training games (see brainhq.com) can be of benefit. New data suggests that learning a novel, challenging skill may be more useful for improving memory over time. Complex tasks are thought to strengthen connections between the different parts of our brains, while repetitive tasks stimulate one brain region.

Strengthening connections between entire brain networks may provide more of a buffer against cognitive impairment. Consider:

- Learning or (re-learning) a musical instrument
- Studying a foreign language
- Taking up quilting or another artistic endeavor
- Enrolling in a new educational course (Alabama provides tuition waivers at community colleges for those 60 and older)
- Practicing a new physical activity like ballroom dancing

These and other things can also increase meaning, purpose, and joy in your life, while enhancing cognitive reserve.

T: Toxicant Removal.

We now know that a percentage of AD risk can be attributed to harmful environmental toxicants. Current or lifetime exposure to heavy metals (aluminium, lead, mercury, copper, etc.), pesticides, industrial chemicals, and air pollutants can induce neuroinflammation, setting the stage for AD and other brain health issues. You can take steps right now to reduce your toxicant load by:

- Consuming organic, pesticide free food and pure water
- Examining your personal care products for questionable or harmful ingredients, like phthalates, parabens, and other hormone disruptors
- Purifying your home’s air (mold and other mycotoxins can have a detrimental effect on brain health)
- Taking inventory of previous toxicant exposures
- Use the Environmental Work Group’s (EWG) Clean 15/ Dirty Dozen app as a guide to decide how to allocate monetary resources towards purchasing organic foods
- Look to the EWG Healthy Living app or the Skin Deep resource at EWG.org for guidance on choosing safer health and beauty aids

H: Habit Formation.

At the Brain Health Institute, we believe in a personalized, incremental approach to improving brain health. We suggest starting with one simple shift in each of the pillars described above. Gradually building on basic healthy habits can lead to big changes over time and build resilience against harmful insults to our precious brains.

Some of the suggestions may be easy for you to undertake and some may be more difficult. That’s okay—start with the easy stuff! The most important thing is that you continue to take steps forward, not towards perfection.

Supporting your brain and your body is the most important thing. Sometimes, the hardest part is just taking the first step!

Start where you are. Start today.