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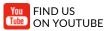
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# What Is Cognitive Decline and What Can We Do About It?

In youth, signs of it are called ADHD, laziness, or lack of motivation. At middle age, we embarrassingly refer to it as "brain fog" or joke that we're having a "senior moment." As we actually reach our senior years, the names get more serious: dementia, Parkinson's disease, and Alzheimer's.

These are all labels for the same thing: cognitive decline (CD). Contrary to popular belief, CD can happen at any age, although it mainly afflicts those over the age of 65. The bad news is that while thousands experience it throughout their lives, very few of us actually do anything about it until it is too late.

The good news is that for most people, cognitive decline is accelerated by lifestyle and dietary behaviors that we have the power to change.

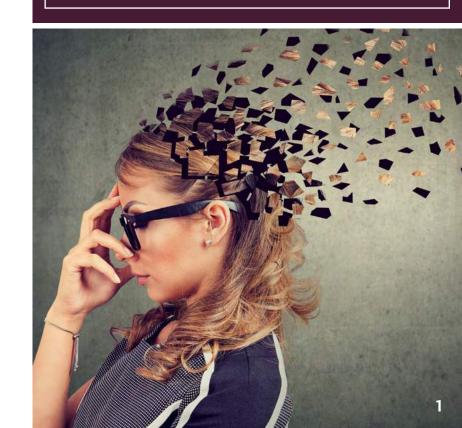
But can cognitive decline actually be reversed? For a lot of people (especially in middle age and younger) it absolutely can! And if you or an aging loved one has been diagnosed with dementia, the course of decline can be significantly reduced through making modifications in diet,<sup>1</sup> lifestyle, and outlook.

Knowledge is power, and that absolutely applies to the simple yet vital steps you can take to protect your brain health. In the following sections, we will dive deep into strategies you can employ NOW for a healthy brain for many years to come.

Making permanent and significant change for better health starts with having the right information. So let's get started with the facts about the state of our brains in America. This information may be a wake-up call, but it is also a testament to the fact that no one is alone when it comes to this crisis.

#### What is Dementia?

Dementia is not a specific disease. Rather it's a collective term to describe symptoms associated with a mental decline severe enough to impact daily activities. The most common form of dementia is Alzheimer's.



## THE PROBLEM

# The Alzheimer's Epidemic

There is no way around it – the statistics about Alzheimer's are downright frightening. According to the Alzheimer's Association,<sup>2</sup> the disease is the 6th leading cause of death in the United States. Every 10 seconds, someone is diagnosed with Alzheimer's. Approximately 5.7 million people have been diagnosed with the disease; according to many experts, many millions more go undiagnosed each year. In many other countries around the world, it is the leading cause of death.

To date, caregivers have given an estimated 18.4 billion hours of care to Alzheimer's patients in the U.S. alone. Some 16 million Americans provide unpaid care for loved ones and others with Alzheimer's. In 2018, Alzheimer's cost the United States \$227 billion.

Alzheimer's is a disease that is growing every day. In the decade-and-a-half between 2000 and 2015, deaths from heart disease actually decreased by 11%. During the same time period, deaths from Alzheimer's increased by a whopping 123%. Alzheimer's kills more elderly Americans than breast cancer and prostate cancer combined; one in three seniors will die from it.



# Drugs Are Not the Long-Term Solution

Anyone who goes the conventional route of treating Alzheimer's discovers that there is no cure for the disease. There are, however, pharmaceutical drugs with complicated-sounding names at your doctor's disposal to try and slow down its progression. The most common ones are "cholinesterase inhibitors." These drugs block a particular enzyme to increase the amount of acetylcholine (a major neurotransmitter) in the brain.

Acetylcholine is located mostly in the hippocampus. It assists nerves in communicating with each other to form memories. Research has found that, for most Alzheimer's patients, acetylcholine levels (as well as cellular receptors designed for acetylcholine) are extremely low.<sup>3</sup> Besides certain senile plaques and "neurofibrillary tangles," acetylcholine abnormalities are the most common biological explanation for Alzheimer's.



Unfortunately, most drugs for Alzheimer's and dementia have limited effectiveness and come with some pretty nasty side effects. Immediate side effects may include nausea and vomiting, muscle pain, fatigue, dizziness, agitation or aggression, loss of appetite, diarrhea, headaches, and even hallucinations.<sup>4</sup>

Long-term side effects of cholinesterase inhibitors have to do with how the drug may affect the heart. These drugs have long been known to induce slower heart rates and occasional fainting. A 2009 Canadian study<sup>5</sup> conducted by Queen's University found that the problem may be worse than previously thought.

The region-wide investigation found that heart rate was 69% slower among patients who used cholinesterase inhibitors. They also found that people who used these drugs were hospitalized for fainting almost twice as much as people who did not receive the drugs. In addition, the study found that people taking common dementia drugs had a 49% chance of pacemaker implants and an 18% increase in hip fractures.

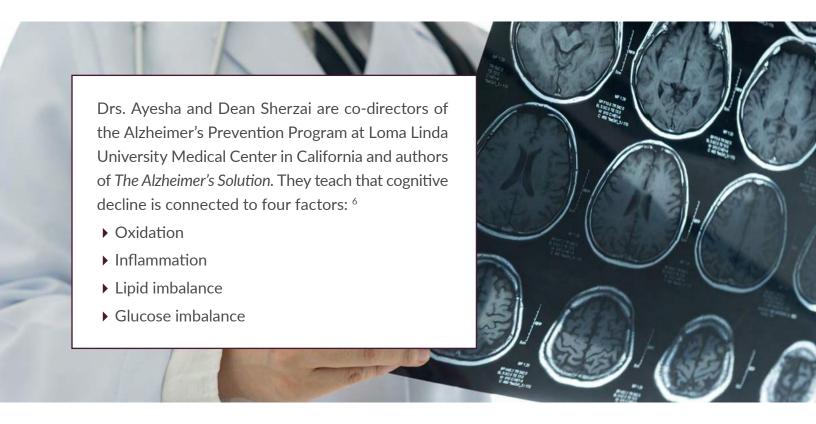
## THE SOLUTION

# Take Care of Your Brain Naturally

These are downright scary statistics. What they don't tell you is that in many cases, Alzheimer's disease could have been prevented early on.

There are sure-fire, evidence-based ways to protect your brain. They involve eating and living in a way that supports your brain, your body, and your overall emotional and physical well-being. The path towards brain health is a journey you have to embark on by your own choice. Once you make the commitment towards better health, there can be a LOT of brain health gains made along the way.

Did you know that the brain is a muscle? Just like any muscle, it must be fed properly, hydrated, and, most importantly, exercised regularly for it to grow and thrive. The brain weighs a mere three pounds but uses about 25% of the body's energy to keep all its mechanisms working and in tip-top shape.



The key to brain health, then, is to reduce oxidation, reduce inflammation, stabilize lipid balance, and stabilize glucose. There is no one "magic pill" that will do all this for you, however. The solution lies in lifestyle and dietary changes that promote health.

# The Six Simple Steps for Brain Health

The solution to declining brain health doesn't have to be complicated. You don't have to be a neurologist to know how to turn it all around. In fact, what will really help your brain thrive is to go back to the basics: eat healthy food, drink fresh water, move your body, slow down stress responses, get a good night's sleep, and be curious and engaged in life.

You can consider the following "six steps" as the MUST DO'S for maintaining brain health. If you make them part of your lifestyle over time, they'll help you maintain good health in both your body and your brain.

So get yourself a glass of fresh (filtered!) water and a healthy snack. Turn off the cellphone and the TV and make a commitment to read through these six simple tips for brain health distraction-free. Your brain will definitely appreciate it.

## # 1 Feed Your Brain with the Right Nutrition



There is so much to say about nutrition and the brain that we could write a whole book on the subject. Indeed, many experts already have. Here are some simple switches that you can employ to get started right now.

The first, and perhaps most important, switch is to move from high-sugar foods to low-sugar foods. This is because sugar causes not only instability in blood glucose levels but also brain inflammation.

The inevitable risk of brain inflammation is perhaps the most serious consequence of too much sugar in the diet. Study upon study has discovered the link between high refined sugars and inflammation in the brain. For instance, a 2015 Australian investigation<sup>7</sup> published in the journal *Nutrients* found a clear link between high carbohydrates and cognitive decline in both young people and the elderly. One of the key factors for this link, according to the study, was brain inflammation.

Glucose's connection to brain health is not as straightforward but just as serious. The brain is a cell-rich environment and is composed mostly of nerve cells or neurons. Remember that statistic about how much energy the brain uses for its weight? Almost 25% of the body's total energy input will go to brain function. This means a lot of the glucose you take in goes right to your brain.

Not enough glucose to the brain, called *hypoglycemia*, can be dangerous and is often connected to diabetes. More to the point, however, is the devastation that too much sugar can do to you and your brain health. Consuming too much sugar and simple carbs like white bread and pasta can lead to a shut-down of brain mechanisms having to do with memory and overall cognitive function.<sup>8</sup>

According to a Harvard University report, several studies have shown the connection between too much sugar and cognitive decline. Among them is a 2009 joint study by the University of Montreal and Boston University. The researchers found that eating too much sugar was directly related to memory and cognitive deficiencies. Another study cited by Harvard was a University of California, Los Angeles, investigation which found a direct relationship between sugar consumption and premature aging of cells.



Another factor for brain health is to eat the right kinds of fats. Recall that lipid balance was extremely important for brain health, according to Drs. Ayesha and Dean Sherzai. This is because the brain is made up of a high amount of fat. It also relies on the substance to carry fat-soluble vitamins such as A, D, K, and E from one place to another and to maintain cell membrane structure.

Experts differ to some degree as to how much and specifically which kinds of fats can be beneficial or detrimental to brain health. Hands down, however, everyone agrees that trans fats are toxic and should be avoided at all costs. Trans fats are a type of unsaturated fat that are synthetically mass-produced from certain vegetable fats. They are found in margarines as well as many pre-packaged and fast foods.<sup>10</sup>

Trans fats are really bad news for your brain. They can destroy cells, lead to hormonal imbalance, and also increase inflammation. Trans fats can also inhibit the production and utilization of good fats, such as omega-3 fatty acids. Major country-wide studies have linked the consumption of trans fats to depression and other neurological disorders in people of all ages.<sup>11</sup>

At the same time, research has shown that certain other fats can be extremely beneficial for your brain. These include monounsaturated fats and some saturated fats that come from whole foods such as avocados and nuts. Olive oil, organic full-fat dairy products, and some fish such as salmon are great sources of healthy fats for your brain.<sup>12</sup>

To recap, if you could do just two things nutritionally for your brain health, it would be these two items: cut your sugar consumption and stay away from unhealthy fats like trans fats. Just those two switches in your diet alone can do wonders for mental clarity, function, and memory.

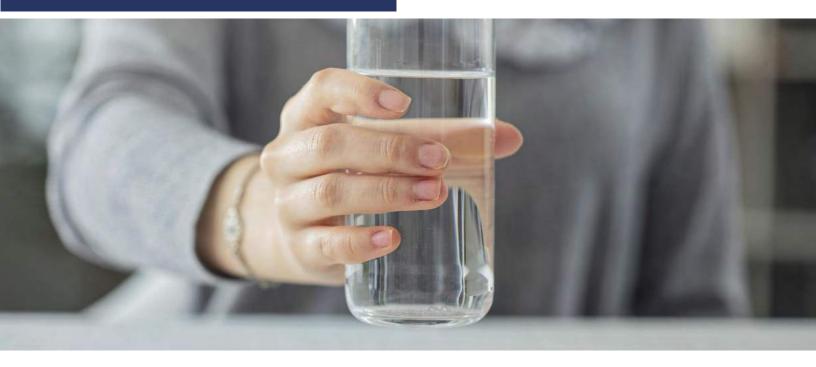
#### 10 Foods to Boost Your Brain

In his book *Genius Foods: Become*Smarter, Happier, and More Productive
While Protecting Your Brain for Life, 13
author Max Lugavere recommends the
following 10 brain-healthy foods:

- ▶ Extra-virgin olive oil
- Avocados
- ▶ Blueberries
- ▶ Dark chocolate
- Eggs
- ▶ Grass-fed beef
- Dark leafy greens
- ▶ Broccoli
- ▶ Wild salmon
- ▶ Almonds



## # 2 Hydrate Your Brain



A clear, sharp brain is a hydrated brain. This doesn't mean gulping down coffee, sodas, and fruit juices. We're talking about good, old-fashioned water. Upping the amount of fresh water you consume can make a surprisingly positive difference in how you think and feel.

Dehydration<sup>14</sup> has been linked to brain fog and problems with memory and focus, as well as headaches, insomnia, and mood swings. This makes sense since lack of fluids can have a direct effect on the production of the feel-good chemicals of the brain: serotonin and dopamine.

When it comes to drinking water, however, not just any water will do. Our advice? Unless you have a pristine water source (such as a mountain-fed spring), stay away from water that comes directly from the tap and the hose. Many municipal water sources have been adding fluoride to their reservoirs as far back as the 1960s. The reasoning back then (and now) is to prevent tooth decay; but this public health initiative comes at great cost to overall health.

Fluoride is a known neurotoxin that has been shown to lower IQ in both adults and children. It also opens pathways for other toxic chemicals to take hold, according to a 2012 meta-analysis published in the journal *Environmental Health Perspectives*. <sup>15</sup>

"Fluoride seems to fit in with lead, mercury, and other poisons that cause chemical brain drain," senior study author Philippe Grandjean said in an interview.<sup>16</sup> "The effect of each toxicant may seem small, but the combined damage on a population scale can be serious, especially because the brain power of the next generation is crucial to all of us."

## #3 Get 7-8 Hours of Quality Sleep a Night



Another factor that sets up an environment for a healthy brain is quality sleep. Studies have concluded that the average adult needs *at least* 7 hours of deep, restorative sleep in order for the body and brain to function adequately. Quality sleep is one in which the brain is in a theta or delta brain wave a significant amount of the time.

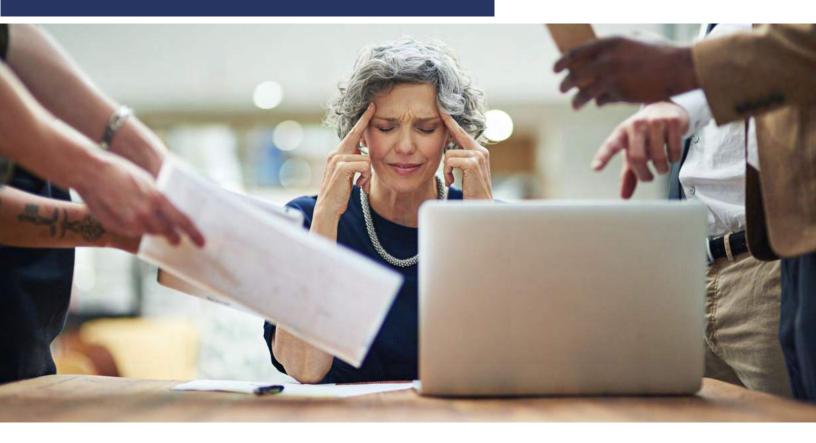
There are two main reasons why this type of sleep is important for maintaining brain health. The first one has to do with a process called "memory consolidation." This process is connected to dreaming. Scientists don't know for sure why we dream at night. However, there's evidence to suggest that dreaming helps to strengthen the "neural traces" of some events, connecting them with older memories and stored knowledge. This process helps us maintain a consistent flow of memories and an understanding of them within the context of our lives.<sup>17</sup>

Another reason for quality sleep is detoxification. A 2013 study<sup>18</sup> funded by the National Institutes of Health (NIH) found that during sleep the brain detoxifies itself of molecules associated with neurodegeneration. In this ground-breaking investigation, NIH scientists actually discovered a whole new network of mechanisms within the brain.

According to the researchers, a "pumping system" called the glymphatic system opens up during sleep. This system controls the flow of cerebrospinal fluid in and out of the brain. At night, the glymphatic system allows fluid to flow more rapidly through the brain for detoxification.

Proof that lack of sleep can affect our thinking can be felt by anyone who has ever gone a few days without adequate rest. A 2003 University of Pennsylvania study found that periods of "extensive wakefulness" can cause permanent damage to neurons connected to both cognition and alertness.<sup>19</sup>

## # 4 Learn How to Manage Stress



Dr. Richard Cytowis, a George Washington University professor of neurology writing for the journal *Psychology Today*, <sup>20</sup> states that the human brain processes information at about 120 bits per second. By comparison, a typical smartphone processes information at 5,000 times that rate. While our human brains haven't evolved much since the Stone Age, we are placing more demands on them than ever before.

"We ask our brains to sort, categorize, parse, and prioritize gargantuan data streams it never evolved to juggle. It should shock us all at how unprepared it is to weigh and navigate the glut of decisions that modern life throws at it," says Cytowis.

He goes on to emphasize that "...We already hit overload, 10 or 20 years ago."

This imbalance of the demands we place on our brains versus what they can handle causes stress. Couple this with bad eating habits, sedentary lifestyles, and stressful events that just come with the territory of life, and you have a recipe for long-term cognitive decline caused by stress alone.

Taking a good look at your life and shaving off unnecessary stressors is a good first step for reducing stress to be sure. At the same time, we have to learn strategies to cope with stressors that will inevitably filter into our lives no matter what we do.

The solution to this, say experts, lies not in cutting ties to anything and everything that causes you stress. We have to learn tools to manage stress with the aim of moving our bodies out of fight or flight mode and into the "relaxation response," where healing on all levels can occur. And we must put these tools into practice every day.



For example, studies by Dr. Sara Lazar,<sup>21</sup> a neuroscience researcher at Massachusetts General Hospital and Harvard Medical School, have found that meditation can have profound effects on the actual structure of the brain itself.

In a study by Lazar and her team in 2015,<sup>22</sup> they found that long-term meditators had more "cortical thickness," i.e., increased gray matter in the areas of the brain that pertain to sensory awareness.

Typically, the cortex tends to shrink as a person gets older. This translates into difficulty in figuring things out and remembering. If a person has a diagnosed cognitive condition, such as Alzheimer's, cortical shrinkage may be severe. In Lazar's study, 50-year-old meditators remarkably had the same amount of gray matter in the cortex region that 25-year-old meditators did.

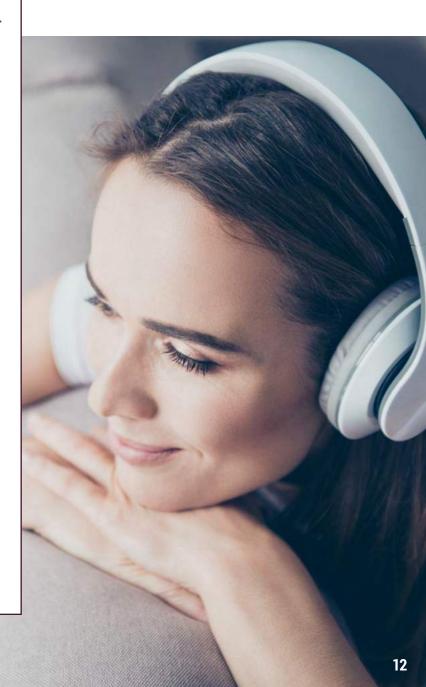
A second study by Lazar<sup>23</sup> conducted at Harvard in 2011 evaluated brain images of individuals who had never meditated before as they embarked on an eight-week meditation program. Significant changes could be found in the group as the weeks went on. These changes included improvements in the areas of the brain that corresponded with self-reflection, learning, cognition, memory, emotional regulation, empathy, and compassion. Changes in the pons, the area of the brain where regulatory neurotransmitters are produced, as well as in the amygdala (the epicenter for the fight or flight response), were also noted.

Finally, other studies have made the correlation between regular meditation and an increase in longevity markers as measured by telomere length. Telomeres are tiny bits of genetic material that occur at the end of each chromosome. Their job is to protect DNA information. Shortened telomeres are linked to depression, stress, and disease while longer telomeres are associated with longevity. An investigation conducted by Canada's University of Calgary in 2015<sup>24</sup> found that those who meditated regularly had significantly longer telomere length.

The verdict is still out on exactly how much you have to meditate to produce the effects mentioned above. In Lazar's latest studies, researchers saw changes in brain states with as little as half an hour of meditation a day. Other experts state that an individual can begin to experience the benefits of meditation after only 10 minutes of daily meditation.

Of course, meditation is not for everyone. Luckily, there are other ways to turn off stress responses. Here are just a few:

- Meditative walking (walking without distractions such as a smartphone)
- Deep breathing
- Emotional Freedom Technique (Tapping or EFT)
- ▶ Forest bathing (also called Shinrin-yoku)<sup>25</sup>
- Gardening
- Reflective journaling
- ▶ Coloring and/or drawing
- ▶ Listening to music
- Grounding or Earthing
- Dancing
- ▶ Meditative eating<sup>26</sup> or tea ceremony<sup>27</sup>
- ▶ Yoga or stretching
- ▶ Tai chi, qi gong, or other martial arts



## #5 Move Your Body



Recent research has discovered something remarkable: moving your body can help your brain in a lot more ways than originally thought. Neurologists now know that for a brain to grow and develop, you must work out your body as well.

You may already know that aerobic exercise can be immune boosting. Working up a sweat on a regular basis is also a boon for your heart, your gut, and almost every organ in your body. It is also correlated with lower risk for diabetes, hypertension, and cardiac disease.

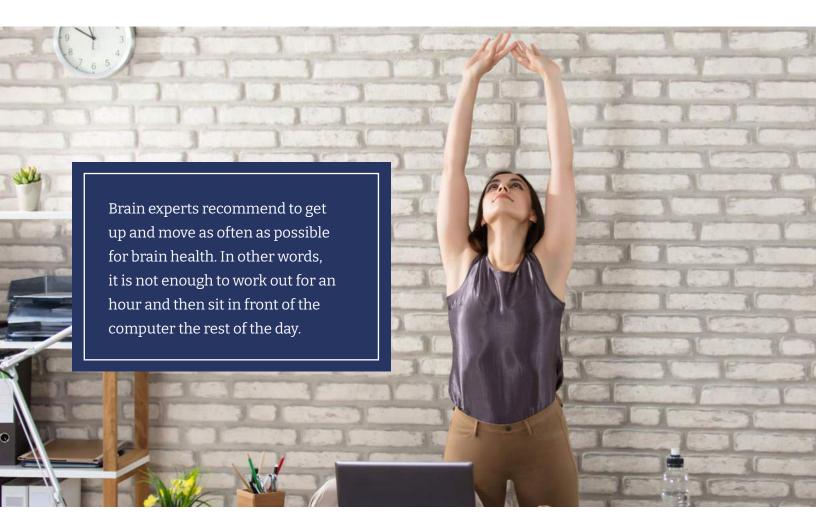
Most of all, exercise reduces inflammation. This may be the biggest benefit of exercise for brain health. A 2005 report published in the journal *Neuroscience*<sup>28</sup> found that even moderate amounts of jogging, biking, or walking can stimulate and grow the hippocampus region that is responsible for storage of long-term memories.

A report published in the 2011 *Proceedings of the National Academy of Sciences*<sup>29</sup> found that hippocampal and medial temporal lobe volumes were bigger in more fit older adults, compared to those who didn't exercise. They also found that exercise training increased hippocampus size by two percent over the course of one to two years.

This landmark joint study further discovered that increased exercise is associated with greater levels of BDNF. BDNF stands for brain-derived neurotrophic factor and is a mediator for neurogenesis, or the growth of brain tissue.

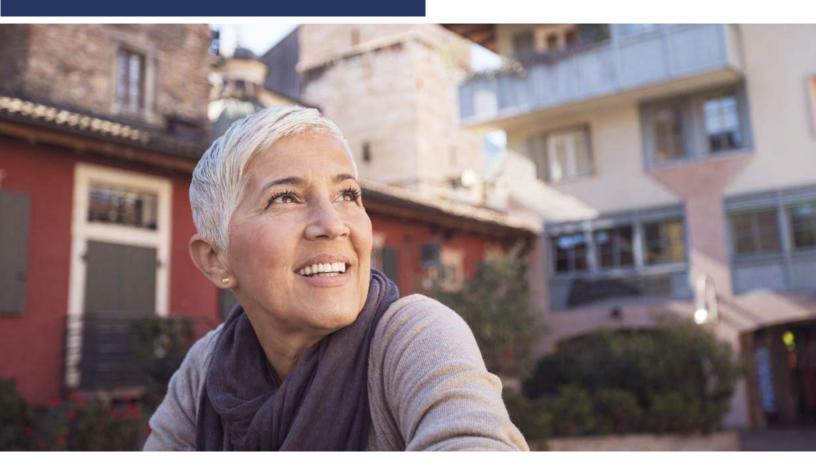
Strength training, especially of the legs, seems to correspond to a boost in brain strength as well. In a 2018 study<sup>30</sup> by Italian scientists, research shows that using the legs in weight-bearing and strength-bearing exercises sends signals to the brain to produce new healthy neural cells. According to an article about this groundbreaking discovery for *Science Daily*, the study's finding "fundamentally alters brain and nervous system medicine."

According to other studies done *in vivo*,<sup>31</sup> strength training's ability to increase innervation (the amount of nerve inputs that occur within a certain amount of time) in the muscles can also help the body assimilate the neurotransmitter acetylcholine.



In addition to working out and doing strength training at least 30 minutes, four times a week, be sure to get up and stretch, take a walk around the block (or around the office), or just move your body several times throughout the day.

## # 6 Challenge Your Brain



Finally, the brain itself must "move" to stay healthy. The brain is a muscle and it needs to be "worked out" on a regular basis – especially as we get older.

Working out for the brain, of course, is different than working out the body. Mental and even emotional challenge can be positive for the brain in small amounts. The best kinds of challenges are those that have to do with learning new skills which exercise the whole brain, such as learning a musical instrument or a new language. Travel, meeting new people, and engaging in social activities like volunteer work all create connections, ties, and challenges that the brain loves and can respond to.

"Cognitive and social engagement have been shown to be protective against cognitive decline, whereas hearing loss, depression, and social isolation are associated with cognitive decline," says Dr. Kathryn Papp, a neuropsychologist and professor at Harvard Medical School.<sup>32</sup>

In short, we humans are curious creatures that thrive on movement, challenge, and growth. We are life-long learners at heart and we are social creatures as well. Doing what brings you joy, what impassions you, and what allows you to feel emotions (both negative and positive) are the factors that are going to grow (and protect) your brain and enrich your life.

## OTHER CONSIDERATIONS

# When Should You Consider Supplementation?

The tips for brain health we just outlined are not complicated. If you follow them, you will undoubtedly see changes in the amount of mental clarity, focus, memory recall, and peace of mind you experience on a day-to-day basis.

Sometimes, however, you need a little extra support. This is especially true if you are on a healing path. Brain function is directly connected to immune function as well as gut health.<sup>33</sup>

In addition, if you or a loved one are already seeing the signs of cognitive decline such as brain fog, forgetfulness, confusion, or mental fatigue, there may be other factors at play that are causing these symptoms. Nutritional deficiencies could be one of them.

It is always a good idea to consult a qualified holistic health practitioner before embarking on any kind of supplement regime. A practitioner will be able to assist you in selecting the right kinds of supplements. They'll also find out more about your unique situation through testing for certain vitamin and mineral deficiencies, lipid levels, inflammatory markers, and toxicity in substances such as fluoride or heavy metals.

If you feel like you would like to supplement for brain health, there are a few key substances that are worth taking note of for how they can help the brain:

B vitamins

▶ Calcium

Vitamin C

- ▶ Selenium
- ▶ Omega-3 fatty acids
- ▶ Magnesium

▶ lodine

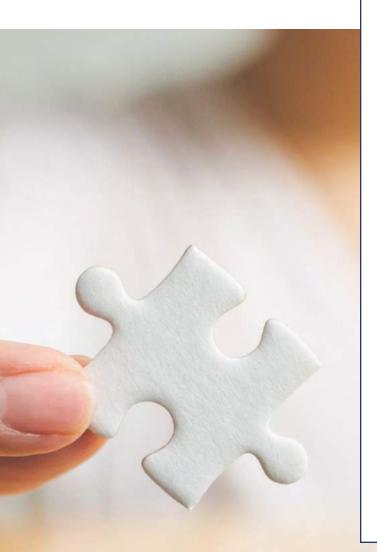
▶ Zinc

▶ Iron

Of course, this list does not cover all important nutrients by any means. But it will give you an idea of some of the most noteworthy ones that promote brain health.



### A Note on Choline



Choline is a type of B vitamin whose job it is to support the production of neurotransmitters. Remember the substance acetylcholine that we have mentioned a few times in this report? It is one of the brain's main neurotransmitters responsible for memory and learning. Almost all who suffer from Alzheimer's and other forms of dementia are deficient in it. The sad fact is, however, that most Americans are low to some degree in this essential brain-enhancing substance.

Choline is key for manufacturing acetylcholine in the body. Only about 10% of the total circulating choline in the body is produced in the liver. The other 90% must come from external sources.

The best way to get sufficient choline into your system is through eating key whole foods that contain it. These include organic eggs (the richest source of choline) as well as fish, quinoa, almonds, organ meat, wheat germ, some mushrooms like shiitake, chocolate (cacao), peanut butter, Brussels sprouts, and cruciferous vegetables like broccoli. These foods are healthy for your body in so many other ways as well. If you add them to your diet, it can be a win-win for you on many levels.

The U.S. Institute of Medicine states the Adequate Intake (AI) of choline is 550 mg/day for adult males and 425 mg/day for adult females.<sup>34</sup>

# Key Herbs and Adaptogens That Can Help Your Brain

There are literally dozens of herbals supplements that can help you balance your moods, obtain mental clarity, and maintain focused peace of mind. Supplements should never take the place of a good diet full of brain-healthy vegetables, fruits, and protein sources.

That being said, here are a few herbs, many coming from the Amazon rainforest or Asia, that have been traditionally used and scientifically proven to boost brain health:

- Ashwagandha
- Bacopa
- ▶ Cacao
- ▶ Camu camu
- ▶ Cinnamon
- ▶ Curcumin in turmeric
- Dragon's blood
- Gotu kola
- Guayusa
- ▶ Kapikachhu
- ▶ Lion's mane mushroom
- ▶ Panax ginseng
- ▶ Pau d'arco
- ▶ Rhodiola
- ▶ Sacha inchi
- ▶ Uña de gato





**Ashwagandha** (Withania somnifera)

Ashwagandha is very good for the brain on many different fronts. In particular, however, it is known as a mood stabilizer. Psychiatric studies have reported that ashwagandha can lead to significant rebalancing for manic depression, bipolar disorder, and schizophrenia.<sup>35</sup> Ashwagandha can also help reduce ADHD in children, according to an Indian investigation.<sup>36</sup>



Bacopa

(Bacopa monnieri or B. monnieri)

Bacopa, or "brahmi," has been shown to help calm anxiety and also improve memory. A study published in the journal *Pharmaceutical Biology*<sup>37</sup> found that *B. monnieri* has the ability to regulate "feel good" hormones like dopamine and serotonin. These chemicals are involved in stress response, mood, thinking, learning, and memory.



Cacao

(Theobroma cacao)

Cacao is considered a mood-lifter as well as a "brain-builder." This is because cacao contains neurotransmitters that are associated with pleasure as well as motivation. In particular, it contains a fatty acid ligand called *anandamide*. Anandamide is immune-boosting as well as neuroprotective. It has the ability to encourage neurogenesis and can help in the creation of new nerve cells which ward off anxiety.



Camu camu

(Myrciaria dubia)

Camu camu contains one of the highest levels of vitamin C of any plant. One report in the *Journal of Alternative and Complementary Medicine*<sup>39</sup> found that 100 grams of camu camu contains 1882 to 2280 milligrams of vitamin C (a typical glass of orange juice only contains 50 to 100 milligrams). Vitamin C is absolutely essential for the "synthesis" of other important substances in the body, including brain neurotransmitters.



#### **Cinnamon**

(Cinnamomum verum)

Cinnamon is a real antioxidant powerhouse and is best known for how it can reduce inflammation and pain. Its flavonoids have been linked to helping with many kinds of neurological diseases, including Alzheimer's and Parkinson's. According to a lab study at the University of California, Santa Barbara,<sup>40</sup> the phytonutrient cinnamaldehyde in cinnamon has been shown to protect against the buildup of proteins associated with Alzheimer's.



#### **Curcumin in turmeric**

(Curcuma longa)

Curcumin is a particular phytochemical found in the Indian Ayurvedic herb turmeric. Over a thousand different studies have found that curcumin can significantly help lower inflammation levels. Many studies, including a 2007 report published in the *Journal of Neurochemistry*, <sup>41</sup> have linked curcumin to help with Alzheimer's disease by breaking up plaque and cleaning up toxicity in the brain.



## Dragon's blood

(Croton lechleri and Daemonorops draco)

Dragon's blood is one of the most powerful antioxidants in the world. Its resin has been shown to be very protective for the brain, especially when exposed to toxins. According to a 2012 Chinese-US study,<sup>42</sup> dragon's blood was found to be highly radioprotective in animal models.



#### Gotu kola

(Centella asiatica)

Gota kola is a common energy-producing Chinese herb. It is also typically used for fatigue and anxiety/depression. There is ample research which connects gotu kola's anti-inflammatory and neuroprotective effects to improving memory and help for the symptoms of Alzheimer's disease.<sup>43</sup> A 2007 report published in the *Indian Journal of Experimental Biology*<sup>44</sup> found that *Centella asiatica* can help reduce monosodium glutamate (MSG) toxicity. MSG is an excitotoxin that has been connected to dementia.



Guayusa

(Ilex guayusa)

Guayusa is a source of L-theanine. A neuroprotective amino acid, L-theanine is able to change brainwave patterns, according to a 2007 study in the Netherlands.<sup>45</sup> In the study, L-theanine helped brainwaves move from beta waves to alpha and calm stress responses. Guayusa also contains small amounts of caffeine, which can produce a "calm focus" in individuals.



## Kapikachhu

(Mucuna pruriens)

Kapikachhu is also called "velvet bean." It is a rainforest legume that can help with dopamine production and brain balancing. According to research, it is one of the best natural sources of the amino acid L-DOPA, which is a precursor neurotransmitter to dopamine. For this reason, it is sometimes used as a natural adjunct for Parkinson's disease and muscular disorders. It has been used in Indian Ayurvedic medicine since ancient times.



### Lion's mane mushroom

(Hericium erinaceus)

Brain boosting, cognitive improvements, increased mental clarity – these are all reported benefits of lion's mane. A study published in the *Journal of Agricultural and Food Chemistry* found that lion's mane mushroom is "antibiotic, anticarcinogenic, antidiabetic, anti-fatigue, antihypertensive, anti-hyperlipodemic, anti-senescence [anti-aging], cardioprotective, hepatoprotective, nephroprotective, and neuroprotective, and improves anxiety, cognitive function, and depression." Wow!



## Panax ginseng

Panax ginseng is one of the most well-known Chinese herbals for brain health. For years, studies have linked ginseng to improved brain function, improved memory, and emotional balancing. Research has shown that ginsenosides and other compounds in ginseng can protect against brain damage caused by free radicals as well. A study conducted at Northumbria University<sup>48</sup> in the UK found that panax ginseng improved mental performance, relieved fatigue, and evened out blood sugar levels in patients.



#### Pau d'arco

#### (Tabebuia impetiginosa or Tabebuia avellanedae)

Pau d'arco is a major anti-inflammatory, including for the brain. It protects brain cells by blocking key enzymes that can contribute to brain inflammation. According to a 2015 Korean study,<sup>49</sup> among others, it has the ability to block inflammation at the DNA level.



Rhodiola

(Crassulaceae)

Depression occurs when neurotransmitters in the brain become unbalanced. Rhodiola can help rebalance brain chemistry for individuals with symptoms of depression, according to a 2007 Armenian study.<sup>50</sup> Rhodiola is also known to help with insomnia and emotional balancing.



Sacha inchi

(Plukenetia volubilis)

Sacha inchi is a nut that comes from the Amazon rainforest. It is a solid source of omega-3, which can protect against oxidative stress in the brain. Sacha inchi also contains tryptophan, which helps balance moods and lower anxiety. A 2002 University of Florida<sup>51</sup> study found that the tryptophan content is unusually high in sacha inchi. Sacha inchi may also help to ward off Alzheimer's since tryptophan is the precursor for serotonin, a hormonal substance that is usually very low in Alzheimer's patients.



Uña de gato

(Uncaria tomentosa)

Uña de gato, or "cat's claw," protects the mitochondrial membranes of cells, including brain cells. One investigation conducted in 2013<sup>52</sup> found that *U. tomentosa* has beneficial effects on DNA repair and immune function and may be beneficial for those with Parkinson's disease. According to some experts,<sup>53</sup> cat's claw can also help with new brain cell growth through boosting levels of a substance called brain-derived neurotrophic factor, or BDNF.

# YOU CAN ACHIEVE BRAIN HEALTH SUCCESS!

So now that you have all this information on helping your brain stay young, what are you going to do with it?

It may seem overwhelming but it doesn't have to be. If you want to make a change towards a clearer, more focused, calmer brain and a more vibrant life, here are three tips for success to get you started.

# Three Tips for Success

# 1

## Take it One Step at a Time

This is often the hardest thing for most individuals to do. We want to do it all now and get it over with so we can move on to the next thing.

We suggest, however, that you be kind with yourself along the way. Taking on too many things at once is usually a recipe for failure. Slow down and choose just one thing from all the suggestions made in this report. For example, if you choose to focus on nutrition to help your brain health, decide to cut back on sugar in a real, tangible way. Make just one thing within the suggestion a new daily habit, such as substituting your afternoon cola for a glass of sparkling water with lemon. Once you have that habit mastered, move on to the next one. (More on this in tip #3.)





# Get Support for Your Decision

Choose a friend or loved one who you know will be on your side and hold you accountable while not being overly critical. Stay away from naysayers and those who may pull you off your path. Tell your support person of your plans and ask them directly for their help in a tangible way.

What kind of support do you need to make this change? It could be a simple check-in once a week or a quick text to them when you are feeling unsure. If there is no one around you physically, try giving someone a call, reaching out on social media, or joining a support group for dietary changes in your area.

# 3 Don't Give Up!

Even if you "fall off the wagon," it's important that you get right back on and keep on going. You are striving for lasting, permanent change. If you want the change to stick, that means you have to "stick to it" for at least six weeks. Don't add another behavior change to your agenda for the six weeks that you are working on this one. After the time is over and the change has become a healthy habit, you can move on to the next behavior you want to tackle from your list.



#### You Don't Have to Become a Statistic

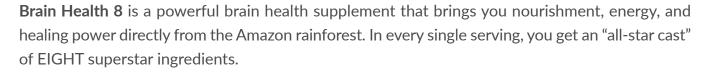
The state of our brain health as a country and globally could be better, that's for sure. But that doesn't mean you have to become a cognitive decline statistic. Now that you have the knowledge, it's up to you to implement it and hopefully share with others. There is perhaps no other health focus that is more important for leading a quality life than caring for the health of your brain!

## Now You Can...

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- Say goodbye to brain fog... embarrassing senior moments... forgetfulness... and trouble concentrating...
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- And so much more!



Each is of the highest quality and almost all are certified organic. You won't find anything unnatural like GMOs, soy, preservatives, or anything else that you don't want in your body.

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Try Brain Health 8 100% RISK-FREE for a FULL YEAR and experience all the brain-boosting benefits it has to offer. If for any reason you're not 100% satisfied, send us back the bottles (even if they're empty) – and we'll send you a full refund of the purchase price.

Experience a Better Memory, Mind, and Mood With Brain Health 8!

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  (This ensures the maximum amount of nutrients from our supplements are actually utilized by your body versus being wasted.)
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