The Top 10 FOODS for a BRIGHT BRAIN
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“Human excellence in virtually all domains is guided by mental factors.”
– Terry Orlick, Founder of the Zone of Excellence

When it comes to nutrition, eating well goes beyond providing energy, optimizing physical health, and improving body composition. In fact, a diet rich in healthy fats, amino acids, vitamins, minerals, antioxidants, and other key nutrients is crucial for optimizing and maintaining brain health, cognitive function, and mental well-being.

For instance, an extensive body of scientific research suggests that diets that are rich in omega-3 fatty acids, particularly docosahexaenoic acid (DHA), are associated with beneficial changes in cognitive performance and behavior. What's more, there’s a powerful connection between the gut and the brain, and researchers have identified that the health of the gut can influence thoughts, feelings, emotions, behaviors, memories, and overall mental function.

Flavanoids, found in foods like green tea, coffee, cocoa, red wine, and myriad vegetables and fruits, have been correlated to improved cognitive function and evolution. B vitamins, particularly B6, folate, and B12 (which is only found naturally in animal sources), have been shown to have positive effects on memory and improve cognitive impairment.

Researchers have found that concentrations of vitamin D, which the body naturally produces from sunlight exposure and is found in fatty fish, mushrooms, and dairy, are positively correlated to cognitive function in elderly folks. Additional vitamins (e.g., vitamin C and E) and various nutrients (e.g., choline, calcium, copper, iron,
selenium, and zinc) have been found to play important roles in cognitive function and delaying cognitive decline.

Clearly, nutrition plays as much of a role in mental fitness as it does in physical well-being, and with that in mind, the following is a list of 10 of the top “smart” foods.

**Wild Salmon**

Wild salmon is rich in the omega-3 fatty acids EPA and DHA, and when it comes to brain health, DHA is “king.” The human brain is made up of nearly 60% fat, and DHA is the predominant fatty acid found in the brain. DHA and EPA are both “essential” fatty acids, which means that the body cannot make them on its own, and they must be consumed through dietary sources.

Unfortunately, the modern food supply is largely void of these important healthy fats due to overconsumption of vegetable oils rich in inflammatory omega-6 fatty acids (e.g., soybean, safflower, sunflower, corn, etc.), meat from feedlot animals (that consume abundant amounts soy and corn), and reductions in healthful seafood consumption. As a result, consumption of these important omega-3 fatty acids has largely diminished and led to significant decreases in body concentrations that have important ramifications for brain health and function.

Even nominal deficiencies in these essential fatty acids can negatively influence intelligence, behaviors, attention, mental well-being, and risk of neurodegenerative diseases. For instance, low levels of omega-3 fatty acids have been linked to multiple degenerative and mood disorders, including memory loss, Alzheimer’s disease, depression, aggressive behavior, and more.
In a series of studies published in the journal *CNS Neuroscience & Therapies*, researchers from Israel found that supplementation with 1.5 – 2.0 grams of omega-3 fatty acids per day led to marked improvements in bipolar disorder and depression in adults and children.\textsuperscript{12}

What’s more, DHA has been shown to accumulate in centers of the brain (e.g., cerebral cortex) involved in memory and attention. In a study published in the *American Journal of Clinical Nutrition*, researchers found that healthy adults who consumed 1.16 grams of DHA per day for 6 months significantly improved both memory and reaction time.\textsuperscript{13}

In a recent study published in the journal *Cerebral Cortex*, neurologists from Germany assessed whether supplemental omega-3 fatty acids had a beneficial effect on the brains of 50 – 75-year olds. The results were nothing short of impressive, as they found that supplementation with 2.2 grams of DHA and EPA per day significantly improved the participants’ cognitive performance and brain function.\textsuperscript{14} What’s more, using neuroimaging, the researchers found that supplementation improved the structure of the participants’ “aging brains.”

In addition to wild salmon, other good whole food sources of DHA and EPA include:

- Mackerel
- Herring
- Anchovy
- Sardine
- Trout

These fatty fish will be your best sources of DHA and EPA; however, it’s important to choose wild-caught fish from a trusted source to ensure the highest levels of omega-3 fatty acids and lowest levels of heavy metals (e.g., mercury). This is why it’s also highly recommended to supplement with a high-quality fish oil supplement daily.
Grass-Fed Beef

Red meat is a great source of vitamins B6 and B12, which are directly involved in the formation and maintenance of healthy nerve and red blood cells. Research suggests that deficiencies in these vitamins may impair cognitive performance and lead to difficulty maintaining balance, depression, confusion, dementia, and poor memory.\textsuperscript{15}

In one study published in the \textit{American Journal of Clinical Nutrition}, researchers from Tufts University found an association between low concentrations of vitamin B6 and B12 and poor cognitive performance on spatial tasks in folks aged 54 – 81.\textsuperscript{16} What’s more, folks with higher concentrations of B6 demonstrated better memory skills.

In an epidemiological study published in the journal \textit{Neurology}, scientists from Stockholm found a clear association between B12 deficiencies and Alzheimer’s disease amongst a group of 370 participants over the age of 75.\textsuperscript{17}

In addition to being a great source of these important B vitamins, beef is also an excellent source of creatine. While known as a muscle-building nutrient, creatine has cognitive benefits as well, including memory formation and retention.

In a Japanese study published in 2002, researchers from the University of Tokyo found that supplementation with creatine significantly reduced mental fatigue when study subjects were asked to perform repeated bouts of mathematical calculations.\textsuperscript{18} Using special infrared technology, the scientists found that taking creatine significantly improved oxygen utilization in the brains of the participants.

In a study conducted at the University of Sydney, researchers found that vegetarians who took just 5 grams of creatine per day for six weeks demonstrated significant
improvements in brain performance, including working memory and intelligence.\textsuperscript{19}

Beef is an excellent source of protein, which provides the amino acids that make up brain communication chemicals called neurotransmitters. Inadequate protein consumption has been known to cause a number of cognitive problems, and protein deficiency can lead to decreases in the concentrations of important neurotransmitters.\textsuperscript{20}

When choosing beef, it’s a good idea to opt for organic, grass-finished sources. Studies show that beef from grass-finished cows contains up to 5 times more omega-3 fatty acids than beef from grain-fed cows.\textsuperscript{21}

You may be asking, “What about saturated fat? I’ve heard it’s ‘bad’ for you.” Truth be told, despite what you may have been led to believe, saturated fat is vitally important for preserving brain health. Saturated fat is a fundamental building block for brain cells.

In a study published in the \textit{Journal of Alzheimer’s Disease}, researchers at the Mayo Clinic found that, amongst over 900 Americans with an average age near 80, participants with the highest saturated fat intakes experienced a 36\% decrease in risk for developing dementia.\textsuperscript{22} On the contrary, folks favoring carbohydrates in their diets had a remarkable 89\% increased risk for developing dementia.

Beyond preserving brain health and function, it is also well-established that the notion that saturated fats are to blame for cardiovascular disease are ill-conceived and unfounded. In other words, as reported by Dr. Glen Lawrence in the journal \textit{Advances in Nutrition}, saturated fat intake is not associated with an increased risk for heart disease.\textsuperscript{23}

Here’s a fun fact: Saturated fats comprise upwards of 50\% of the fats in human breast milk, arguably the most natural and accurate source of human nourishment.
Eggs

Like beef, eggs are also a very good source of vitamin B12, and they are one of the few excellent sources of choline—nearly all of which is located in the yolk. A lesser-known nutrient that supports brain health and nervous system function, choline is the main building block of the neurotransmitter acetylcholine, and its significance in nervous system function cannot be overstated.

When scientists from the University of North Carolina supplemented the diets of rat pups with choline, they found that their brain function changed for the better, resulting in life-long memory enhancement.24

In a study published in the *American Journal of Clinical Nutrition* in 2011, researchers from the Boston University School of Medicine set out to determine the relationship between dietary choline intake and cognitive function amongst nearly 1,400 men and women with an average age of 61. Not surprisingly, the researchers found that higher choline intake was associated with better cognitive performance.25

In addition to their B vitamin and choline content, eggs are also rich in protein and the potent antioxidants lutein and zeaxanthin, which fight oxidative stress and free radical damage. In one study, a research team from the Human Nutrition Center on Aging at Tufts University found that lutein and zeaxanthin can improve cognitive function in the elderly.26

These findings spawned the research team to conduct a study on the effects of daily egg consumption on cognitive function in the elderly. Although the study is currently ongoing, the researchers hypothesize that “there will be a significant increase in
cognitive function measures in older adults provided with meals containing 2 eggs per day at the end of 6 months.”

When shopping for eggs, it’s a good idea to look for eggs from pasture-raised hens. While all egg yolks contain some omega-3 fatty acids, pasture-raised eggs may have 3–5 times more than conventional eggs.

You may be asking yourself, “What about cholesterol? Isn’t that ‘bad’ for you?” According to Dr. David Perlmutter, author of The Grain Brain, “Cholesterol, which has been long vilified by the media and medical community, actually promotes neurogenesis (i.e., the birth of new brain cells) and communication between neurons, to the degree that studies have shown that higher levels of serum cholesterol correlates to more robust cognitive prowess.

“Cholesterol is vital for a well-functioning brain. Cholesterol functions as a brain protective antioxidant. While the brain constitutes about 2-3% of our total body weight, an impressive 25% of the body’s cholesterol is found in the brain. So when the FDA last year began requiring consumer warnings on certain cholesterol lowering medications related to memory decline and other cognitive issues, it wasn’t surprising.”

In a study published in the journal Neurology, researchers from Johns Hopkins University found that, amongst the elderly, those folks whose cholesterol levels are the highest may have as much as a 70% risk reduction for dementia.27
Blueberries

When it comes to brain aging, two of the most important factors to take into consideration and manage are inflammation and oxidative stress, the latter of which is fueled by free radicals. In fact, there is a large number of neurodegenerative diseases associated with excessive oxidative stress, including Alzheimer’s disease, mild cognitive impairment, Parkinson’s disease, Huntington’s disease, and amyotrophic lateral sclerosis (ALS).28

Antioxidants slow down the aging process in the brain and body by binding to and combating free radicals that can damage cellular structures. Not surprisingly, researchers have repeatedly found that high fruit and vegetable intakes are positively correlated with antioxidant intake and cognitive performance.29

Blueberries repeatedly rank as having one of the highest antioxidant capacities among all fruits, vegetables, spices, and seasonings.30 Amongst the brain benefits, researchers have found that greater intakes of blueberries (and berries in general) reduce rates of cognitive decline in older adults.

In one study published in the Annals of Neurology, researchers tracked the nutrition intake and measured the cognitive function of over 16,000 women aged 70 and above for 6 years. Participants with the highest antioxidant intake, namely from berries, showed the lowest rate of cognitive decline.31

In another study published in the Journal of Agricultural and Food Chemistry, scientists found that adults who consumed a concentrated blueberry juice daily demonstrated improved learning and memory, as well as reduced levels of depression.32
Studies show that blueberries may prevent and reverse cognitive and behavioral deficits by improving communication between nerve cells. In fact, in his book *The Brain Diet*, naturopathic doctor Alan Logan refers to blueberries as the “WD40® of the nerve cells.”

To boost your brain power, it’s a good idea to consume blueberries, other berries, and dark-colored vegetables daily.

**Walnuts**

Walnuts are the same shape as the human brain—need we say more? If you need more persuasion, walnuts are one of the best plant-based sources of omega-3 fatty acids, and they contain more antioxidants, folate, and vitamin E than any other nut.

A study published in the Journal of the *American Medical Association* found that vitamin E may combat dementia. Specifically, a large team of investigators found that, among patients with mild to moderate Alzheimer’s, daily supplementation with vitamin E slowed functional decline. In another study published the journal *Neurobiology of Aging*, European researchers found that low levels of vitamin E were associated with increased risk for mild cognitive impairment and Alzheimer’s disease.

Scientists have found that when rats are fed walnuts daily, they reverse brain aging and improve cognitive and motor performance. In a study published in the *British Journal of Nutrition*, researchers from Tufts University found significant cognitive improvements in rats when they were fed a diet of 6% walnuts, which would be equivalent to consuming about 1 ounce of walnuts per day.
In a study just published in a 2014 issue of the *Journal of Health, Nutrition & Aging*, researchers from UCLA examined the diets of thousands of folks from the National Health and Nutrition Examination Survey (NHANES) to determine whether a connection exists between walnut consumption and measures of cognitive function. They found that cognitive function was consistently greater in study participants who consumed walnuts.\(^{37}\)

Walnuts have also been shown to boost levels of melatonin, a hormone that plays an intricate role in sleep. In a study published in the journal *Science*, researchers from the Department of Neurosurgery at the University of Rochester discovered that, during sleep, the brain clears out potential “neurotoxic” waste that builds up during the day.\(^{38}\)

As mentioned above, walnuts are one of the better plant-based sources of omega-3 fatty acids, specifically alpha linolenic acid (ALA), which is considered to be the “parent” omega-3 fatty acid to the aforementioned EPA and DHA. It should be noted that ALA must be converted (in the liver) into the heart- and brain-healthy EPA and DHA. Although the human body has the capability to do this, it has only a very limited capacity to do so, as the conversion rate is relatively poor (e.g., 5\%).\(^{39}\)

Although walnuts may not be a suitable source of EPA and DHA, they provide various other nutrients that support a healthy brain, and adding one ounce per day to your nutrition plan is a good place to start.
Broccoli

Broccoli is an excellent source of vitamin K, which studies have shown to improve cognitive function and memory. Using data from the Québec Longitudinal Study on Nutrition and Successful Aging, Canadian researchers found that men and women over the age of 70 who had higher levels of vitamin K performed better on memory tests. The research suggests a possible role of vitamin K in cognitive function during aging.

There is a growing body of evidence suggesting that menaquinone-4, one of the subtypes of vitamin K2, exerts anti-inflammatory effects and protects against oxidative stress, two very important factors in combatting an aging brain and promoting brain health.

Speaking of fighting oxidative stress, broccoli is also an excellent source of vitamin C and a very good source of vitamin E, two potent antioxidants that scavenge free radicals and protect the brain from oxidative damage. Because of vitamin C’s potent antioxidant capabilities, researchers have posited that it may have a potential therapeutic role in neurodegenerative diseases like Alzheimer’s, Parkinson’s, and Huntington’s.

In addition to being a very good source of the brain nutrient choline, broccoli—and other cruciferous vegetables—contains sulforaphane, a compound that has been shown to support the health and function of the blood-brain barrier, which is responsible for protecting the brain from harmful chemicals in the blood.

In one study, researchers from the University of Texas Medical School found that when rats were given sulforaphane after traumatic brain injury (TBI), they significantly improved performance on tests of cognitive function and working memory.
Researchers from Italy suggest that sulforaphane “appears to be a promising compound with neuroprotective properties that may play an important role in preventing neurodegeneration” and neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, stroke) due to its potent ability to counteract oxidative stress.44

With all of this in mind, it’s a good idea to consume at least 1 – 2 servings of broccoli or other cruciferous vegetables daily. Other vegetables from the Brassica family include Brussels sprouts, cabbage, cauliflower, collard greens, and kale.

Fermented and Probiotic-Rich Foods

It’s no secret that the gut is far more than a component of the digestive system. In fact, it’s home to a vast bacterial ecosystem (i.e., gut microbiota) that includes over 100 trillion bacteria. That’s a huge number, and it’s on the order of 10 times the number of cells in your body. That’s right, you’re about 90% bacteria and only 10% human.

Building and maintaining the proper amount of beneficial bacteria (i.e., probiotics) is crucial for a number of reasons, and this area of science is considered by many to be the next frontier of research. Gut bacteria have a profound effect on your immune system. In fact, it’s estimated that the digestive system contains over 70% of your immunity.45

Furthermore, there is accumulating and ample evidence to suggest that the gut microbiota plays an important role in longevity, brain health, mood, and behavior. Once in the gut, probiotics are free to colonize and exert their health-conferring functions, which include:

- Displacing “bad” bacteria
- Reducing food sensitivities
- Synthesizing vitamins B and K and beneficial fatty acids (i.e., short-chain fatty acids)
- Enhancing gastrointestinal (GI) motility and function
- Enhancing digestion and absorption
• Producing anti-inflammatory chemicals (i.e., cytokines) and down-regulate pro-inflammatory cytokines
• And more

While there are many species of bacteria that inhabit the GI tract, two of the most prominent types of friendly bacteria are those belonging to the *Lactobacillus* and *Bifidobacterium* genera. As mentioned above, one of the primary functions of friendly bacteria is to produce anti-inflammatory cytokines and down-regulate pro-inflammatory cytokines like TNF-alpha and IL-6.

An over-arching theme of optimizing brain health and cognitive function involves the management of oxidative stress and inflammation, and pro-inflammatory chemicals like these tend to cause anxiety, depressive symptoms, and cognitive disturbances. They can also lower levels of brain-derived neurotrophic factor (BDNF), which helps protect nerve cells.

In a study published in the *American Journal of Clinical Nutrition*, researchers from Poland found that oral administration of *Lactobacillus plantarum* daily for 6 weeks significantly decreased both markers of oxidative stress (37% reduction in F-isoporstanes) and inflammation (42% decrease in the inflammatory cytokine IL-6) in healthy men and women.46

Recent research out of the University of California at Los Angeles (UCLA) led by Dr. Kristen Tillisch supports the notion that probiotics are beneficial for brain function. When the UCLA researchers gave a fermented milk product fortified with *Lactobacilli* and *Bifidobacteria* to women twice daily for four weeks, they found that the participants’ brain function significantly changed both at rest and during an emotion-recognition task in which the women looked at pictures of angry or frightened faces.47

The women who consumed the probiotic-enriched beverage demonstrated decreased activity in emotion-, cognitive-, and sensory-related areas of the brain compared to women who did not receive the probiotics. Dr. Tillisch and her colleagues were so
encouraged by the research that they are conducting additional experiments including some in which they will examine whether manipulating the gut microbiome can help treat brain-related conditions like Alzheimer’s and Parkinson’s.

Additional research on the beneficial effects of probiotics and cognitive function has been conducted in rodents. In a study published in the journal *Neuroscience*, researchers from Iran found that when they fed diabetic rats probiotics for two months, they significantly improved cognitive performance and demonstrated the reversal of deteriorated brain functions. The rats fed probiotics also showed increased activation of superoxide dismutase, which is one of the body’s most powerful antioxidant enzymes.

Perhaps some of the most impactful research on probiotics comes in the areas of anxiety, depression, and mood. This shouldn’t come as too much of a surprise; after all, the gut is colloquially termed the “second brain.” It has its own entire nervous system network called the Enteric Nervous System (ENS), which has approximately 100 million neurons and uses/secretes most of the same neurotransmitters as the Central Nervous System (CNS), including 90 – 95% of the body’s serotonin, half of its dopamine, and a large quantity of melatonin.

In a study spearheaded by Dr. John Cryan, researchers found that supplementation with *Lactobacillus rhamnosus* reduced stress, anxiety, and depression-related behaviors in mice. The researchers found that the probiotics altered receptors in the brain for GABA, a calming neurotransmitter. GABA dysregulation is implicated in depression, anxiety, irritable bowel syndrome, fibromyalgia, and chronic fatigue syndrome.

Studies like these have prompted scientists, including Dr. Cryan, to term certain probiotics, including those in the *Bifidobacterium* genera, “psychobiotics” due to their effects on well-being and their anti-depressant and anti-anxiety activities. In a study published in the *British Journal of Nutrition*, French researchers found that two weeks of administration of a probiotic formulation, including *Lactobacillus heretics* and *Bifidobacterium longum*, yielded beneficial psychological effects—including decreased depression, anxiety, and hostility—in healthy human volunteers.
It is becoming increasingly recognized that the gut-brain axis plays a powerful role in mental health and well-being, and there is a growing body of research suggesting its significance in brain health and cognitive performance. With that in mind, it’s a very good idea to consume 1 – 2 servings of probiotic-rich foods daily, including the following traditionally fermented options:

- Dairy with live, active cultures (e.g., yogurt, kefir)
- Fermented vegetables (e.g., pickles, sauerkraut, kimchi)
- Tempeh, miso, soy sauce
- Wine
- Kombucha tea
- Probiotic supplements
Coffee

Coffee is one of the world’s most consumed drinks, yet despite its popularity, coffee (and caffeine) seems to have an undeserved bad reputation. Fortunately, there’s a bounty of research to suggest the opposite, as there are a multitude of health benefits associated with regular coffee consumption, and amongst them are numerous brain benefits.

There is an emerging body of research that looks at coffee consumption and its role in Alzheimer’s disease and dementia. The overwhelming majority of human observational studies suggest that moderate coffee consumption over a lifetime may reduce the risk of developing Alzheimer’s. In one study published in the journal of Neurological Research, scientists from Spain noted an “obvious protective effect” of coffee, as they found a highly significant inverse relationship between coffee consumption and the risk of Alzheimer’s disease.52

Recent reports estimate that moderate coffee consumption may lower the risk of Alzheimer’s by as much as 20%.53 In a study that appeared in the Journal of Alzheimer’s Disease, Finnish researchers found that folks who consumed 3 – 5 (six-ounce) cups of coffee per day had a 65% decreased risk of developing dementia.54

Generally speaking, researchers attribute coffee’s brain health benefits to its unique combination of caffeine and polyphenols. In the case of the latter, coffee is loaded with antioxidants. In fact, studies show that coffee is the single greatest dietary source of antioxidants—outweighing even fruits and vegetables—amongst many cultures.55 As you may recall, antioxidants support brain health and cognitive function by warding off free radicals and oxidative stress.
In fact, researchers from the University of California at Davis published a study in the *Journal of Agricultural and Food Chemistry* in which they concluded that “brewed coffee contains many antioxidants and consumption of antioxidant-rich brewed coffee may inhibit diseases caused by oxidative damages.”

Of course, coffee is synonymous with caffeine, and there are a slew of mental health benefits associated with moderate caffeine consumption. For instance, coffee consumption increases alertness and energy levels, and studies have shown that coffee consumption can improve performance on mental tasks. In addition, studies have found that caffeine can improve mood, feelings of well-being, reaction times, vigilance, and cognitive function.

According to research and Coffee & Health, the institute for scientific information on coffee, moderate coffee consumption is defined as 3 – 5 six-ounce cups per day. Generally speaking, for healthy adults with no medical issues, it is agreed upon that 300 – 400mg of caffeine can be safely consumed daily without adverse effects.

That being said, a small minority of folks are particularly sensitive to caffeine, and individuals who are prone to anxiety should also take into this into account when deciding whether or not to consume coffee/caffeine. Lastly, it goes without saying that caffeine is not a sleep aid, and it is generally recommended to avoid caffeine consumption after 2pm.

**Green Tea**

Green tea is loaded with beneficial polyphenols called catechins, which have noteworthy anti-inflammatory and antioxidant properties. Amongst the most powerful catechins is epigallocatechin-3-gallate (EGCG), which has been shown to dampen the expression of pro-inflammatory cytokines and provide protection to the brain.
Correlational studies have examined the relationship between green tea and cognitive function. In a study published in the *American Journal of Clinical Nutrition*, Japanese researchers collected data on the frequency of green tea consumption of over 1,000 individuals over the age of 70. They found that a higher consumption of green tea was associated with a lower prevalence of cognitive impairment.62

In another observational study published in the *Journal of Clinical Nutrition*, researchers from Singapore obtained comparable results investigating the association between green tea consumption and cognition in 2,501 Chinese people aged over 55 years. They found that the intake of green tea was related to a significantly lower risk of cognitive impairments and decline.63

In a double-blind placebo-controlled study published in the *Journal of Medicinal Foods*, researchers from Korea found that a combination of green tea extract and l-theanine improved memory and attention in subjects with mild cognitive impairments.64 Recently, researchers at the University of Basel in Switzerland found that drinking green tea directly enhances cognitive function, specifically memory performance.65 Both of these studies suggest that green tea has a direct impact on cognitive function.

What’s more, green tea is a modest source of naturally-occurring caffeine, which has been shown to improve arousal, mood, and concentration. As mentioned above, in addition to its caffeine content, green tea is also rich in the amino acid l-theanine, which is known to promote relaxation without sedation. L-Theanine helps to reduce some of the excitability sometimes caused by caffeine consumption all while retaining the focus, attention span, mood, and metabolism benefits that caffeine offers.

Generally speaking, the research suggests chronic brain health benefits with regular green tea consumption, with higher correlations to cognitive function associated with higher intakes. In other words, drinking 1 – 2 cups of green tea daily seems to be a good place to start; however, drinking some (e.g., a few cups per week) seems to be better than none at all.
Dark Chocolate

You may have heard about the fat-burning benefits associated with dark chocolate, but what you may not realize is that dark chocolate may also boost your brain health as well. Cocoa, from which dark chocolate is made, is rich in antioxidant flavonoids, which help to fight against oxidative stress that deteriorates brain tissue over time.

In a recent Harvard Medical School study, researchers found that consuming antioxidant-rich cocoa daily significantly reversed cognitive decline in seniors age 60+. Specifically, participants who drank hot cocoa twice daily for 30 days showed a 30% increase in memory and thinking abilities. The authors concluded that regular cocoa consumption improved cognitive function by boosting the brain’s blood supply.

In a study just published in the American Journal of Clinical Nutrition, a group of Italian researchers evaluated the effects of cocoa flavanol (i.e., antioxidants) consumption on cognitive function in cognitively intact elderly folks. The scientists found that daily consumption of cocoa flavanols significantly improved cognitive function and reduced measures of age-related cognitive decline.

There you have it: Science—including Harvard researchers—suggests that you have the green light to eat chocolate to boost cognitive function and support a healthy brain. Just remember, these benefits are associated with cocoa and its flavanols.

In other words, cocoa is not a chocolate bar, something whose added ingredients and processing reduce the number and type of flavonols, increase calories (cocoa itself has very few), and possibly change the physiological response to the cocoa. As researcher Dr. Andrew Neilson, assistant professor at Virginia Tech states, “The evidence does not
show that you can eat a chocolate bar every day and expect to improve your health.”

When searching for a dark chocolate bar, the higher the cocoa content the better. As you move down the “healthy” scale of dark chocolate bars (from highest to lowest cocoa content), you’ll typically find more calories and sugar and fewer flavanols.

**Boost Your Brain with “Smart” Foods**

Not surprisingly, an array minimally-processed, nutrient-dense whole foods populates another list of “top” foods for health. As seen above, a steady supply of healthy fats, amino acids, vitamins, minerals, and antioxidants are essential to brain structure, function, and health throughout a lifetime. Make the smart choice and include more of these categories of foods daily.
REFERENCES


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