You see, we are in the midst of an ever-escalating global Alzheimer’s epidemic.\textsuperscript{1,2} In fact, it’s now the sixth leading cause of death in the United States\textsuperscript{3} … and afflicts up to 30 million people worldwide.\textsuperscript{4,5} Americans account for about 20 percent of those cases, which are expected to triple by the year 2050.\textsuperscript{3,6}

There is currently no cure for Alzheimer’s … but scientists have identified several correctable factors involved in its onset, as well as nutritional interventions that may effectively target them. So the key here is to supplement your neurological health now to help head off problems later. And we’ve identified some of the nutrients you need to do just that.

Protect your memory and cognitive skills.

A lot of scientific evidence indicates that if you want to protect your brain from dementia and other ravages of aging, you should supplement with compounds that support neuronal connections, stimulate brain energy metabolism; boost acetylcholine levels; protect against inflammation and oxidative stress. By taking advantage of recent advances in the understanding of nerve cell function, cognition and memory, and how these processes are disrupted during normal aging, you can customize a program of potent brain-protective nutrients.

Supplements like magnesium, phosphatidylserine, DHA, vinpocetine, blueberries and grape seed extract work via numerous mechanisms to provide natural, broad-spectrum support for optimal brain health and function. So let’s take a look at those nutrients one by one to explore the vital roles they can play.

**Magnesium L-threonate: heads off memory loss**

Memories form and are stored in multiple brain regions. But the most active and essential area is the hippocampus … a small, sea horse-shaped structure deep in the center of your brain. Hippocampal memory enables you to recognize and distinguish between old friends and new acquaintances or to find your way around a well-known floor plan. It is also used to comprehend and navigate new experiences based on old ones.

This puts the hippocampus squarely at the center of your ability to assimilate new information and integrate it with what you already know. As you learn and experience new events, cells in your memory centers tighten and enhance their neuronal connections, known as synapses.\textsuperscript{7}

The ability of brain cells to quickly form new synapses and remove old ones is referred to as **neuronal plasticity**. Large numbers of synapses promote rapid
retrieval and processing of the information stored by connected cells.\textsuperscript{8}

Neuronal plasticity is the physical equivalent of learning. Synaptic density is roughly the equivalent of memory.\textsuperscript{9}

A young brain exhibits high levels of neurologic plasticity that produce large numbers of interconnected synapses. That’s why young people learn quickly and have such strong memories.

But with “normal” aging, the numbers of synapses, and the ability to rapidly form new ones, steadily declines.\textsuperscript{10} People with Alzheimer’s disease, or its precursor, mild cognitive impairment, experience more rapid loss of both plasticity and synaptic number.\textsuperscript{11-14} And that’s when memories begin to fade or be lost.

People have always suspected that specific nutrients can positively affect cognitive functions such as learning and memory.\textsuperscript{15} It’s now known that many nutrients can actually modify aging brain function, in part by increasing the formation of brain synapses.\textsuperscript{16}

Magnesium has been repeatedly shown to have a positive impact on both neuronal plasticity and synaptic density.\textsuperscript{17-19} And magnesium L-threonate is a form of magnesium that has been shown to dramatically boost levels of magnesium in the brain\textsuperscript{17,18}... to enhance memory and cognitive performance.\textsuperscript{18}

Now, since half of all older people in the developed world are already magnesium deficient, and getting more so over time, supplementation is particularly critical. American women, for instance, consume just 68% of the recommended daily intake of magnesium, so crucial to brain function.\textsuperscript{20}

Since it’s far easier to protect the health of your brain cells than it is to restore their function once damaged, supplementing with magnesium L-threonate as soon as possible really is a no-brainer!

Phosphatidylserine: enhances memory

Your body manufactures phosphatidylserine to maintain the structure and function of cell membranes. It helps your brain use fuel efficiently. It acts as an antioxidant to combat free radical damage and quell chronic inflammation.\textsuperscript{21} And it stimulates acetylcholine production\textsuperscript{22} to help with cognitive impairment\textsuperscript{6} (as shown in: a study of patients with age-related cognitive decline;\textsuperscript{23} controlled, random-
ized trials on patients with senile dementia; a study with Alzheimer’s patients exhibiting Parkinson’s-like stiffness and rigidity).

However, the body’s production of phosphatidylserine declines with age. So in Europe and Japan, it’s sold as a prescription drug to treat memory and learning dysfunction. Lucky for you, it’s available here at home as a nutritional supplement.

Research indicates that while phosphatidylserine may help improve memory in patients who are older … it is most effective with early cognitive impairment. So the sooner you start supplementing with this safe, well-tolerated nutrient, the better for you!

**DHA: 30%–50% of the total fatty acid content of your brain**

This omega-3 fatty acid is so essential to normal brain function, including learning and memory, that low levels of DHA are associated with an increased risk of Alzheimer’s.

In the brain, DHA combines with phosphatidylserine to form nerve cell membrane components that support healthy nerve function. Substantial laboratory research suggests that the ability of phosphatidylserine to improve cognitive skills is greatly increased in the presence of DHA.

Furthermore, DHA combined with phosphatidylserine strongly supports energy production in brain cells. Scientists from the National Institutes of Health believe that phosphatidylserine with attached DHA is among the most critically important molecules for healthy brain function and that phosphatidylserine works best in the presence of abundant levels of DHA.

**Vinpocetine: better cerebral blood flow**

The brain health benefits of vinpocetine are widely recognized in Europe, where it is available by prescription to treat symptoms of age-related memory impairment.

It improves sluggish cerebral blood flow to enhance the brain’s use of oxygen and glucose, increases electrical conductivity between nerve cells, and supports the activity of nerve pathways related to mental alertness. When combined with the popular herb ginkgo biloba, vinpocetine speeds the processing of short-term working memory in normal adults.
In three studies of older adults with memory impairment due to poor brain circulation or dementia, vinpocetine was shown to produce improvement in tests of attention, concentration, and memory.26

Blueberries & grape seed extract: antioxidant protection for brain cells

The brain's complex circuitry generates massive amounts of oxygen free radicals that attack delicate brain cells. This disrupts optimal cell function and often causes age-related cognitive decline.24

Increasing your dietary intake of antioxidant-rich fruits and vegetables can help you maintain optimal neuronal function and cognition well into old age.35-37 So it's no surprise that neuroscientists are continually searching for natural agents that can protect brain cells from the devastating effects of oxidative stress and inflammation.

Blueberries are rich in polyphenols, powerful antioxidant phytochemicals that include proanthocyanidins which are particularly beneficial for brain health.38-42 Studies of blueberries have found that they provide important protection against destructive inflammation in the brain.42

Like blueberries, grape seed extract is also rich in polyphenols that offer broad-spectrum protection against premature aging, disease, and decay by improving blood circulation and strengthening capillaries, arteries, and veins. In fact, grape seed extract packs 20 times more antioxidant power than vitamin E and 50 times more antioxidant power than vitamin C.43

Need we say more?

References: