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## A BEAUTIFUL MIND

Proper nutrition, lifestyle choices fuel cognitive health

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Proper nutrition, lifestyle choices fuel cognitive health.

#### By Daniel Breeman

ith aging, comes normal changes in cognition...and the desire to slow the process for those most affected. According to the U.S. Department of Health and Human Services, three specific changes in cognitive health as we age include, reduced processing speed, greater tendency to be distracted and reduced capacity to process and remember new information at the same time. Is this "cognitive impairment" or "cognitive decline," simply normal changes our mind and bodies go through as we age?

As of April 2014, the U.S. Census Bureau indicated that there were 76.4 million Baby Boomers in the United States, representing close to one-quarter of the estimated 2012 U.S. population of 314 million. The Census Bureau also projects that the Baby Boomer population will total 61.3 million by 2029, when the youngest boomers reach age 65. And by 2056, the population 65 years and older is projected to become larger than the population under the age of 18.

According to numerous studies, a large majority of Baby Boomers fear the loss of mental capacity as they age. Mild cognitive impairment can be defined as cognitive decline that is more than normal for someone of a specific age, and is said to affect up to 25 percent of people over the age of 70. The further rate of decline to dementia is about 10 percent. If cognitive changes are indeed inevitable for this enormously large population and others as they reach their golden years, what can be done to help patients remain in good cognitive health?

Research points to prevention as the key to the slowing of cognitive decline, spearheaded by nutritional information and guidance and exercise for both the mind and body for the young and old alike. In fact, according to a February 2015 Harvard Women's Health Watch report, the four best ways to "maintain your brain" include, physical exercise, eating well (Mediterranean Diet is recommended), staying connected socially and keeping mentally active.

Health care practitioners are in a unique position to be at the forefront of this charge to help patients maintain healthy cognitive function in the years by recommending prevention measures and guiding them along the path to cognitive wellness.

"Cognitive function can be influenced by many different factors, including dietary, genetic, environmental and psychosocial," said Andrew Halpner, PhD, vice president of product development for Pennsylvaniabased Douglas Laboratories, makers of Optimized Curcumin with Neurophenol. "Given the ability of the integrative health care professional, especially those practicing functional medicine, to integrate all of these areas in their management of patient care, complementary medicine practitioners are uniquely suited to address the maintenance of healthy cognitive function."

#### Feeding the Mind

Nutrition for the brain is just as important as nutrition for the rest of the body, experts say. Making sure patients have the proper nutritional intake to help counter negative factors, such as stress, fatigue, depression and prescription medications and their side effects, which can all contribute to cognitive decline, is imperative to keeping the mind healthy and happy.

"As with all part of the body, the brain especially needs to be properly nourished," said Mark Kaylor, PhD, CN, MH, vice president of education and research at New Jersey-based Mushroom Wisdom, which promotes lion's mane mushroom extract in its Amyloban product to help support cognitive function and health. "On top of this, and somewhat specific to the brain, is making sure it does not get the toxic and non-nourishing compounds. The brain is more sensitive to toxins, high sugar levels, pro-inflammatory foods and 'bad' fats."

"Make sure that the person gets overall excellent nutritional support with a multivitamin that contains folate, B12 and zinc," added Jacob Teitelbaum, MD, "In addition,



be sure that they get good amounts of omega-3s. For those who have a family history of Alzheimer's, I strongly recommend a special highly-absorbed curcumin supplement. India has a 70 percent lower rate of Alzheimer's than does the U.S., and this has been traced back to the high curcumin levels in the diet."

Dr. Teitelbaum recommends CuraPro 750 mg from Wisconsinbased EuroMedica (one to two daily), which he says has a much higher rate of absorption than other comparable supplements.

One of the most important things we can do to promote healthy aging and cognitive function is to recommend a whole foods, anti-inflammatory diet that keeps blood sugar balanced, according to Aimee Shunney, ND, advisory board member for California-based Nordic Naturals, maker of ProDHA 1000, an essential nutrient for maintaining optimal brain and mood health, cellular fluidity and normal memory and vision.

"We know that chronic inflammation plays a role in the development of Alzheimer's disease and other forms of dementia," said Dr. Shunney. "Emerging data shows that nutrients, particularly omega-3 fatty acids, are important to not only support memory, focus and overall cognitive function, but also to help treat age-related cognitive decline."

David Perlmutter, MD, FACN, ABIHM and author of a new book on brain health, *Brian Maker*, also cites inflammation as contributing to cognitive decline and other conditions, and believes that the hundred trillion bacteria that lives within the human gut plays a critical role in brain health. Probiotics may also come into play here.

"The brain is exquisitely sensitive to the process of inflammation," Dr. Perlmutter said. "Indeed, it is inflammation that underlies virtually all the degenerative diseases of the brain, including Alzheimer's disease, Parkinson's disease, multiple sclerosis and even non-degenerative conditions like autism. Now, we understand that the health of the gut modulates inflammation in human physiology. When there is a disruption of the balance of normal gut bacteria, various chemicals and proteins can escape the gut as it becomes more permeable and enhance inflammation."

Dr. Shunney also warned about the longterm effects on excessive sugar intake and its role in cognitive decline. "Science is catching up to what integrative practitioners have long been saying about sugar," she offered. "The long-term impact of excessive sugar intake and subsequent insulin resistance is metabolic syndrome of the brain—increasing risk for

> cognitive decline and dementia, not to mention diabetes, heart disease and immune system dysfunction.

"Integrative practitioners are uniquely equipped to present their patients with the full spectrum of treatment options, thereby empowering them to take charge of their health, and sometimes prevent the need for more invasive therapies and treatments."

Inflammation and cardiovascular disease are the top drivers of cognitive decline as we age, according to Christopher Hobbs, PhD, LAc, director herbal science at California-based Rainbow Light, who said that anything that can be done to keep these conditions in check will support cognitive health. He also agrees with Dr. Shunney about eliminating excessive sugar intake.

"We can reduce chronic inflammation by eating lots of fresh fruits and vegetables, whole grains, nuts and seeds, which will also help normalize weight and reduce fat stores," Dr. Hobbs said. "Strongly reducing or eliminating any foods or drinks that contain added sugar will also make a huge contribution to cardiovascular and cognitive health. Regular moder-

ate exercise will improve blood circulation, which brings more blood and therefor oxygen to the brain, supporting improved cognitive function."

#### **Lifestyle Choices**

Eating the right nutrient-rich foods may be only half the battle when it comes to

healthy cognitive function as we age. Getting plenty of sleep, supplementing when needed and being active are all major contributing factors to staying ahead of the brain game.

"The body has a 'use it or lose it' approach to efficiency," said Dr. Teitelbaum. "Because of this, the more you use your mind, the more likely you are to keep it."

Aging well with optimal brain health depends very much on your genes, your environment and your lifestyle, according to Greg MacPherson, CEO of New Zealandbased MitoQ. "You can make a difference to your patients regardless of their circumstance and delay cognitive decline by encouraging them to exercise, keep their weight in a healthy range and prescribing a range of evidence-based supplements to support healthy brain function.

"Any supplement recommendation should have antioxidant and anti-inflammatory supplements at its core. By resolving chronic oxidative stress you down regulate key triggers for the inflammatory cascades that directly cause neuronal damage and disease. Combining effective antioxidants with antiinflammatory supplements give you a synergistic effect for maximal brain protection."

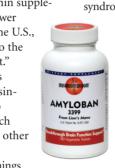
MacPherson points to mitochrondria-targeted antioxidants as a new and emerging category of brain health supplements that not only lower oxidative stress and inflammatory sequelae by tackling free radicals at the point of production, but also improve cell energetics to support optimal neuron function and repair. Evidence suggests mitochondria-targeted antioxidants improve vascular endothelial function, which further benefits brain health by improving blood flow to the brain.

At the Integrative Healthcare Symposium in New York, NY in February, Michael E. Greer, MD, in his presentation "From Mitochrondria to the Spoken Word: Important Brain Herbs for Maximum Memory," identified some of the top nutrients for mitochondrial and anti-inflammatory wellness. The list included, bacopa, rosemary, eleuthro, carotenoids, proanthocyanidins, ashwaganda, rhodiola, gotu cola and omega-3s. Dr. Greer stressed that specific nutrients can positively affect cognitive functions, such as learning and memory, and can actually modify the aging brain function, in part, by increasing formation of brain synapses.

New-York-based PatientOne Medi-Nutritionals, offers NeuroOne supplement containing BaCognize, an extract of Bacopa Monnieri, as a key ingredient in its NeuroOne brain health supplement.

> Other brain supplement champions may include, vitamin D, grape seed or pine bark extract (pycnogenol), creatine, theanine (l-theanine), found in green tea and mushrooms and DHA omega-3s.

Mental health issues, such as attention deficit disorder, depression, anxiety, among others, are rapidly increasing in society, and while the









causes may not yet be fully understood, dietary and lifestyle choices have an important impact on mental health, according to Jim Daily III, PhD, president of North Carolina-based Daily Manufacturing, Inc.

"Maintaining a healthy active lifestyle is critical of healthy cognition," said Daily, who also explained that nutrition interacts with the brain in two major areas, supplying key energy sources for the brain and providing substrates for making neurotransmitters and cytokines. "Providing the brain with critical nutrients, oxygen, and rest are all essential. There is no one food or supplement that can provide reverse poor lifestyle choices. Sleep deprivation is just recently being recognized as one of the most common causes of mood disorders and cognitive dysfunctions such as attention deficit disorder."

#### An Early Start

While much of the focus on cognitive health is on the aging and elderly, and the steps that can be taken to help the Baby Boomer generation and beyond, there is a renewed effort to begin the preventative measures at a much younger age when the brain is healthy and fully functioning.

Cardiovascular health has long been linked to cognitive health and new studies show that cognitive function may peak at age 22 and decline beginning as early as age 27. And once symptoms of cognitive decline set in, there are more often than not difficult to reverse. That's why starting early and finishing strong is the way to go when it comes to cognitive health, experts say.

"Cognitive decline rarely happens overnight," said Dr. Shunney. "Insulin resistance, oxidative damage and chronic inflammation happen gradually. Because it is so much easier to protect the cells of the brain than it is to restore function once damage has been done, starting early is crucial. How early? Ensuring optimal brain development with fish oil during pregnancy is a great place to start."

"It's never too early to starting thinking about how diet and lifestyle can impact cognitive function," added Dr. Halpner. "One does not have to wait until their 50s or 60s to start considering how to best optimize their brain health. Choices that are made early in life can ultimately impact cognitive function many years later. The early years of life, when the brain is still rapidly developing, is one of the most important times to think about healthy cognitive function."

Developing healthy habits from a young age, like getting plenty of rest and exercising regularly, helps set the stage for a healthy body and a healthy mind, as one truly does have the potential to feed the other.

"Cardiovascular disease is the main driver of cognitive decline and can begin as early as our teens, studies show," said Dr. Hobbs. "We need to develop good health habits as early in our lives as possible, not only to make it much easier to maintain health later in life because it's a life-long habit, but also to slow the progression of chronic inflammation and vessel damage, which directly leads to reduced blood flow to our brains."

Many believe that the process for optimal cognition for an entire lifespan can even begin prior to birth, and that there are vital nutrients that should be made part of an expected mother's health regimen.

"Early brain development determines the potential for optimal cognition for the entire lifespan," said Daily. "This probes beings before birth. Over the last 20 years we have learned that epigenetic control of gene expression in all parts of the body, including the brain, is largely determined in utero. Most people are aware of the importance of folate during pregnancy, but vitamin B12 and choline should also be included."

#### **Healthy Mind, Healthy Body?**

So if patients make the right lifestyle choices, then, does a healthy body really guarantee a healthy mind?

"I think the two are inseparable," said Mushroom Wisdom's Dr. Kaylor. "For some reason, at some time, someone separated the mind from the body and place it solely in the head. That being said, there are always things one can do to support a healthy mind while getting the body healthy."

It's also no secret that stress and anxiety are common enemies of cognitive health as the body's battle with these conditions often set the wheels in motion for a harmful event.

"The mind and body is an interconnected system that needs to be in balance," added MitoQ's MacPherson. "We are all familiar with the physical manifestations of chronic stress and anxiety. Keeping your brain in optimal condition is going to be reflected in a healthy body not least because you will be motivated to make good lifestyle choices."

"I believe that managing the stress response is as important as diet and exercise," added Dr. Shunney. "We do so much in our daily lives that keeps us in constant motion. Anger, hostility, depression and shame have all been shown to increase inflammatory markers in the blood. Taking the time to slow down helps calm and balance our nervous system. Activities such as yoga, tai chi, meditation, and anything else that helps clients get to a quieter place benefits our health."

#### **Closing Arguments**

As patients age, many begin to worry about cognitive decline. So what can integrative practitioners offer patients who are looking for real-world answers to their questions that conventional medicine or prescription drugs cannot?

"My best advice is to get started now on a holistic program that supports health and integration of the whole, the body-mindspirit, and not to neglect any of these aspects," said Dr. Kaylor.

"It may be upsetting for patients to learn that diet and lifestyle contribute to cognitive decline, dementia and even Alzheimer's," said Dr. Shunney. "But to good news is that diet and lifestyle are within our power to change. My best advice to patients is not to look back. Start today to preserve brain function tomorrow."

■ The Baby Boomer population in the U.S. will total 61.3 million by 2029.

■ Mild cognitive impairment is said to affect up to 25 percent of people over the age of 70.

 The further rate of decline to dementia is about 10 percent.
Integrative practitioners are

uniquely positioned to guide patients in cognitive wellness.

#### FOR MORE INFORMATION:

- Daily Manufacturing, Inc., (800) 782-7326, www.dailymfg.com
- Douglas Laboratories, (800) 245-4440, www.douglaslabs.com
- EuroMedica, (920) 593-6277, www.euromedicausa.com
- MitoQ, Ltd., +64 9 3798222, www.mitoq.com
- Mushroom Wisdom, (800) 747-7418, www.mushroomwisdom.com
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