

FOODS FOR COGNITION

A Holistic Approach to Brain Health

Natural solutions for enhanced performance of the mind diversify across botanicals, adaptogens, and gut health categories to compliment a healthy lifestyle.

by Elizabeth Green

The consumption of nootropics for brain health has increased tremendously in recent years with consumers on the hunt for performance-based products that can help them reach their mental peak. Nootropics and foods for cognition open doors for improved mental capacity and brain performance.

Product launches with nootropics are growing rapidly, reflected by an average annual growth of 70% in nootropic product launches (Global, CAGR 2015-2019), according to data from Innova Market Insights. “Mindful choices” continues to dominate as a key theme this year, alongside the demand for natural, clean label ingredients and substances obtained from plants. This is in tandem with an increased focus on brain health.

Physical and Mental Well-Being

The brain health category is one of largest, according to Julia Díaz, Head of Marketing at Pharmactive Biotech Products. It can be subdivided to segments targeting physical support (including memory, motivation, cognitive function and concentration) and emotional support (including mood improvement, stress and anxiety reduction, relaxants and support for sleep quality).

“Despite both subcategories being intimately related, they will experience different trends throughout 2020. For instance,

the physical support category is dominated by neuro-nutrition ingredients [vitamins and minerals mainly] and will likely see pre- and probiotics grow in an upward fashion. Meanwhile, the emotional support sub-category is dominated by botanical extracts and will also experience a growth in pre- and probiotics, as well as in adaptogens,” she explains. A growing awareness of the effectiveness of natural solutions for cognitive health, as well as increasingly busy lifestyles, is driving this consumer demand, says Díaz, who remarks that consumers have started prioritizing brain health vs. other categories, such as practicing yoga, mindfulness or meditation.

Brain Health Top of Mind

Consumer interest in brain health is showing a higher growth rate compared to other health-related problems in the past few years, notes Dr. Benny Antony, Joint Managing Director at India-based Arjuna. “The rising number of elderly people and the increasing incidence of dementia and neurodegenerative diseases affecting brain functions is spiraling the demand for brain health supplements worldwide,” he comments. “The global brain health supplement market size is expected to reach US\$10.7 billion by 2025 and natural molecules are expected to occupy more than 50% of the market share.

brain health, Dr. Antony details. “Alcoholism, smoking, diabetes, sleep disturbances, brain injuries, high blood pressure, stroke, bad dietary and overall lifestyle can adversely affect the health of the body and brain,” he stresses.

Meanwhile, Díaz also says the demand for better brain function is driven by stressful and demanding lifestyles we commonly see today. “There is proactivity to manage stress, mental fatigue and reduce the risk of developing neurological disorders such as dementia and Alzheimer’s disease,” she states. Moreover, the growing awareness of the mind and body being connected, as well as diet and lifestyle are key factors to maintaining health and well-being, Díaz highlights. “It is important to note that consumers continue valuing traditionally used ingredients in this category, and that their knowledge about new ingredients is limited, so brands must invest in educating their audience,” she flags.



The Age Race

Between 2015 and 2050, the proportion of the world’s population over 60 years will nearly double from 12% to 22% with the older outnumbering children younger than five years old, according to Dr. Antony. “The pace of population aging is much faster than in the past,” he remarks. “As the population ages, the number of older adults suffering from age-related health problems, such as cognitive decline and dementia, is also expected to rise.”

Nevertheless Dr. Antony warns that cognitive impairment can occur in younger populations. “Cognitive decline unfortunately is no longer a disease of the elderly, with the brain showing early signs in younger age groups. Managing risk factors early can help your chances of staying mentally sharp and maintaining long-term brain health. There is strong evidence that deterioration of brain health can be reduced by making key lifestyle changes including diet, regular physical activity, staying socially engaged and maintaining good cardiovascular health,” he further explains.

Our brains reach full maturity in the 20’s, but the brain volume shrinkage starts during the 30’s and 40’s, with the first signs evidenced as short-term memory disturbances, Dr. Antony states. “This understanding of our brain aging just like the rest of your body, slowing down and becoming less adaptable to change, gives us ample time to intervene and modify the risk factors at an early age,” he continues. “The consumers that can benefit from nootropics are very broad from students, professionals, executives, athletes, people who do multitasking to retired people who are at risk of maximum loss of brain plasticity.”

Meanwhile, Díaz says that younger age groups, such as Generation Z’s and Millennials, are much more aware than previous generations about the importance of brain health, but baby-boomers are putting major focus on the prevention of future brain concerns and are strongly

looking for stress relievers. “Seniors are also important drivers of healthy aging support,” she further comments.

“Supporting brain health is important because it can determine our present and future happiness, quality of life, well-being, social healthy relations and work success. Caring for our minds is not only a duty but a necessity for all humans looking for happiness,” adds Díaz.

Food and Ingredients That Support Cognition

A diet rich in fruits, vegetables, whole grains, legumes, fish and other seafood, unsaturated fats, and low amounts of red meat and sugar might help reduce the risk for dementia or slow cognitive decline, according to Dr. Antony. “Dietary supplements are one of the most common forms of complementary and alternative medicine that people use to maintain intact cognitive function. But the most critical aspect is for the ingredient to pass the blood-brain barrier, which is a limiting step for any drug leading to poor bioavailability in the brain. Among the several nutrients, curcumin from turmeric is a promising candidate regulating multiple neuronal pathways, which is critical for brain health,” he highlights.

Meanwhile, epidemiological studies suggest the presence of turmeric in the daily Asian diet may be a reason for a low incidence of brain-related disorders in the population, flags Dr. Antony. “Turmeric contains a pleiotropic molecule, curcumin the yellow coloring pigment, which is a potent antioxidant and anti-inflammatory molecule.

It is known to protect against neurotoxins, enhance neuronal growth and neurogenesis and positively influence the gut hypothalamic-pituitary-adrenal (HPA) axis modulating the brain neurotransmitters,” he explains. “Scientific studies supporting the beneficial role of curcumin in brain health are fueling its demand for its use as a preventive-care or therapeutic agent.”

Curcumin from turmeric is definitely attracting more at-



› A diet rich in fruits, vegetables, whole grains, legumes, fish, unsaturated fats, and low amounts of red meat and sugar might help reduce the risk for dementia or slow cognitive decline, according to experts.

tention with a wide array of health benefits, especially on brain-related disorders. But the major limitation of curcumin is the poor absorption after oral intake. Most of the nootropic drugs fail to pass the blood-brain barrier significantly lowering its effectiveness, according to Dr. Antony.

“Taking curcumin along with essential oils of turmeric has clearly shown the presence of significantly higher levels of curcumin in brain and blood plasma showing the enhanced bioavailability and superior bioactivity shown by various human clinical studies,” he continues. “The turmerones in turmeric essential oils significantly enhance the curcumin bioavailability and acts synergistically, supporting the prominent role of turmeric in the Ayurvedic treatment of brain disorders.

Another ingredient worth considering is ashwagandha, a potent adaptogen widely used in Ayurveda for brain health and longevity, notes Dr. Antony.

“Ashwagandha is known to reduce stress, anxiety and sleep disturbances which is very critical for cognition and memory. While selecting a supplement, ashwagandha extract with a maximum potency of the bioactive withanolide glycoside will offer optimal results,” he says.

Opportunities Ahead

Díaz underscores a more holistic approach for brain support in

the future, noting that consumers choose ingredients or supplements that address the mind and body connection. “Overall, the category follows the trend for food supplements, including claims around sustainability, personalization and clinically proven,” she notes, adding that there are still a lot of unexplored areas. “Further investigations into adaptogen properties are needed and formulations adapted to various age groups could also be explored,” adds Díaz.

Meanwhile, Dr. Antony highlights that specific nutrients influence energy metabolism and synaptic plasticity that are vital for maintaining cognitive function and evolution of brain function. “The brain is the most complex organ in our human body and recent research is pointing towards inflammation, oxidative stress and changes in the gut microbiome to the onset and progression of neurodegenerative diseases of the brain. The human brain is susceptible to oxidative damage and various antioxidant molecules have been shown to influence cognitive function. Calorie restriction helps reduce oxidative damage and decrease deficit in motor and cognitive function associated with aging. Gut microbiota along with various gut hormones also influence cognitive processes,” he remarks. ▼

Elizabeth Green is the deputy editor of *FoodIngredientsFirst*.



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