# Brain Charge<sup>TM</sup> Advanced Cognitive Support

n our fast-paced, highly competitive and cerebral culture, people of all ages need increased brain power to learn, remember, and thrive at optimum levels. Yet many aspects of that culture are an attack on brain health: pollution, toxic diets, stress, and lack of healthy, restful sleep—all affect our ability to live life to its fullest and to think at our highest capacities. As our lives become more harried and stressful, we become fatigued mentally and physically.

Whether you want to be at your best in old age, in middle age, or in school, Brain Charge<sup>™</sup> is a powerhouse herbal-nutrient formula for cognitive health, memory support, and an occasional brain boost. It is a targeted cognitive formula with additional ingredients to support energy and help you handle stress.\*

# A Targeted Cognitive Formula

Brain Charge supports your brain's highest and most important functions: cognition and memory. Preliminary research on ingredients in this formula indicates learning may also be supported. Higher cognition means optimal processing speed and mental clarity. It is formulated to clear the "brain fog" and to allow you to function at your best. Brain Charge does this by addressing a number of key brain functions and processes.\*





Source Naturals® for a life well lived®

\*The above information has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease. Brain Charge includes an array of ingredients renowned for brain health and backed by scientific studies. For example, **gotu kola**, used traditionally in Chinese and Ayurvedic medicine to improve mental clarity, was shown in one study to support healthy memory and cognition and in two additional studies to support normal mood in healthy older adults. Current preclinical research has demonstrated the benefits of **huperzine A**, **vinpocetine**, **acetyl L-carnitine**, and **gotu kola** for learning and memory. In fact, all of the ingredients in Brain Charge are backed by modern research. These ingredients provide brain benefits by supporting important brain functions.\*

#### Cognition

Cognition is the acquisition of knowledge through experience, thought, and the senses. The brain must be accurate and quick in processing thoughts, and it utilizes neurons and neurotransmitters to do this. Neurons are the nerve cells central to brain communications, and neurotransmitters are the chemicals used by neurons to communicate with each other. Activated by a neuron's electrical impulse, neurotransmitters travel between nerve cells, where they excite or inhibit (in various degrees) the electrical impulse in neighboring cells. The neurotransmitters acetylcholine, dopamine, and noradrenalin are critical to memory, motor coordination, motivation, concentration, and alertness. The precursors and activators of dopamine, noradrenalin, and acetylcholine included in Brain Charge are N-acetyl L-tyrosine, acetyl L-carnitine, huperzine A, DMAE, choline, and vitamin B-6.\*

#### **Structural Support**

The membrane is the working surface of a cell. It needs to be strong yet flexible so the cell can maintain its integrity and be able to move and change shape. The membrane regulates the flow of nutrients into the cell and the removal of waste, plus it controls the passage of molecular messages from outside the cell to its interior.

In neurons, a rapid exchange of sodium and potassium ions across the nerve membrane is responsible for their unique ability to generate the electrical impulses that are the basis of all communication in the nervous system. Membrane enzymes use a third of the cell's energy just to maintain the correct ratio of sodium to potassium. Key membrane molecules called phospholipids are crucial to the health of neuronal membranes. **Phosphatidylserine**, the phospholipid in Brain Charge, and the compound **glycerophosphatidyl choline** are helpful nutritional supplements for brain structure, particularly the membranes. Nerve cell membrane health and structures are critical because membranes are the pathway that



electrical impulses travel down. These electrical impulses are the basis for all thoughts, emotions, and perceptions.\*

# **Mood and Stress Support**

Most people know they are not at their best when they are stressed or on edge. **Gotu kola** is a renowned herb from India that promotes a healthy mood. **Ashwagandha**, an herb used in Ayurvedic herbalism, may help optimize energy levels and reduce stress while improving results on tests of memory and cognition in healthy adults. *Rhodiola rosea* is a world-renowned adaptogen traditionally used in Scandinavia to improve vitality and resistance to stress.\*

## Energy

**Coenzyme Q10 (CoQ10)** is a metabolic energizer that helps produce ATP, the primary energy molecule in the body. Since the brain uses 20 percent of the body's total energy supply, efficient ATP production is vital.\*

Adequate supply of nutrients is also critical to the brain's energy needs. The blood vessels feeding the brain become less efficient as we pass middle age. Since the brain depends on the bloodstream to deliver nutrients and oxygen and to remove waste, the quality of this blood flow is paramount to proper brain nutrition. **Vinpocetine** supports cerebral blood flow and oxygen levels, and **acetyl-L-carnitine** may help support energy levels and cognitive function. Carnitine is needed to transport fat into mitochondria to be burned for energy.\*

## **Antioxidant Defense**

Oxidation is a natural byproduct of cellular metabolism—much like the smoke from a fire. Free radicals, if left unchecked, can overwhelm our bodies' self-cleansing abilities. Free radicals have unpaired electrons that can attack healthy cells. As more free radicals attack more cells, the result is called a free radical cascade, which can cause damage to our cells, tissues, and organs. The brain, when measured by dry weight, is mostly fats, which are prone to rancidity, a form of oxidation. Antioxidants from vitamins and nutrients offer electrons to halt the cascade, thereby contributing to overall cellular health. Antioxidants are provided in this formula by **coenzyme Q10**, **ginkgo**, and **grapeseed**.\*

## For Optimum Brain Power

Much more than just a vast supercomputer, the brain stores our memories and creates our dreams and plans for the future. It's clear that the brain, our body system from which consciousness emerges, is integral to our sense of self and is worth feeding well. While stresses and strains are part of normal life, the targeted nutrients in Brain Charge can help counteract the effects of modern-day living, allowing us to thrive with mental clarity.\*



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