O'BRIEN PHARMACY

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Optimal Neurogen

It can be confusing and expensive for patients trying to sort through all the various supplements marketed for brain health. For many years at O'Brien Pharmacy, we have carried several different, rigorously vetted products, each well established for its regenerative properties. However, for those who suffer from conditions such as traumatic brain injury, Parkinson's, multiple sclerosis, Alzheimer's, dementia, neurological injury, neuropathy, etc., the list of necessary supplements becomes long, tiring, and costly.

With that in mind, we have developed Optimal Neurogen, a super powder that incorporates tried and true components which have been shown to support neuroregeneration while helping to reduce pill fatigue. It is also easier on the budget as it is the only supplement to combine its unique therapeutic ingredients into one product.

What Does a Therapeutic Neurological Formula Look Like?

You may have seen on the health food store shelves or at your doctor's office neurological formulations with 1-6 ingredients, some of which you may recognize and others you are not sure of why they are included. But certainly with the price tags attached to these supplements, they must work and work well, right? Unfortunately, many of these products are insufficiently combined, under-dosed, missing key ingredients, and, considering all of these factors, way overpriced.

Like all of our privately developed supplements, Optimal Neurogen came about as a labor of love. It is not easy bringing these supplements into fruition, but it is necessary in order to provide the very best to our patients.

A formula that can comply with these high standards consists of vitamin A, vitamin D, vitamin K, thiamin, riboflavin, niacin, vitamin B6, folate, vitamin B12, biotin, pantothenic acid, calcium, magnesium, selenium, chromium, molybdenum, taurine, acetyl L-carnitine, alpha lipoic acid, ginkgo biloba, alpha-GPC, PEA, DMAE, CoQ10, phosphatidyl serine, superoxide dismutase, annatto seed extract, vinpocetine, and huperzine A.

Why all of the ingredients? Well, single ingredients are not as effective as when they are combined with others, and the synergy of the combined ingredients, at the doses provided, produces supplementation that is truly therapeutic. This is also why for the rest of the vital nutrients that are not found in Optimal Neurogen, it is important to continue taking Optimal Daily Allowance, just at 1/2 the regular dose.

Ingredient Spotlight

Vitamin D is well known for invoking a healthy, positive mood and emotional balance.

Vitamin K supports brain health by aiding in the formation of sphingolipids, a crucial fat found in brain cells. It protects cognitive function and supports mitochondrial function, muscle, and nervous tissue, which leads to a balanced inflammatory response.

The B's are a prime example of the strength of proper combining. They are water soluble, which means they are not stored and must be replenished daily. Thiamin converts carbohydrates into energy, and is a coenzyme in ATP production. Riboflavin is a precursor for coenzymes that are needed for energy production. It also helps regenerate glutathione which is an antioxidant. Riboflavin is essential for the production of red blood cells and the protection of proper neurological function.

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Niacin supports vascular integrity and lowers clot formation. Pantothenic acid helps synthesize CoA, which is essential for fatty acid metabolism, hormone production, and cortisol production. Pantothenic acid is involved in the synthesis of acetylcholine, a critical neurotransmitter for the parasympathetic nervous system, which regulates functions such as memory. It also helps the adrenal glands produce healthy amounts of cortisol. Vitamin B6 is involved in over 100 enzymatic reactions, including the synthesis of mood-regulating neurotransmitters such as serotonin, dopamine, norepinephrine, and GABA. It improves mood, reduces occasional anxiety, and alleviates mood-related symptoms associated with premenstrual syndrome. Biotin influences gene expressions that are involved in inflammatory responses. Folate protects DNA and supports the synthesis of neurotransmitters. Vitamin B12 is crucial for the maintenance of myelin, the protective sheath around nerve cells. B12 deficiency can lead to neurological damage, including peripheral neuropathy, cognitive impairment, and depression. B12 helps improve healthy mood state responses. It is essential for the production and maturation of red blood cells and for DNA synthesis and repair.

Magnesium is an essential mineral that is involved in 600 biochemical reactions in the body. It supports healthy cortisol levels and improves stress, as well as plays a role in energy production, nerve transmission, and balanced mood.

Most people are deficient in magnesium as our food once contained more magnesium than it does today. Depletion is also brought on by several different medications, including antibiotics, diuretics, drugs that suppress the immune system, acid-blocking drugs, and chemotherapies. Chronic stress can lead to decreased amounts of magnesium. If this depletion lasts, it can lead to increased excitation in the brain, which then results in increased feelings of restlessness, nervousness, and feeling "jumpy." This excitation further leads to increased cortisol output — a vicious cycle. Sufficient magnesium brings us back to a state of calm.

Magnesium has also been found to support GABA and melatonin function, both of which positively affect our sleep and sleep cycles.

Acetyl L-carnitine lessens fatigue of the body and mind. It helps to increase levels of acetylcholine, an important neurotransmitter. It crosses the blood-brain barrier and may help improve absentmindedness and mild memory problems associated with aging.

Phosphatidyl serine helps with memory, learning, concentration, word choice, mood, coping with stress, and other cognition parameters. It is an essential building block of brain and nerve cell membranes, which supports attention, memory, learning, and mental flexibility. It is a naturally occurring nutrient that helps support the brain's metabolic activity and cognitive functions, as well as cell signaling and neurotransmitter production.

CoQ10 is an antioxidant that is found in every cell in the body. It plays a critical role in the synthesis of adenosine triphosphate (ATP), which is key to energy production. Although our bodies produce CoQ10, its production decreases with age, insufficient dietary intake, drug induced depletion, gene mutations, and oxidative stress.

The brain is made up of neurons responsible for processing and transmitting information using neurotransmitters and electrical ion channels. Neurotransmitter receptors are the gateways for communication between nerve cells. Maintaining the function of these neuron communications is integral to maintaining good cognitive function. Protecting neurons from damage and maintaining blood flow to the neurons is essential. Issues within the mitochondria can reduce ATP production and promote neuronal dysfunction and degeneration via increased production of reactive oxygen species (ROS) in the central nervous system. Because CoQ10 is an effective carrier with strong antioxidant properties, it has been shown to promote neurological health.

Ginkgo biloba protects overall neuronal function, increases cerebral blood flow, and protects neurons from a variety of hypoxic conditions and oxidant-induced damage. In addition, ginkgo scavenges nitric oxide species (NOS) and ROS, supports mitochondrial function, and reduces the overstimulation of neurons that cause brain fatigue. Its attributes contribute to helping maintain memory.

Vinpocetine is an antioxidant that can cross the blood-brain barrier with vasorelaxant effects on cerebral smooth muscle tissue. It maintains red blood cell flexibility and moderates the excitotoxicity of neurotransmitters, enhancing nerve cell health by inhibiting sodium channels and reducing intracellular calcium levels.

Huperzine A supports healthy cognition and promotes improved recall and cognition in elderly subjects. It has been shown to increase cerebrovascular blood flow, improve memory, and moderate behavioral functions.

When combined, it has been found that vinpocetine and ginkgo biloba support cerebral blood circulation, decrease excitotoxicity, and scavenge damaging free radicals. Combining ginkgo biloba, vinpocetine, and huperzine A gives the benefits of three of the most well-studied ingredients for targeted, multidimensional cognitive support.

The Real Cost

Because of Optimal Neurogen's wonderful combination of therapeutic ingredients, it is a money-saving supplement. In comparison, a patient would have to take the following products instead of Optimal Neurogen:

Optimal Daily Allowance 30 day supply -	$68.00
Vital Brain Powder 30 day supply -	$95.00
Body & Vision 30 day supply -	$54.50
CoQNol 30 day supply -	$77.50
Vital Magnesium 30 day supply -	$13.50
Membrin 30 day supply -	$35.50
PEA 30 day supply -	$28.00
DMAE 30 day supply -	$11.00
	TOTAL: $383.00

Versus Optimal Neurogen 30 days supply - $139.00 per month. **That's a savings of $244.00!**

While perhaps not for everyone, Optimal Neurogen, when taken with a 1/2 dose of Optimal Daily Allowance, is designed for those who need truly therapeutic support for neurological or cognitive recovery in a cost effective dosage form.

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