



Combining ETI Formulas and Nutrition to Support Healthy Brain Function*

Introduction

For thousands of years, diet, in combination with other aspects of daily living, has had an important role in affecting a person's cognitive capacity and brain evolution⁽¹⁻²⁾. Research in molecular biology has revealed the capability of food-derived signals to impact energy metabolism and synaptic plasticity and, consequently, facilitate the effects of food on cognitive function⁽³⁻⁴⁾.

In vertebrate organisms, the brain depends upon a large amount of energy consumption to support ionic balance in neurons, create action potentials, generate post-synaptic currents and reuse neurotransmitters⁽⁵⁾. In addition, "neurons are highly susceptible to oxidative damage, and glucose oxidation in the pentose phosphate pathway is required to obtain NADPH and regenerate reduced glutathione, which is essential to maintain redox balance in the brain"⁽⁶⁾.

The brain is also responsible for detecting and integrating signals that are sent from peripheral tissues, which support the coordination of physiological and social responses⁽⁷⁾.

This paper presents some mechanisms of bidirectional gut-brain communication, and scientific data on nutritional supplements and their ability to improve mental performance, as well as an Energy Tools International (ETI) formulation that can energetically support healthy brain functioning.

1. Supporting Healthy Brain Function: Some Vital Aspects of the Gut-Brain Axis

Current evidence indicates the process of eating can itself modify cognitive processes through neural circuits that connect the gut and the brain, as well as through the release of gut hormones and peptides into the bloodstream. The vagus nerve is the main afferent pathway from the gut to the brain, and there are sufficient scientific data confirming the gut microbiota is capable of activating this pathway to facilitate physiological effects on the brain⁽⁸⁻⁹⁾. (Note: This pathway was described in the previous chapter of the ETI educational program - "Findings in the Gut".) Our objective here is a short description of the influence of specific gut hormones or peptides, such as leptin, ghrelin, glucagon-like peptide 1 (GLP1) and insulin, on emotions and cognitive processes.

Leptin is produced in adipose tissue and sends signals to the brain to decrease appetite⁽¹⁰⁾. Leptin receptors have been identified in several brain areas, including the hypothalamus, the cerebral

cortex, and the hippocampus. Studies show leptin promotes fast changes in hippocampal dendritic morphology, indicating that leptin exerts a direct influence on hippocampal plasticity (11-13).

Ghrelin is a hormone that is secreted by an empty stomach (14) and acts as an appetite stimulant in animals (15) and humans (16). Data has shown ghrelin promotes reorganization of synaptic terminals in the hypothalamus and stimulates synapse formation in dendritic spines in the hippocampus, which are paralleled by enhanced learning and memory formation (17-18).

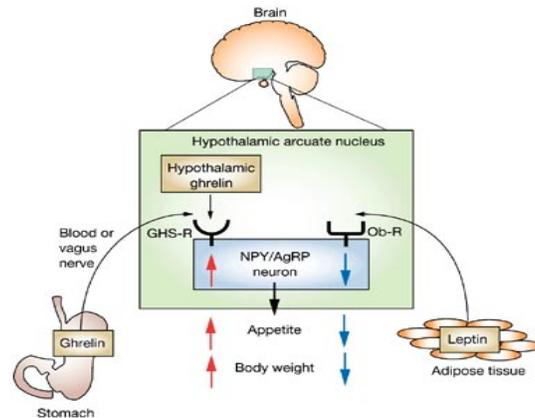


Figure 1. From <http://www.core-condition.com/quick-tips/talking-cheat-days-hormones-and-fat-loss-via-precision-nutrition/>

Glucagon-like peptide (GLP1), which is synthesized by intestinal cells, controls energy metabolism by stimulating pancreatic insulin secretion and following glucose uptake by muscle cells, and by suppressing food consumption via actions on the hypothalamus (19). In addition, infusion of GLP1 into rats' brains has been shown to improve associative and spatial memory (20).

Also, insulin has been found to alter synaptic activity and cognitive processing (21). Insulin can promote neuroplasticity from maturity into adulthood, where it is known to be an essential part of the healthy brain. Further, it is able to regulate motivated behaviors through actions in several brain regions, like the nucleus accumbens and the ventral tegmental area (22).

2. Supporting Healthy Brain Function: Brief Summary of Nutritional Data

Current data have shown the brain's ability to fight neurologic disorders and recover from injury is mostly dependent upon lifestyle choices, such as diet and exercises (23-30). A healthy diet can facilitate synaptic transmission, improve cognitive ability and create a positive brain environment for overall health by providing molecules that act on brain metabolism and synaptic plasticity (26-27, 30, 37).

For example, an important originator in the molecular mechanism stimulated by a specific dietary modification (a dietary supplementation of DHA), is the brain-derived neurotrophic factor (BDNF) (31). In addition to regulating the survival, growth and differentiation of neurons during development (31), BDNF stimulates synaptic and cognitive plasticity in the adult brain (32-33). As an illustration, BDNF facilitates neurotransmitter release, axonal growth and the formation

and maintenance of presynaptic structures⁽³⁴⁻³⁵⁾. BDNF also plays a role in gene expression and long-term memory⁽³⁶⁾.

Omega-3 fatty acids play a critical role in the central nervous system's development, structure and function⁽³⁷⁻⁴¹⁾. Folate, vitamin B₃, B₆ and/or vitamin B₁₂ are considered essential for normal brain function⁽⁴²⁻⁴⁷⁾. Long-term oxidative stress has been associated with cognitive decline and dementia. Intake of anti-oxidants, such as vitamin E, could possibly decrease free radical-mediated damage in neuronal cells and reduce beta-amyloid toxicity⁽⁴⁶⁻⁴⁹⁾.

B vitamins have drawn particular interest as a possible nutritional intervention. Research has demonstrated B-vitamin deficiency leads to an increase in blood concentrations of homocysteine, and high neuronal levels of homocysteine could disturb brain metabolism and cause cognitive impairment. Additionally, folate increases nitric oxide availability in the brain, and deficiency of this molecule has been found to impair DNA repair in neurons and sensitize neurons to oxidative damage, as well as the toxicity of amyloid beta-peptide⁽⁵⁰⁻⁵⁸⁾.

The studies above support the idea that some benefits to brain function can be achieved by a single nutrient, but also uphold the concept that significant benefits can be accomplished by a nutrient combination that amplifies the potency of single compounds⁽²³⁾.

3. Epigenetics and Diet

In 1942, the biologist Conrad Waddington proposed that specific mechanisms allow the genome to interact with environmental factors, such as diet, as a way of explaining the relationship between genes and the environment in determining the phenotype of an organism.

The term “epigenetics” defines a variety of processes that cause heritable changes in gene expression without modifying the deoxyribonucleic acid (DNA) sequence; in particular, DNA methylation, histone modification and non-coding RNA are the main mechanisms underlying epigenetic modifications⁽⁵⁹⁾.

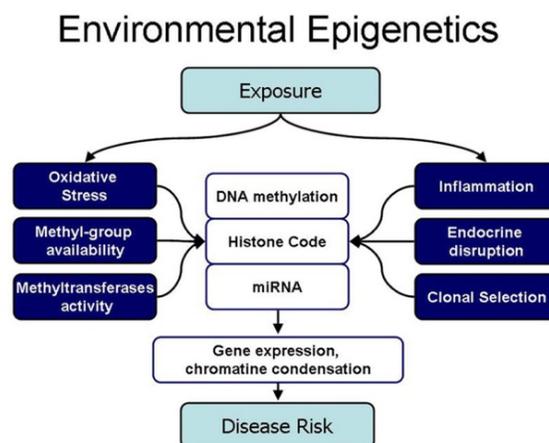


Figure 2. From <https://diethylstilbestrol.co.uk/epigenetics-environmental-chemicals/>

Recent evidence has shown some of the epigenetic changes ensuing from early nutrition and microbiome can be trans-generationally inherited, thus having a significant impact on evolution⁽⁶⁰⁾.

Scientific understanding of the molecular mechanisms regarding the affect of diet on epigenesis are still in the developmental stages, but it is known, for example, the BDNF system is susceptible to epigenetic modifications that influence a cognitive function ⁽⁶¹⁻⁶³⁾. Also, DNA methylation and histone modification have a role in the acquisition and maintenance of epigenetic changes induced by dietary or other environmental factors.

By modulating the functioning of specific genes, the regulator SIRT2, a member of the sirtuin protein family, has emerged as an important modulator of genomic stability and cellular homeostasis ⁽⁶⁴⁾. A diet that is high in saturated fat reduces the expression of SIRT2 in rats' hippocampi ⁽⁶⁵⁾, whereas a diet that is high in omega-3 fatty acids has the opposite effect ⁽⁶⁶⁾. For more details regarding the molecular mechanisms involved in the survival of environmental epigenetic information following epigenetic reprogramming across generations, see the following review: <https://innovareacademics.in/journals/index.php/ijpps/article/view/4577/4810>.

4. Supporting Healthy Brain Function: Microbiota Facts

Activation of the Brain's Afferent Pathway via Microbiota

The vagus nerve represents the main afferent pathway from the abdominal cavity to the brain, and there are sufficient scientific data confirming the gut microbiota is capable of activating this pathway to mediate their behavioral and physiological effects on the brain ⁽⁷⁵⁻⁷⁶⁾. For instance, the vagus nerve is responsible for mediating the beneficial effects of probiotics on physiological mechanisms, such as wound healing. *The probiotic bacteria, lactobacillus reuteri*, has been shown to enhance wound healing in mice by increasing the oxytocin release from the hypothalamus ⁽⁷⁷⁾.

Signaling the Brain via Short-Chain Fatty Acids

Acetic acid, propionic acid and butyric acid are the basic short-chain fatty acids (SCFAs), metabolites produced by the bacterial population in the human gut. Besides the vagus nerve, these SCFAs act as another mediator between the gut microbiota and the brain, and they represent an additional mechanism through which gut bacteria can influence brain physiology and behavior ⁽⁷⁸⁾.

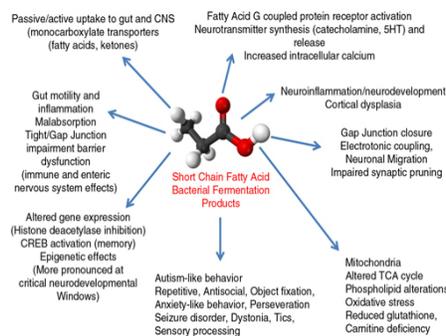


Figure 3. From <http://www.microbecolhealthdis.net/index.php/mehd/article/viw/28177>

Researchers have demonstrated the gut microbiota can regulate the metabolism of a key dietary amino acid, tryptophan, and thus coordinate kynurenine and 5-HT production ⁽⁷⁹⁻⁸¹⁾. 5-HT is known to be an essential neurotransmitter that regulates physiological activities, such as mood,

appetite, aggression and sleep⁽⁸²⁾. It should be noted, increased peripheral and central kynurenine have been documented in patients with autism, schizophrenia, depression and neurodegenerative diseases, such as Alzheimer's and motor neuron disease⁽⁸³⁻⁸⁴⁾.

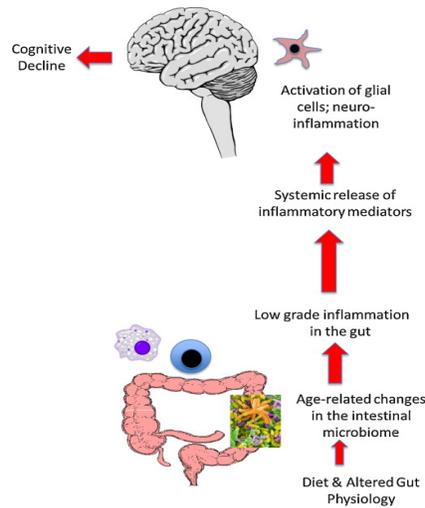


Figure 4. From <https://www.sciencedirect.com/science/article/pii/S0047637413001309>

Further, butyric acid has been shown to generate antidepressant effects in preclinical tests, while excessive doses of propionic acid are associated with insufficiencies in cognition and friendliness⁽⁸⁵⁻⁸⁸⁾.

The current data suggest an increase in SCFA-producing bacteria in the gut may have a positive effect upon the neuro-inflammatory response controlled by microglia and synaptic regulation, mediated by astrocytes. Propionic acid has been reported to increase expression of the astrocyte marker glial fibrillary acidic protein (GFAP), while butyric acid was found to reduce its expression⁽⁸⁹⁻⁹¹⁾.

5. Supporting Healthy Brain Function: Data on Omega-3 Fatty Acids & Polyphenols

Omega-3 Fatty Acids

Several clinical trials have demonstrated that supplementing one's diet with omega-3 fatty acids can play a significant role in improving the cognitive status in adults, the maintenance of normal cognitive function and the prevention of age-related cognition problems⁽⁹²⁻⁹⁶⁾. One study found depletion of omega-3 fatty acids led to degenerated motor skills and memory insufficiencies⁽⁹⁷⁾, and supplementation with omega-3 fatty acids prior to injury leads to progress in motor skills and learning⁽⁹⁸⁻⁹⁹⁾.

Also, a dietary supplementation of the essential fatty acid docosahexaenoic acid (DHA), which is one of the important members of the omega-3 fatty acid family (Figure 5), has been shown to increase the levels of hippocampal BDNF⁽¹⁰⁰⁾.

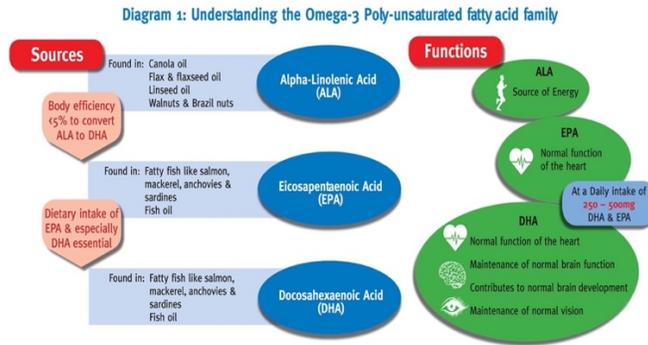


Figure 5. From http://www.atlife.co.za/content/products_omega3.html

Akbar and coworkers⁽¹⁰¹⁾ provided additional evidence that “DHA is highly enriched in neuronal membranes and it facilitates the activation of protein kinase B (PKB), also known as Akt... Activation of Akt, thus, can cause an increase in BDNF, which further strengthens synaptic plasticity and cell survival.” It was also demonstrated that a diet rich in DHA activates another signaling cascade as a Ca^{2+} /calmodulin-dependent protein kinase (CaMKII), which is critical for learning and memory, and plays an important role in the induction and continuation of long-term potentiation in the hippocampus⁽¹⁰²⁻¹⁰⁴⁾.

Omega-3 supplementation has also been confirmed to have a beneficial influence on the modulation of gene expression at the transcription level, as well as on the mRNA stability of several enzymes associated with glucose and lipid metabolism⁽¹⁰⁵⁾.

Polyphenols

Polyphenols are secondary metabolites of plants, and are generally involved in defense against ultraviolet radiation or aggression by pathogens. Although polyphenols may be classified into different groups, the main units contain phenolic acids, flavonoids, stilbenes and lignans⁽¹⁰⁶⁾.

Multiple studies suggest long-term consumption of diets rich in plant polyphenols might protect against the development of cancers, cardiovascular diseases, diabetes, osteoporosis and neurodegenerative diseases⁽¹⁰⁶⁻¹¹³⁾, but the mechanism of action underlying their beneficial properties is complex and not yet fully understood⁽¹¹⁴⁾.

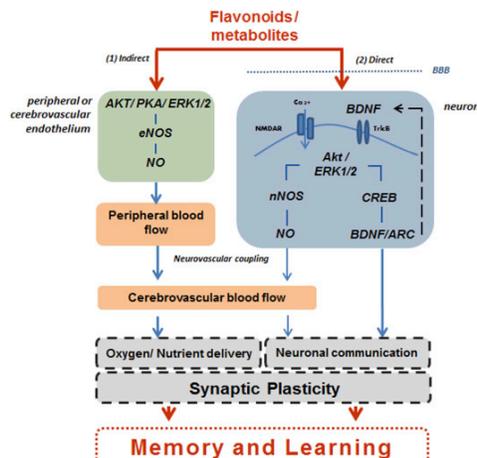


Figure 6. From <https://www.sciencedirect.com/science/article/pii/S0197018615300309>

Research data has suggested polyphenols are associated with a reduced risk of developing dementia⁽¹⁰⁷⁾ and improved cognitive performance in normal aging⁽¹⁰⁸⁾. As well, they may create neuroprotective effects by suppressing the activation of microglia, which mediates inflammatory processes in the CNS⁽¹¹⁰⁻¹¹¹⁾. There are also data that show promising effects of polyphenols in animal and *in vitro* studies related to multiple sclerosis (MS)⁽¹¹⁶⁾ and modulation of not only the expression of genes, but also the expression of miRNA and proteins, thereby inducing epigenetic modifications⁽¹¹⁷⁻¹¹⁸⁾.

Green tea is rich in flavonoids, specifically catechins such as epigallocatechin-gallate, epigallocatechin, epicatechin, and epicatechin-3-gallate. The general evidence indicates higher consumption of green tea is associated with a lower incidence of cognitive diminishing in humans⁽¹¹⁹⁾.

Resveratrol has displayed several promising effects on human physiology, such as protecting cells in the heart, brain and kidney, increasing apoptosis, and reducing tumor growth⁽¹²⁰⁾. Also, resveratrol has been observed to have a strong anti-aging ability, as well as the capacity to protect against autonomic dysreflexia (AD)⁽¹²¹⁾. Resveratrol's neuroprotective mechanisms appear to result from its effective ability to stimulate caloric homeostasis by acting on the mitochondria, which results in less oxidative stress and more effective neuronal function⁽¹²²⁾.

When used as a supplement, curcumin, a plant-produced chemical,⁽¹²³⁾ has been regularly reported to produce positive effects in enhancing cognitive deficits due to aging, cognitive decline⁽¹²⁴⁾, or by stress⁽¹²⁵⁾, an insult⁽¹²⁶⁾ or chemicals, such as phenobarbitone and carbamazepine⁽¹²⁷⁾.

6. Supporting Healthy Brain Function: Herbal Approaches

Korean ginseng (*Panax ginseng*)

Panax ginseng has been used in traditional Chinese medicine for centuries. The results from several studies suggest ginseng may provide neuroprotection to the brain through a combination of anti-inflammatory and antioxidant mechanisms⁽¹²⁸⁻¹³⁰⁾.

Ginkgo (*Ginkgo biloba*)

The plant extract, *ginkgo biloba*, has been shown to induce positive effects on memory, learning and concentration⁽¹³¹⁻¹³²⁾. *Ginkgo biloba* has a noticeable effect on brain activity and short-term memory in animals and humans suffering from cognitive deficiency,⁽¹³³⁾ and also promotes learning in aged rodents⁽¹³⁴⁻¹³⁵⁾. The pharmacological mechanisms by which *ginkgo biloba* boosts cognitive effects remain uncertain, although its ability to stimulate a reduction in levels of reactive oxygen species (ROS)⁽¹³⁶⁾, increase cerebral blood flow⁽¹³⁷⁾, modulate membrane flexibility⁽¹³⁸⁾, interact with muscarinic cholinergic receptors⁽¹³⁹⁾, protect the striatal dopaminergic system⁽¹⁴⁰⁾, and upregulate AMPA, calcium and chloride channels, and growth hormones⁽¹⁴¹⁾ have been suggested as possible mechanisms underlying its actions in the central nervous system.

Bacopa (*Bacopa monnieri*)

Bacopa monnieri has been used for a number of nervous system disorders, including insomnia, anxiety and epilepsy ⁽¹⁴²⁾. Besides enhancing cognition and memory functions ⁽¹⁴³⁾, *bacopa monnieri* is also known for its anxiolytic effects and for managing convulsive sicknesses ⁽¹⁴⁴⁾. A study done by Anand and colleagues ⁽¹⁴⁵⁾ demonstrated the characteristics of antioxidant and DNA damage prevention by *bacopa monnieri*. Other effects of *bacopa monnieri* that have been studied include its influence on morphine toxicity ⁽¹⁴⁶⁾, as well as its action as a calcium antagonist ⁽¹⁴⁷⁾, anticancer agent ⁽¹⁴⁸⁾ and anti-addictive agent ⁽¹⁴⁹⁾.

Arctic root (*Rhodiola rosea*)

Rhodiola rosea, also known as golden root or Arctic root, is reported to improve cognitive function ⁽¹⁵⁰⁾, enhance memory and learning ⁽¹⁵¹⁾, and protect the brain ⁽¹⁵²⁾. This plant has increased a level of 5-HT and NE in the cerebral, prefrontal and frontal cortex, and is upregulated directly to dopamine and acetylcholine in the limbic system pathways, responsible for emotional calming ⁽¹⁵³⁾. It has also been demonstrated to enhance learning and memory impairment in Alzheimer's disease ⁽¹⁵⁴⁾.

Siberian Ginseng (*Eleutherococcus senticosus*)

Eleutherococcus senticosus, also known as Siberian ginseng ⁽¹⁵⁵⁾, has been used in China for thousands of years as a remedy that helps rejuvenate body functions, recover general health, restore memory, promote digestion and prevent respiratory tract infections ⁽¹⁵⁶⁾. Research has shown *Eleutherococcus senticosus* encourages a person's working and intellectual abilities and increases resistance to physical, chemical and biological factors ⁽¹⁵⁷⁻¹⁵⁸⁾. *Eleutherococcus senticosus* has confirmed antioxidant activity ⁽¹⁵⁹⁾, as well as neuroprotective and anti-inflammatory effects ⁽¹⁶⁰⁾.

7. Supporting Healthy Brain Function: Essential Minerals and Vitamins

Zinc

Zinc (Zn) is a co-factor of more than 300 enzymes or metalloproteins and plays an important role in many body functions, including cell division, the immune system, protein development and DNA synthesis. The precise regulation of zinc homeostasis is essential for a healthy central nervous system, as well as the whole organism ⁽¹⁶¹⁻¹⁶²⁾.

Magnesium

Over the last several decades, a vast amount of scientific data has been accumulated suggesting supplementing one's diet with magnesium (Mg) is very important, especially for addressing various neurological injuries. It also interacts with other micronutrients to maintain and promote cognitive function and performance ⁽¹⁶³⁻¹⁶⁸⁾.

Vitamin D

Research has shown the neuroprotective effects of vitamin D, which are gathered from data on vitamin D deficiency ⁽¹⁶⁹⁾, regulate apoptosis and reduce oxidative stress, inflammation and

excitotoxicity⁽¹⁷⁰⁾. Deficiencies in vitamin D can contribute to declines in cognitive function and increases in dementia and Alzheimer's disease⁽¹⁷¹⁾.

Vitamin E

Tocopherols and tocotrienols (α -T) are a group of compounds known as vitamin E, the primary fat-soluble, chain-breaking antioxidants in the body⁽¹⁷²⁻¹⁷³⁾. The neuroprotective effects of α -T are mainly facilitated by its inhibition of free radical transmission via the stopping of polyunsaturated fatty acid oxidation chain reactions⁽¹⁷⁴⁻¹⁷⁵⁾, as well as increases of brain-derived growth factor⁽¹⁷⁶⁾. Also, vitamin E reduces amyloidosis and improves cognitive function in a vivo (animal) model of Alzheimer's disease⁽¹⁷⁷⁾.

Vitamin B Complex

Vitamin B₂ (Riboflavin) is a powerful antioxidant assimilated from meat and dairy products. It is required for normal cellular functioning and has strong antioxidant effects⁽¹⁷⁸⁾.

Vitamin B₃ Nicotinamide (NAM) is the amide form of nicotinic acid (niacin), and increases available energy in an injured brain as a precursor to nicotinamide-adenine dinucleotide (NAD⁺). Vitamin B₃ treatment helps to reduce apoptosis, degenerating neurons and edema, and decreases the number of activated astrocytes and lesion size⁽¹⁷⁹⁻¹⁸²⁾.

Vitamin B₆ (Pyridoxine) has several different forms: pyridoxine, pyridoxal and pyridoxamine, all of which are converted to pyridoxal 5'-phosphate (PLP), primarily in the liver⁽¹⁸⁴⁻¹⁸⁵⁾. PLP is the active coenzyme of vitamin B₆ and is necessary for metabolism, catabolism, and transamination of amino acids⁽¹⁸²⁾, as well as several other physiological reactions -- as aids in glycogenolysis⁽¹⁸⁶⁻¹⁸⁷⁾ and the reduction of excitotoxicity⁽¹⁸³⁾. Conversely, chronic high doses of vitamin B₆ can cause considerable neural toxicity and behavioral impairments, including balance and gait problems⁽¹⁸⁸⁻¹⁸⁹⁾.

Vitamin B₉ (Folic acid) is critical for cell division, DNA synthesis and the maintenance of DNA methylation patterns⁽¹⁹⁰⁾. It has been systematically researched for its effects on cognition (specifically whether it improves cognitive function), although no conclusive findings have been established⁽¹⁹¹⁻¹⁹²⁾.

Vitamin B₁₂ is an essential B vitamin that plays an integral role in DNA synthesis, methylation reactions and maintenance of genomic stability⁽¹⁹³⁻¹⁹⁴⁾. It is synthesized by microorganisms, and primary dietary sources of Vitamin B₁₂ are animal-source foods⁽¹⁹⁵⁾. Vitamin B₁₂ deficiency also affects neuropsychiatric and cognitive function⁽¹⁹⁶⁾, particularly in young children and elderly populations⁽¹⁹⁷⁾.

8. ETI Formulas and Formulations Supporting Healthy Brain Function

During the last 15 years, Energy Tools International (ETI) and Vital Force Technology (VFT) have been collecting data from a wide range of rigorous VFT lab tests, along with testimonials regarding the practical usage of ETI formulas — via a worldwide practitioner's network — in an effort to effectively amplify the potency of ETI formulas, by combining different energy

formulas for specific applications. The systematic combining of ETI's energy formulas is based on the specific role of each formula in addressing a particular biological effect.

We recommend that our practitioners try the following specific combinations of ETI formulas (see below), with special attention on fine-tuning dosages, frequency and proportions of each formula, thereby creating a personalized approach for each particular client's needs in supporting healthy brain function.

1. Supporting brain function during stressful conditions

Description: Can be used as a restorative tonic for the brain during stressful conditions and might help with mental fatigue, as well as enhance memory and support intellect.

Formulation and Dosage: Combine Master Brain (10 drops) and Hypothalamus Support (5 drops) in 2-4 oz. of water. Drink 2-3 times per day, when it is necessary, but not later than 2-3 hours before bedtime.

Precautions: No precautions or side effects, if used with the recommended dosages.

2. Balancing an overactive mind

Description: May be helpful to decrease nervousness and insomnia, as well as a general tonic to relieve physical and mental fatigue associated with stress, worry or hyperactive imagination.

Formulation and Dosage: Combine Clear Mind (10 drops) and Stress Relief (5-10) drops) in 2-4 oz. of water. Drink 3-4 times per day, for up to two weeks.

Precautions: No precautions or side effects, if used with the recommended dosages.

3. Energy boost for physical activities

Description: Indicated for both men and women athletes. Recommended in any situation where the body and/or mind are trained to perform optimally and when pushed beyond normal limits. Facilitates rapid recovery from serious physical stress.

Formulation and Dosage: Combine Peak Performance (5-10 drops), Clear Mind (5 drops) and Quantum Balance (5 drops) in 2-4 oz. of water. Drink before, during or after physical activities.

Precautions: No precautions or side effects, if used with the recommended dosages.

4. Supporting mental clarity and emotional stability

Description: This formulation can help develop the experience of mental clarity, calmness, stable mood and/or a feeling of happiness, as well as support normal brain-body function during a woman's menopause period.

Formulation and Dosage: Combine Master Brain (5-10 drops), Hypothalamus support (5 drops), Oxytocin (5 drops) and Stress Relief (5 drops) in 2-4 oz. of water. Drink 2-3 times per day, for up to two weeks.

Precautions: No precautions or side effects, if used with the recommended dosages.

5. Supporting brain function during states of anxiety

Description: May decrease symptoms of generalized anxiety disorder, panic disorder and social anxiety disorder by more efficiently supporting regulation of homeostasis via HPA. Also, this can help physical and mental conditions associated with injury, illness, overwork, mental exertion and lack of vitality.

Formulation and Dosage: Combine Adrenal Support (5 drops), Master Brain (5 drops), Adaptogen (3 drops) and Oxytocin (2-3 drops) in 2-4 oz. of water. Drink 2-3 times per day; increase frequency up to 5 times per day during a panic attack or severe anxiety; continue for up to two weeks.

Precautions: This formulation can be very effective as an individual formulation via slight tuning/adjustment of the compound's proportion to meet specific needs. Do not use this formula during acute state of infection.

6. Supporting brain function during depression

Description: May be helpful with symptoms of persistent depression and seasonal affective disorder.

Formulation and Dosage: Combine Stress Relief (5 drops), Hypothalamus Support (5 drops) and Tranquility (3-5 drops) in 2-4 oz. of water. Drink 3-4 times per day, for up to two weeks.

Precautions: No precautions or side effects, if used with the recommended dosages.

7. Eliminating headaches from overwork or after an overnight flight

Description: This formulation may help decrease the experience of mental tiredness or headache from overwork or after an overnight flight.

Formulation and Dosage: Combine Master Brain (5-10 drops), Vital360 (10-15drops) and Adrenal support (5 drops) in 4-6 oz. of water. Drink 2 times per day when it is necessary.

Precautions: No precautions or side effects, if used with the recommended dosages.

8. Systemic support to decrease low-level state of inflammation

Description: Can be used to decrease stress that might cause hypothalamic-pituitary-adrenal imbalances, which, in turn, could affect the renin-angiotensin system, which could increase the transcription of inflammatory mediators. Relaxation and pleasant experiences appear to reduce inflammatory responses, promote normalization of neuroendocrine status and allow humoral and cellular elements of the immune system to function properly, as well as decrease susceptibility to allergy, infection and neurogenic inflammation.

Formulation and Dosage: Combine Master Brain (5-10 drops), Vital360 (5 -10 drops), Adrenal support (3 drops) and Stress Relief (3-5 drops) in 4-6 oz. of water. Drink 2-3 times per day, for up to two weeks.

Precautions: No precautions or side effects, if used with the recommended dosages.

9. *Fatigue and/or mental overwork accompanying low GI functioning*

Description: May help overcome fatigue caused by frequent or sustained stress and physical or mental overwork accompanied by dysregulation of the digestive system.

Formulation and Dosage: Combine Master Brain (5 drops), Adrenal Support (5 drops) and GI Aid (5 drops) in 2-4 oz. of water. Drink 2-3 times per day, continue for up to two weeks.

Precautions: No precautions or side effects, if used with the recommended dosages.

10. *Oxytocin Formula*

Description: Using this formula, any man or woman may improve their energetic vitality and enhance their sociability. They can look more vibrant, and experience more feelings of charm, love and harmony.

Dosage: 10-15 drops diluted in 2-4 oz. of water. Drink 2-3 times per day, whenever it is necessary.

Precautions: No precautions or side effects, if used with the recommended dosages.

11. *Clear Focus Formula*

Description: The Clear Focus formula was created on the basis of the herbal extract of gotu kola (*Centella asiatica*) and ginkgo (*Ginkgo biloba*), mixed with trace minerals and energetically structured by the Clear Mind energy pattern. The Focus Mind formula can be used as a restorative tonic to help in overcoming mental fatigue, melancholy, mental overwork and poor concentration. This synergistic blend may also help improve cognitive functions and promote alertness, mental clarity, positive mood and focus, as well as help maintain an overall energy balance.

Dosage: 10-15 drops diluted in 2-4 oz. of water, up to 3 times per day.

Safety: Clear Focus formula is safe when used within proper therapeutic dosages.

Precautions:

Specific: No known precautions.

General: We recommend you consult with a qualified healthcare practitioner before using herbal products, particularly if you are pregnant, nursing or on any medications.

Description of ETI's formula ingredients:

1. Gotu kola (*Centella asiatica*) - fresh herb extract, 1:2 alcohol ratio

Gotu kola was broadly used in traditional Ayurvedic medicine for its wound healing properties and its positive effect on memory and focus (198). Recently, its significance has been acknowledged in the United States as an herb that helps maintain cognition (199) and vascular health (200). Several studies have shown gotu kola promotes healthy memory functioning, focus and alertness (201-204).

2. Ginkgo (*Ginkgo biloba*) - fresh leaf extract, 1:2 alcohol ratio

Current research has confirmed traditional data that *Ginkgo biloba* supports cognitive function (205-208) and enhances memory in adults (206-207, 209), as well as improves central and peripheral circulation (210-211).

3. Clear Mind energy pattern – this formula is infused into a 40% solution of chloride, magnesium, sulfate and potassium base.

The Clear Mind energy formula energetically supports the body's natural ability to maintain communication between the left and right hemispheres of the brain, as well as between the brain and the organs of the body, and thus can help in the achievement of mental clarity, calmness and the development of one's potential for increased states of stable mood and happiness.

* **Disclaimer** (i) The information provided herein is for educational purposes only. (ii) These statements have not been evaluated by the Food and Drug Administration (FDA). The information provided is not intended to diagnose, treat, cure or prevent any diseases or medical problems.

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