Natural Brain Enhancers
with AlphaSize & SerinAid

INGREDIENTS
Natural Brain Enhancers combines the two nutrients best validated for supporting brain health and mental performance at any age. GPC and PS are both phospholipid (fos-fo-lip-id) nutrients, essential to brain cell structure and function, but have differing molecular actions that naturally complement each other. GPC operates in the cell water phase ("cytoplasm"), while PS works within cell membranes. Both these nutrients are naturally present in all the cells of the body and are fundamental to life.

GPC, Vital For Mind and Body*
GPC has been an important brain nutrient in Europe since the 1980s, and in North America since 1997. It has many important nutritional roles, including being the best dietary source of choline, recently confirmed to be a dietarily essential nutrient.1 It helps prevent tissue buildup of urea, a metabolic waste product. This is just part of GPC's broader, very important osmotic function in helping to keep water pressures equalized between the cell's interior and the outside environment.4 GPC, along with PS, is concentrated in human breast milk.5

Double blind ("DB") clinical trials and experimental findings document GPC's many important benefits4-18:
* Supports healthy memory, learning, focus, and other cognitive functions, at all ages.
* Improves learning and behavior in children.
* Sharpens attention and word recall in young, healthy adults.
* Supports healthy mental performance in middle-aged people.
* Supports memory, learning, mood, and sociability in the elderly.
* Assists the kidneys and other organs to manage metabolic wastes.

In two DB trials with young, healthy subjects, GPC supported and even enhanced crucial cognitive functions.4,5 Volunteers were pretreated with GPC or a placebo, then injected with the chemical scopolamine. This can cause a temporary cognitive paralysis – amnesia. But giving GPC in advance acted as a countermeasure against the expected cognitive paralysis. Verbal learning was maintained all through the 6-hour amnesia period. Attention, verbal learning, and memory benefited for at least the first 3 hours. GPC also partially supported "working memory," the ability to concentrate in the presence of distraction.

In these young, healthy subjects GPC surprisingly even boosted word recall above the healthy starting level.4 To enhance normal mental performance in young, healthy people is a very rare quality and establishes GPC as a premier brain nutrient.5,6

Revitalizes the Aging Brain*
GPC has been subjected to many clinical trials with subjects older than 50 years. In 2001, a "meta-analysis" after pooling of the clinical data concluded that GPC was helpful for attention and memory in this aging population.7 A further meta-analysis in 2007 reconfirmed these findings.8 Data from over 1000 individuals assessed in several psychometric test systems showed that GPC offered support for mood and occasional fatigue in addition to attention, memory and other cognitive functions.7,8

GPC can help revitalize the brain.9-18 In one large DB trial that involved 261 elderly subjects, GPC improved cognition, behavior and activities of daily living.9

Integrates Brain With Body*
GPC metabolites are constantly needed for supporting (among other functions) healthy gene regulation, mental and visual performance, the brain's stimulation of voluntary muscles, and the non-conscious coordination of internal organ functions by the autonomic nervous system. GPC and its metabolites are fundamentally involved in growth, renewal and overall health maintenance, across the human lifespan.

Choline is a vitamin-like nutrient that is crucial to health, most especially as a source of methyl groups for healthy gene regulation (epigenetics).19 Choline also is used to make acetylcholine (ACH), which is not just the presence of distraction.

Supplement Facts

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>2 veggie capsules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Servings per container</td>
<td>30 servings</td>
</tr>
<tr>
<td><strong>Amount per serving</strong></td>
<td><strong>% Daily Value</strong></td>
</tr>
<tr>
<td>GlyceroPhosphoCholine</td>
<td>300 mg</td>
</tr>
<tr>
<td>(GPC, from AlphaSize*)</td>
<td></td>
</tr>
<tr>
<td>PhosphatidySerine</td>
<td>100 mg</td>
</tr>
<tr>
<td>(PS, from SerinAid*)</td>
<td></td>
</tr>
<tr>
<td>† Daily Value not established.</td>
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</table>

Other Ingredients: Dicalcium phosphate, modified cellulose (vegetarian capsule), silicon dioxide, magnesium stearate (vegetable source), magnesium silicate.

Contains Soy

Suggested Adult Use: Take 2 capsules daily between meals, not later than 4 pm. Up to 6 capsules per day may be beneficial, or higher intakes as recommended by a nutritionally-informed physician.

Non-GMO / Gluten Free / Vegan

Store in a cool dry place.

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* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.
The PC that can be derived from GPC is a major cell membrane building block.20 Cell membranes are the universal, dynamic molecular assemblies that cells use for the majority of their functions.20 Our brain cells and other cell types can readily use GPC to make fully functional membrane PC, with minimal expenditure of energy. Supplementing with GPC therefore helps ensure our cells can make new membrane mass from PC, in order to make energy, to grow, and to replace membranes lost to damage.

**Promotes Active Living and Healthy Aging***

GPC's primary actions support a further cascade of beneficial actions. By supporting the brain's acetylcholine status it supports pituitary hormone rhythms.18 Its osmotic and urea-buffering actions support all the organs, but especially the kidneys which typically accumulate it to very high levels.1 GPC is so versatile, it even helps the brain cells respond to NGF (nerve growth factor), an important messenger for nerve tissue renewal.21

GPC is truly vital at all stages of life. Its unique profile of protective, metabolic, and biochemical attributes help account for its proven contributions to mind-body integration, to active living and to healthy aging.

**PS, Vital Lipid for Memory, Mood and Stress***

PS also emerged as an important brain nutrient in Europe. It has been proven through 30 double-blind trials and numerous other human and animal studies.24-45 In 2003 the U.S. Food and Drug Administration (FDA) granted PS two Qualified Health Claims21:

- Consumption of phosphatidylserine may reduce the risk of dementia in the elderly. Very limited and preliminary scientific research suggests that phosphatidylserine may reduce the risk of dementia in the elderly. FDA concludes that there is little scientific evidence supporting this claim.
- Consumption of phosphatidylserine may reduce the risk of cognitive dysfunction in the elderly. Very limited and preliminary scientific research suggests that phosphatidylserine may reduce the risk of cognitive dysfunction in the elderly. FDA concludes that there is little scientific evidence supporting this claim.

Proven PS brain benefits include:

- Enhances memory, learning and other cognitive functions in over-50 healthy subjects, when compared to others in their age group.22-30,40,41,43
- Improves behavior, sociability and other quality of life indicators in the elderly.23-29,38,40-43
- Facilitates brain vitality, supports brain energetics.30
- Helps manage stress, whether emotional or physical in origin.30-39
- Promotes a balanced mood and is useful for restlessness or nervous tension, both in the young and the elderly.34-36,38,39,42
- Supports normal development of attention and behavior in childhood.42

Initially, PS was produced from cow brains, but after “mad cow” disease contaminated cattle herds soy became the source of commercial PS. Soy PS has been proven effective in at least 11 clinical trials.32-38,41-44

**Supports Memory, Learning, Other Higher Brain Functions***

In DB trials with over-50 subjects, PS was proven to slow age-related declines of memory, learning, concentration, and other cognitive functions.23,30,40-42,43 Renowned memory expert Dr. Thomas Crook coordinated two of the most informative trials.22,23

The first Crook trial studied people older than 50 who were healthy but did not have ideal memory for their age.22 The researchers concluded that PS have may “turned back the clock” on ageing in the brain. PS taken by mouth for 3 months may have restored as much as 12 years’ worth of memory and other cognitive functions: a subject who first tested at a “cognitive age” equivalent to a 64-year-old could later test at a cognitive age of 52 years.

In the second Crook DB trial, PS helped those with mild memory problems associated with aging.23 The sum total of all the memory trials with PS suggests consistent benefit for individuals whose memory could be better, but is not disturbing their daily existence.

**Benefits Mood and Stress Management***

PS has improved nervous irritability and sociability in elderly, young university students, and children. In a British DB trial,39 university students took PS or a placebo for 10 days, then had to do complicated arithmetic calculations without calculators. Taking PS supported the mood and self-confidence of the most restless in this group.

PS also can help combat physical stress, such as intense physical exercise. For bicyclists doing long rides, PS seemed to promote better mood, faster heart rate recovery, and increased endurance time.18 At higher PS intakes, cyclists may avoid experiencing elevation of the stress hormone cortisol.31 Golfers after taking PS for six weeks showed significantly improved accuracy on their drives.34 Weightlifters reported noticeably less muscle soreness and markedly better wellbeing from taking PS, as compared to placebo.37

**Key Cell Membrane Builder***

Every human cell has a membrane system that is both an outer border for the cell AND creates functionally specialized compartments within the cell.20,44 Cell membranes drive both the production of energy (mostly in the mitochondria) and its utilization to sustain the body’s life processes.20,44 PS is a foremost molecular building block for both the outer and the inner cell membranes.

In a brain imaging study conducted using PET (Positron Emission Tomography), supplementation with PS was found to markedly enhance brain energy production.30 The brain is more enriched in PS than is any other organ. PS is crucial for the brain’s electrical activity via the individual nerve cells. PS also supports many of the brain’s major nerve transmitter systems by facilitating their membrane receptors.

**The Brain's Premier Nutrient Enhancers***

People of all ages can benefit from GPC and PS, the most clinically proven natural brain enhancers. GPC and PS mutually support attention, learning, concentration, mood, behavior and sociability from childhood through old age. Both are orthomolecules *(orthodox molecules for the body, built into normal human metabolism, as defined by Nobel Professor Linus Pauling)*.45 This natural integration into our biochemistry is consistent with the clinical experience that both GPC and PS are very well tolerated as dietary supplements and safe to take long-term.
SCIENTIFIC REFERENCES

42. Gindin J., Noviko M, Kedar D, others. The effect of plant phosphatidylserine on age-associated memory and mood in the functioning elderly. 1995; Kaplan Hospital, Rehovot, Israel, 10–25.

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