Think Smart. Think Sharp.
A breakthrough solution for brain health

- Natural brain building block
- Clinically proven
- Long term effect
- Variety of grades and applications
- Easy to consume
- Excellent organoleptic properties
Cognitive Needs Throughout the Lifespan

Brain health is one of the major public health concerns at all ages. Children and students today are growing in a very competitive academic environment and parents are committed to supporting their mental performance and helping them achieve the highest academic results.

Adults are looking for a way to keep their brain healthy and well nourished in order to enable their brain to work at top capacity, and seniors seek to lessen loss of cognitive skills and abilities as part of the aging process.

Clinical studies have demonstrated that Phosphatidylserine (PS) supplementation may improve mental performance and contribute to maintaining a healthy lifestyle.
What is Phosphatidylserine (PS)?

Phosphatidylserine (PS) is one of the body's essential building blocks. It is naturally found in the cell membrane and particularly abundant in the brain\(^1\). The brain is a very metabolically active organ and is one of the richest organs in lipid content\(^2\).

PS Composition of Human Tissues\(^1\) (as % of total phospholipids)

- **Brain**: 18%
- **Heart**: 3%
- **Liver**: 3%

The Role of Phosphatidylserine in the Brain

PS has a crucial contribution to the structure and function of the nerve cells and plays a key role in 'cell to cell' communication, information transfer, signaling etc\(^3\)-\(^5\).
PS in our Diet

PS is a natural nutrient, it can be found in our food chain and exists in mother’s milk.6

PS is found abundantly in the internal organs of animals and some types of fish. However, the modern diet contains low levels of PS7.

Daily Intake of PS is Reduced in Modern Diets

Clinical studies demonstrate beneficial effects for supplementing our daily diet with 100–300 mg /day of PS.
PS Health Benefits

PS health benefits have been proven in over 30 clinical studies addressing the entire human life cycle, from seniors\textsuperscript{8}, adults\textsuperscript{9} to children\textsuperscript{10,11}. PS was found to significantly improve:

Concentration, Memory, Attention, Learning, Behavior, Stress Management.

**Consumption of Sharp PS\textsuperscript{®} Improves Cognitive Functions\textsuperscript{8}**

![Graph showing consumption of Sharp PS\textsuperscript{®} improves cognitive functions.](image)

Published in: Richter et al, Clinical Interventions in Aging. 2013; 8, 557

**Soy PS in Milk Improves Cognitive Functions of Students\textsuperscript{9}**

![Graph showing soy PS in milk improves cognitive functions of students.](image)

Published in Chinese in: Tang Yong et al, Chongqing medical journal, 2011
Enzymotec Introduces
A Leading Phosphatidylserine Brand for Cognitive Function

Enzymotec has exclusive and patented Sharp-PS® grades

Sharp-PS® has excellent organoleptic properties

Enzymotec is currently the only supplier that has next generation products in the market
Produced by Enzymotec, a leading PS supplier, Sharp-PS® is one of the most popular supplements in the industry, representing the highest quality and greatest variety of grades.

Sharp-PS® is easily applicable in dairy matrix – UHT or milk formula.
Why is PS the Best Cognitive Solution?

PS is the only cognitive supplement that demonstrates crucial contribution to the structure and function of brain cells.

Brain Boosters

Products: Ginkgo Biloba, Ginseng, Coffee/Energy drinks

Activity: Immediate, short term effect

Membranes structure

Products: PS and other phospholipids

Activity: Direct long term clinically approved effect on cognitive performance

Oxidation & Inflammation

Products: Vitamins & Minerals, Anti oxidants, DHA

Activity: Indirect support to inflammation & oxidation influence on the brain

PS gained two approved FDA* claims:

Consumption of phosphatidylserine may reduce the risk of cognitive dysfunction in the elderly

Consumption of phosphatidylserine may reduce the risk of dementia in the elderly

• Sharp-PS® is certified by:
Sharp PS® is Suitable for a Wide Range of Applications

- Softgels
- Capsules
- Gummies
- Liquid Formula / UHT Milk
- Milk Powder

NEWLY LAUNCHED!
PATENTED
Sharp PS® SILVER - is a natural brain energizer for sharp thinking, focused activities, mood improvement and enhanced concentration. Sharp PS® SILVER delivers significant amounts of PS and DHA, reduces stress and anxiety. Additive effect for PS and DHA may be observed when consumed simultaneously.

Sharp PS GREEN™ - is one the most revolutionary and innovative new products in the field of brain health. It is comprised of phosphatidylserine from vegetarian source which is free from soy allergens, a non GMO and eco friendly. Sharp PS GREEN™ was developed by Enzymotec and helps maintain and restore memory and mental performance.

Available Grades

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<thead>
<tr>
<th></th>
<th>Sharp PS®</th>
<th>Sharp PS Green™</th>
<th>Sharp PS® Silver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>20-70% for GM 20-85% for non-GM</td>
<td>20% and 60%</td>
<td></td>
</tr>
<tr>
<td>Fluid</td>
<td>20%</td>
<td>20%</td>
<td></td>
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<tr>
<td>Dispersion</td>
<td>20 and 28%</td>
<td>18%</td>
<td>10%</td>
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[With EU health claim for brain]
Attributes

- Exclusive Complex of PS & Omega-3
- Soy-Allergen Free

Benefits

- Proven to support mental performance & cognitive abilities at all ages, from school age children to adults with memory complaints. Long term effects on memory, learning & focus

Specific advantages

- Grades available for multiple applications including dairy products
- Additive cognitive effects of PS & DHA

References:

1. White, D. The phospholipid composition of mammalian tissue, 1973
7. M. Haarem, Statement on the change of nutritive provision with PS, 2002

* 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.

Regulations

Sharp PS® has gained regulatory approval in the following countries:
- USA
- Europe
- China
- Australia
Enzymotec’s Edge

- Global leader in lipids technologies
- Clinically-validated products that address dietary needs, medical disorders and common diseases, using molecules familiar to the human body
- Proprietary, scalable technology platform and clinical research capabilities integrated across segments
- A unique product range that addresses the entire human life cycle from infancy to old age
- Solutions that cover the entire health spectrum from prevention to treatment, from nutrition to drugs (Rx)
- Fully integrated – R&D, Process Development, Manufacturing, Regulation, Marketing and Sales

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