Liver Health

Purity you expect. Quality you trust.

The Gold Standard

“PPC can be administered in general, or as an adjuvant, to enhance cell membrane related physiological process.”

Dr. K.-J. Gundermann

Advanced Lipid Science

Delivery | Absorption | Bioavailability

Nutrasal
Advanced Lipid Science
According to the intensity of exposure to noxae, malnutrition or viruses, liver damage may manifest itself as acute and chronic hepatitis, fatty liver and liver cirrhosis, among others. Irrespective of the origin, damage to liver cell membranes and to their organelles is generally present in hepatopathies. Metabolic functions of the liver cell and the activity of enzymes bound to membranes are inhibited, thus causing the clinical picture of liver disorders.
PPC is incorporated into liver cell membranes in toto as shown with the help of double-radioactive labeling. Clinical studies suggest that PPC:

- Restructures Damaged Membranes
- Normalizes Cellular Permeability
- Improves Cell Metabolism
- Reactivates Membrane-Bound Enzymes
- Stimulates Hepatocyte Regeneration

**PPC MODE OF ACTION IN THE LIVER**

- Reduced Radical Formation and Peroxidation
- Anti-Apoptotic Efficacy
- Restoration and Stabilization of Membrane Structures
- Improved Blood Flow Properties/Microcirculation
- Anti-Fibrogenic Efficacy

**Improvement of Liver Function**

- Cytoprotection
- Influence on Mediators of Inflammation/Necrosis
- Stabilization of Coagulation Equilibrium
- Precursor of Eicosanoids (e.g., Prostaglandins)
- Donator of Polyunsaturated Fatty Acids
- Tissue Regeneration
- Cell Signalling
- Source of Second Messengers
- Incorporation into Hepatocytes
- PPC Administration

**PPC is safe, effective and well tolerated even under long-term use.**
Every year doctors around the world prescribe polyenylphosphatidylcholine (PPC) to millions of patients with liver disorders. The positive experience doctors and patients have with PPC, the main ingredient in PhosChol, is due to its unique mode of action.

- PPC corresponds in its chemical structure to endogenous phospholipids. Due to its high content of bound polyunsaturated fatty acids, however, they are much superior to these.
- PPC is incorporated into all cell membrane systems of the cells and organelles, and thus constitutes an integrative component of the membrane.
- PPC plays a decisive role in membrane dependent metabolic processes as well as in cell regeneration.
- Phospholipid-dependent, membrane-located enzyme activity increases in the presence of PPC.
- The polyunsaturated fatty acids released from a part of the molecules constitute prostaglandin precursors.
- PPC co-regulates immunological processes.
- PPC stabilizes the membranes and counteracts lipid peroxidation due to free radicals.

A loss of phospholipids is seen irrespective of the etiology in liver disorders in which there is damage to the hepatocyte membranes and organelles. Exogenous substitution of phospholipids in the form of PPC leads to the incorporation of PPC into the membranous structures of the liver cell and thus to membrane regeneration. The proof of the unique mode of action and thus the therapeutic relevance of PPC was primarily demonstrated by a large number of different pharmacological studies carried out all over the world and now is continually completed on the basis of new scientific methods.

**Clinical Studies Confirm**

In numerous international clinical studies with more than 10,000 patients, well-known clinicians checked the therapeutic possibilities of PPC in the treatment of liver disorders of different etiology and confirmed the knowledge gained during pharmacological examinations.

**PPC is a superior protectant against liver damage.**

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**References & Indications**

**Indications:**
As adjuvant in acute and chronic hepatitis; cirrhosis; intoxications; fatty degeneration of the liver of any origin; functional cholestasis; prophylaxis of gallstone formation; radiation syndrome; pre-and postoperative care, especially in liver/gallbladder surgery.

**Dosage and Administration:**
Unless otherwise prescribed by the physician, 2-3 grams (2-3 capsules or 1 tsp. liquid concentrate) once daily. To be administered during meals, with a little liquid if required.

Further information on request.
Please call toll free: 1-800-777-1886
or email customercare@nutrasal.com

**Only Pharmaceutical Grade PPC Delivers a Therapeutic Dose of 1,2 DLPC**

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**Disclaimer:** 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.