# Phosphatidylcholine (sunflower)

Phospholipid-bound choline to support cellular function, cognitive function and liver health<sup>‡</sup>

#### **INDICATIONS**

- Ages 18 and up
- Healthy liver function<sup>‡</sup>
- Cellular health support<sup>†</sup>
- Pregnancy support<sup>†</sup>

#### **BENEFITS**

- Phospholipid-bound choline to support cellular function, cognitive function and liver health<sup>†</sup>
- Acts as a precursor for phospholipids and acetylcholine, a neurotransmitter involved in attention, memory and neuromuscular function<sup>†</sup>
- Supports fat metabolism in the liver to promote energy production<sup>†</sup>
- Provides choline source for pregnancy to support infant cognitive development<sup>†</sup>

#### **FEATURES**

- Soy-free, sunflower-derived phosphatidylcholine.
- Part of the PureGenomics® product line
- Made with high-quality ingredients backed by verifiable science

## **VERIFIABLE SCIENCE**

Phosphatidylcholine (PC) is a naturally occurring, integral component of the cellular membrane, adding fluidity and strength to cells. It serves as a source of choline, an important nutrient for methylation, cell-to-cell communication, cognition and liver function.1 Choline and its metabolites are the major source of methyl groups in the diet. Methylation plays many roles including neurotransmission, vitamin assimilation, DNA synthesis and gene regulation.<sup>2</sup> Choline is required for the synthesis of phospholipids and acetylcholine, a neurotransmitter involved in attention, learning and memory. A 6-month double-blind, placebocontrolled trial suggested that choline-containing lecithin, alpha GPC supports memory in aging individuals. Animal research suggests an adaptogenic effect when exposed to stress.3 Certain genetic variations in MTHFR and PEMT, enzymes that play critical roles in methylation and choline synthesis, respectively, have been associated with increased dietary choline needs.4

Research indicates that choline intake is important for pregnant women, particularly those with PEMT and MTHFR genetic variations. Another clinical trial showed that women with PEMT and MTHFR genetic variations who consumed 480 mg of choline daily during pregnancy had offspring with faster processing speed than those who did not. PC also plays a significant role in the healthy transport and metabolism of lipids. A randomized, double blind, placebo-controlled trial suggested that choline-containing lecithin may help support healthy hepatic fat metabolism. Animal studies indicate that PC promotes healthy liver and pancreatic antioxidant activity.

## **SUGGESTED USE**

As a dietary supplement, take 2 capsules daily, with a meal.

## **STORAGE**

Store in a cool, dry place.

#### **WARNING**

If you are pregnant or lactating, have any health condition or are taking any medication, consult your health professional before use.

#### **SOURCE**

 Derived from sunflower, a source that is rich in polyunsaturated fatty acids, as opposed to animal-derived sources, which tend to be much higher in saturated fatty acids. There is no detectable GMO material in this product

## **NOTES**

Size 22 softgel

Bottle count 90

Order code PHC9

Bottle size 300 cc



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## **REFERENCES**

- 1. da Costa KA, et. al. Am J Clin Nutr. 2006 |ul;84(1):88-94.
- 2. Olthof MR, et. al. Am J Clin Nutr. 2005 Jul;82(1):111-7.
- 3. Kumar R, et. al. J Altern Complement Med. 2002 Aug;8(4):487-92
- 4. West AA, et. al. J Acad Nutr Diet. 2014 Oct;114(10):1594-600
- 5. Yan J, et. al. Am J Clin Nutr. 2012 May;95(5)
- 6. Caudill MA, et al. FASEB J. 2018 Apr;32(4):2172-2180
- 7. Fischer LM, et. al. Am J Clin Nutr. 2010 Nov; 92(5): 1113–1119.

#### SUPPLEMENT FACTS

2 capsules daily, with a m	eal.		
Two (size 22) softgels con-	tain:		
Calories			15
Total fat			1.5 g
Total phosphatidylcholine			550 mg
Other ingredients: gelatin co sunflower lecithin, medium-			ater, carob),
NON (MO)			
Phosphatidylcholine (sunflower)	Quantity	Order Code	
	90	PHC9	



