

## LECITINA

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### Descripción

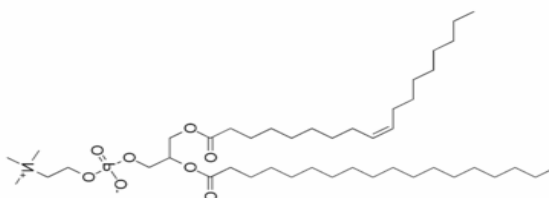
Fracción fosfatídica de la yema de huevo (de donde toma su nombre), compuesta fundamentalmente por fosfatidil colina, el fosfolípido más abundante del organismo.

Los ácidos grasos prevalentes son el esteárico o el palmítico en C1; y oleico, linoleico o linolénico en C2.

Junto a los otros fosfolípidos es el componente esencial de las membranas celulares. El principal órgano de síntesis es el hígado, en cantidades suficientes para las necesidades del organismo.

Es el principal emulsionante de uso industrial.

Fuentes: yema de huevo, soja entera, productos industriales emulsificados



### Seguridad y Efectos Adversos

Considerado "GRAS" (Generally Regarded as Safe)	Sin evidencia de efectos adversos en cantidades ingeridas con alimentos
Otros efectos	En altas dosis puede asociarse a síntomas gastrointestinales agudos, sudoración y sialorrea (efectos colinérgicos)

### Beneficios Postulados y Grados de Evidencia

Condición	Fuerza de la Evidencia	Observaciones
Hipercolesterolemia	Insuficiente	Pocos estudios contradictorios y de diseño cuestionable
Enfermedades hepáticas (NAFLD, Cirrosis alcohólica, Cirrosis post viral)	Insuficiente	Pocos estudios y de diseño cuestionable

Colitis ulcerosa	Insuficiente	Un estudio pequeño
Alzheimer, Parkinson, Trastorno bipolar	Insuficiente	Estudios pequeños y resultados contradictorios

### Colesterol

Suplemento muy popular para la reducción del colesterol plasmático. Pese a su participación en la transferencia de colesterol entre lipoproteínas, no se ha podido demostrar ningún efecto en ensayos de diseño adecuado.

### Enfermedades hepáticas

Pocos ensayos en pacientes con enfermedad hepática avanzada han fallado en demostrar alguna utilidad. La privación de colina puede asociarse a cáncer de hígado en animales de laboratorio, pero esta carencia es extremadamente rara en el ser humano

### Enfermedades Neurológicas

El papel de la colina como precursor de la acetil colina llevó a investigar su potencial en enfermedades degenerativas pero sin éxito. Aunque es popular suponer que es capaz de mejorar el rendimiento intelectual, esta hipótesis carece de fundamento.

### Obesidad

Carece de efectos sobre el metabolismo energético.

### Observación

Pese a la popularidad de los suplementos con lecitina, su estudio es escaso y proviene fundamentalmente de los años 70 al 90.

### Referencias

1. FDA: GRAS Substances (SCOGS) Database (<http://www.accessdata.fda.gov/scripts/fcn/fcnDetailNavigation.cfm?rpt=scogsListing&id=185>)
2. Fiume Z., Final report on the safety assessment of Lecithin and Hydrogenated Lecithin, Int J Toxicol. 2001;20 Suppl 1:21-45.
3. Csáky I, Fekete S. Soybean: feed quality and safety. Part 1: biologically active components. A review. Acta Vet Hung. 2004;52(3):299-313.
4. Wood JL, Allison RG. Effects of consumption of choline and lecithin on neurological and cardiovascular systems. Federation proceedings, 1982 Dec;41(14):3015-21.
5. Barbeau, Andre M.D., John H. Growdon, M.D., Richard J. Wurtman, Nutrition and the Brain; Choline and Lecithin in Brain Disorders, (1979) Vol. 5, Raven Press, NY, 73, 76, 83, 113, 444.

6. Hanin Israel, Brian Ansell G, Lecithin : Technological, Biological, and Therapeutic Aspects, (1987), Plenum Press, NY, 180, 181.
7. Szuhaj L, Bernard F., Gary R., Lecithins (1985), American Oil Chemists' Society, 323, 324, 326, 331-337.
8. Langer, S. Electrify your memory with brain-boosting nutrients, (June 1997) Better Nutrition, Atlanta, 36-47.
9. Lawhon C. Lecithin supplement's effectiveness in weight loss. Vanderbilt University,  
[http://www.vanderbilt.edu/ans/psychology/health\\_psychology/LECITHIN\\_SUPPLEMENT.htm](http://www.vanderbilt.edu/ans/psychology/health_psychology/LECITHIN_SUPPLEMENT.htm)
10. Brook JG, Linn S, Aviram M. Dietary soya lecithin decreases plasma triglyceride levels and inhibits collagen- and ADP-induced platelet aggregation. *Biochem Med Metab Biol* . 1986;35:31-39.
11. Wojcicki J, Pawlik A, Samochowiec L, et al. Clinical evaluation of lecithin as a lipid-lowering agent. *Phytother Res* . 1995;9:597-599.
12. Oosthuizen W, Vorster HH, Vermaak, WJ, et al. Lecithin has no effect on serum lipoprotein, plasma fibrinogen and macro molecular protein complex levels in hyperlipidaemic men in a double-blind controlled study. *Eur J Clin Nutr* . 1998;52:419-424.
13. Buchman AL, Dubin M, Jenden D, et al. Lecithin increases plasma free choline and decreases hepatic steatosis in long-term total parenteral nutrition patients. *Gastroenterology* . 1992;102:1363-1370.
14. Guan R, Ho KY, Kang JY, et al. The effect of polyunsaturated phosphatidyl choline in the treatment of acute viral hepatitis. *Ailment Pharmacol Ther* . 1995;9:699-703.
15. Lieber CS, Robins SJ, Li J, et al. Phosphatidylcholine protects against fibrosis and cirrhosis in the baboon. *Gastroenterology* . 1994;106:152-159.
16. Lieber CS, DeCarli LM, Mak KM, et al. Attenuation of alcohol-induced hepatic fibrosis by polyunsaturated lecithin. *Hepatology* . 1990;12:1390-1398.
17. Lieber CS, Leo MA, Mak KM, et al. Choline fails to prevent liver fibrosis in ethanol-fed baboons but causes toxicity. *Hepatology* . 1985;5:561-572.
18. Lieber CS, Rubin E. Alcoholic fatty liver. *N Engl J Med* . 1969;280:705-708.
19. Schuller-Perez A, Gonzalez San Martin F. A controlled study with polyunsaturated phosphatidylcholine compared to placebo in alcoholic steatosis of the liver. *Med Welt* . 1985;36:517-521.
20. Knuchel F. Double-blind study in patients with alcoholic toxic fatty liver. Effect of essential phospholipids on enzyme behavior and lipid composition of the serum. *Med Welt* . 1979;30:411-416.
21. Jenkins PJ, Portmann BP, Eddleston AL, et al. Use of polyunsaturated phosphatidylcholine in HBsAg negative chronic active hepatitis: results of prospective double-blind controlled trial. *Liver* . 1982;2:77-81.
22. Niederau C, Strohmeyer G, Heintges T, et al. Polyunsaturated phosphatidyl-choline and interferon alpha for treatment of chronic hepatitis B and C: a multi-center, randomized, double-blind, placebo-controlled trial. *Hepatogastroenterology*. 1998;45:797-804.

23. Singh NK, Prasad RC. A pilot study of polyunsaturated phosphatidyl choline in fulminant and subacute hepatic failure. *J Assoc Physicians India*. 1998;46:530-532.
24. Stoll AL, Sachs GS, Cohen BM, et al. Choline in the treatment of rapid-cycling bipolar disorder: clinical and neurochemical findings in lithium-treated patients. *Biol Psychiatry* . 1996;40:382-388.
25. Cohen BM, Lipinski JF, Altesman RI. Lecithin in the treatment of mania: Double-blind, placebo-controlled trials. *Am J Psychiatry* . 1982;139:1162-1164.
26. Polinsky RJ, Ebert MH, Caine ED, et al. Cholinergic treatment in the Tourette syndrome. *N Engl J Med* . 1980;302:1310.
27. Gelenberg AJ, Dorer DJ, Wojcik JD, et al. A crossover study of lecithin treatment of tardive dyskinesia. *J Clin Psychiatry* . 1990;51:149-153.
28. Domino EF, May WW, Demetriou S, et al. Lack of clinically significant improvement of patients with tardive dyskinesia following phosphatidylcholine therapy. *Biol Psychiatry* . 1985;20:1189-1196.
29. Weintraub S, Mesulan MM, Auty R, et al. Lecithin in the treatment of Alzheimer's disease. *Arch Neurol* . 1983;40:527-528.
30. Cohen BM, Miller AL, Lipinski JF, et al. Lecithin in mania: a preliminary report. *Am J Psychiatry* . 1980;137:242-243.
31. Cohen BM, Lipinski JF, Altesman RI. Lecithin in the treatment of mania: Double-blind, placebo-controlled trials. *Am J Psychiatry* . 1982;139:1162-1164.
32. Harris CM, Dysken MW, Fovall P, et al. Effect of lecithin on memory in normal adults. *Am J Psychiatry*. 1983;140:1010-1012.
33. Joe SH. Effect of lecithin on tardive dyskinesia. *Korea Univ Med J*. 1985;22:197-206.
34. Knuiman JT, Beynen AC, Katan MB. Lecithin intake and serum cholesterol. *Am J Clin Nutr* . 1989;49:266-268.
35. Greten H, et al. The effect of polyunsaturated phosphatidylcholine on plasma lipids and fecal sterol excretion. *Atherosclerosis* . 1980;36:81-88.
36. Childs MT, et al. The contrasting effects of a dietary soya lecithin product and corn oil on lipoprotein lipids in normolipidemic and familial hypercholesterolemic subjects. *Atherosclerosis* . 1983;38:217-228.
37. Kesaniemi YA, et al. Effects of dietary polyenylphosphatidylcholine on metabolism of cholesterol and triglycerides in hypertriglyceridemic patients. *Am J Clin Nutr*. 1986;43:98-107.
38. Olthof MR, Brink EJ, Katan MB, et al. Choline supplemented as phosphatidylcholine decreases fasting and postmethionine-loading plasma homocysteine concentrations in healthy men. *Am J Clin Nutr*. 2005;82:111-117.
39. Higgins JPT, Flicker L. Lecithin for dementia and cognitive impairment. *Cochrane Database Syst Rev*. 2003;(3):CD001015.
40. Stremmel W, Ehehalt R, Autschbach F, et al. Phosphatidylcholine for steroid-refractory chronic ulcerative colitis: a randomized trial. *Ann Intern Med*. 2007;147:603-610.

