

Highly Concentrated EPA

EPAActive®

Concentrated and Purified
by Molecular Distillation



- Supports Cardiovascular Health
- Helps Balance Inflammatory Response
- Balances Cytokines That Play Key Roles in the Body's Immune Actions
- Promotes Mental Health

Supplying EPA, a substrate for the body's natural regulators of COX-2, thus can support the body against many types of damage. Conditions that are characterized by chronic inflammation can compromise the function and integrity of the joints and other tissues. DHA can be readily reconverted back to EPA and has its own special benefits. For instance, DHA is critical for the proper functioning of the nervous system and it also exerts beneficial effects upon blood lipids levels and cardiovascular health.

Excessive intake of omega-6 fatty acids, such as are over-represented in most common vegetable oils, can elevate the production of arachidonic acid in the body, especially in diets high in refined carbohydrates, as a result of elevated *delta*-5-desaturase activity, the terminal enzymatic step in the synthesis of arachidonic acid. Excessive arachidonic acid, in turn, promotes inflammation. EPA counterbalances this action, in part by decreasing leukotriene synthesis by inflammatory cells. It has been shown experimentally that the addition of eicosapentaenoic acid to *gamma*-linolenic acid-supplemented diets prevents serum arachidonic acid accumulation in humans. Supplementation with EPA thus plays a role strategies for manipulation of cell composition in order to influence cellular responses and functions in desirable ways.

Usage and Safety

As a dietary supplement, take 2 softgels per day with water or juice with meals or as directed by your qualified health consultant.

References

Barham JB, Edens MB, Fonteh AN, Johnson MM, Easter L, Chilton FH. Addition of eicosapentaenoic acid to gamma-linolenic acid-supplemented diets prevents serum arachidonic acid accumulation in humans. *J Nutr.* 2000 Aug;130(8):1925-31.

Burgess JR, Stevens L, Zhang W, Peck L. Long-chain polyunsaturated fatty acids in children with attention-deficit hyperactivity disorder. *Am J Clin Nutr.* 2000 Jan;71(1 Suppl):327S-30S.

Chung BH, Mitchell SH, Zhang JS, Young CY. Effects of docosahexaenoic acid and eicosapentaenoic acid on androgen-mediated cell growth and gene expression in LNCaP prostate cancer cells. *Carcinogenesis.* 2001 Aug;22(8):1201-6.

Gerster H. Can adults adequately convert alpha-linolenic acid (18:3n-3) to eicosapentaenoic acid (20:5n-3) and docosahexaenoic acid (22:6n-3) *Int J Vitam Nutr Res.* 1998;68(3):159-73.

Harris WS, Isley WL. Clinical trial evidence for the cardioprotective effects of omega-3 fatty acids. *Curr Atheroscler Rep.* 2001 Mar;3(2):174-9.

Obata T, et al. Eicosapentaenoic acid inhibits prostaglandin D2 generation by inhibiting cyclo-oxygenase-2 in cultured human mast cells. *Clin Exp Allergy.* 1999 Aug;29(8):1129-35.

Raisz LG. Potential impact of selective cyclooxygenase-2 inhibitors on bone metabolism in health and disease. *Am J Med.* 2001 Feb 19;110(3 Suppl 1):43-45.

Ringbom T, Huss U, Stenholm A, Flock S, Skattebol L, Perera P, Bohlin L. Cox-2 inhibitory effects of naturally occurring and modified fatty acids. *J Nat Prod.* 2001 Jun;64(6):745-9.

Rose DP, Connolly JM. Regulation of tumor angiogenesis by dietary fatty acids and eicosanoids. *Nutr Cancer.* 2000;37(2):119-27.

Supplement Facts

	Amount Per 2 Softgels	%DV
Calories	10	
Calories from fat	10	
Total Fat	1 g	
Fish Oil	955 mg	*
EPA (Eicosapentaenoic acid)	400 mg	*
DHA (Docosahexaenoic acid)	24 mg	*
Gamma-Tocopherols	8 mg	*
Ascorbyl Palmitate	8 mg	*
Rosemary Extract	10 mg	*

* Daily Value not established.

Superior Nutrition and FormulationSM by
Jarrow FORMULAS®
Los Angeles, CA 90035-4317
www.Jarrow.com

* 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.

© 2006 Jarrow FORMULAS®

www.Jarrow.com

Jarrow FORMULAS® uses the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) in a variety of products for special purposes. Although these are closely related fatty acids, EPA and DHA have somewhat different roles within the body. EPA exerts its major activity by suppressing the arachidonic acid cascade and by increasing the production of anti-inflammatory prostaglandins (PG), in particular the series or "family" of prostaglandins called PGE-3.

Omega-3 / EPA to Control Arachidonic Acid

Recently a new class of synthetic inhibitors which block only COX-2 have been proposed as safe alternatives, but this promise has not turned out to be entirely true in practice. COX-2 may have a critical role for immune function, in salt, water and body temperature regulation, in nerve transmission, and in the proper operation of several organ systems, including the brain and the kidneys. Hence, it turns out to be the case that it is much safer and even beneficial to support the body's own mechanisms for controlling COX-2 rather than to intervene directly. Moreover, inflammation is a signal of damage to local tissues as well as being an origin of such damage. Free radicals and strong oxidants appear in the body from many different sources and attack tissues through pathways not limited to those controlled by COX-2. There are other arachidonic acid-activating pathways in the body, for instance, those of 5-lipoxygenase and 12-lipoxygenase, which can be influenced by natural mechanisms.

The cyclooxygenase enzyme is the body's common site of action for a number of processes that lead to inflammation and pain as a result of its pivotal role in the production of a pro-inflammatory family of prostaglandins. These particular prostaglandins are hormone-like signaling agents which are manufactured primarily from arachidonic acid. Synthetic inhibitors of the cyclooxygenase enzyme, unfortunately, can cause a variety of problems, primarily damage to the gastrointestinal tract, liver and kidneys. These problems associated with synthetic inhibitors arise because the cyclooxygenase enzyme is actually two enzymes rather than one. One of the cyclooxygenase enzymes is highly desirable even under conditions of active inflammation. Cyclooxygenase-1 (COX-1) is important for producing prostaglandins which protect the stomach and kidneys against damage by acid and other forms of assault. Only discovered in 1991, it is cyclooxygenase-2 (COX-2) which activates many pathways that use arachidonic acid to manufacture inflammatory prostaglandins. Most synthetic inhibitors block both pathways, and therefore both protect and damage the body at the same time. Serious gastrointestinal side effects can be caused by inhibitors of COX-1.



EPAActive® plays a major role in supporting the body's natural mechanisms for maintaining balance in immune actions, inflammatory stability and cardiovascular health. Moreover, essential fatty acids are the "building blocks" used by the body to produce many hormones and chemical messengers, including important neurotransmitters in the brain. With the great excess in intake of the omega-6 family of fatty acids (the predominant components in corn, soybean and many other common oils) presently found the American diet, many health professionals advise increasing the intake of omega-3 fatty acids, including EPA, to restore balance.

EPAActive® contains 42 percent EPA and 65 percent total omega-3 content. The form of mixed glycerides, which are preferred over free fatty acids or ethyl esters for superior assimilation. EPAActive® contains 42 percent EPA and 65 percent total omega-3 content. The omega-3 fatty acids in EPAActive® are in ensure that the product is free of any contaminants. concentrated and purified by molecular distillation to fatty acids must be derived from the diet. EPA is lipids known to be essential for health — omega-3 eicosapentaenoic acid (EPA) derived from sardine oil. This omega-3 fatty acid belongs to a family of EPAActive® contains a high concentration of the

A Member of a Family of Essential Fats

Concentrated Eicosapentaenoic Acid

Highly Concentrated EPA
EPAActive®