

Why Bioriginal?

Innovative
EFA Experts
Responsive

Introduction to EFAs

What are Essential Fatty Acids?

Essential fatty acids (EFAs), also called the “good” fats, are a type of polyunsaturated fat that is critical for the healthy functioning of every cell in the body. Like other essential vitamins and minerals, EFAs are necessary for the maintenance of good health. There are 2 families of EFAs omega-3 and omega-6 fatty acids. The body cannot produce ALA omega-3 and LA omega-6 EFAs, we must receive them through the diet and supplementation. Longer chain derivatives of EFAs regulate cell processes and produce eicosanoids (a family of hormone-like substances that aid cell function) to optimize health.

EFAs contribute to good health by mediating the actions of hormones, increasing absorption of vitamins and minerals, nourishing the skin, hair and nails, promoting the proper functioning of nerves, benefiting the cardiovascular, reproductive, immune and central nervous systems, and stimulating the body’s metabolism, which can help promote weight loss.

Although North Americans consume a significant amount of fat, many are suffering from an essential fatty acid deficiency. Many diets are high in sugar, carbohydrates, and processed foods but are lacking sufficient healthy fats. Insufficient “good” fats are consumed since highly processed foods are stripped of essential fats and most people do not eat enough fresh raw fruits, green leafy vegetables, nuts, grains, berries, fish and lean meat.

Research has demonstrated that supplementation with EFAs is safe. In thousands of studies worldwide, no serious side effects have ever been reported. Minor side effects may include bloating, nausea, upset stomach, burping, and loose stools. These minor side effects can be avoided by taking dietary supplements with meals, starting with low doses and gradually increasing, and dividing the daily dose into smaller portions. Daily EFA supplements are available in a wide range of easy and convenient-to-take formats to help your customers get the good fats they need to stay healthy.

EFA Deficiency Is Linked To:

- Coronary heart disease
- Dry skin, eczema and psoriasis
- Inflammation
- Arthritis
- Stroke
- Depression
- PMS
- ADD / ADHD
- Obesity
- Stress
- Immune system dysfunction
- Diabetes

EFA Families

Omega-3

- Alpha-Linolenic Acid (ALA)
- Eicosapentaenoic Acid (EPA)
- Docosahexaenoic Acid (DHA)

Omega-6

- Linoleic Acid (LA)
- Arachidonic Acid (AA)
- Gamma-Linolenic Acid (GLA)

EFA Definitions

Linoleic Acid (LA) omega-6: LA is found in processed foods, margarine, and vegetable oils. It is plentiful in the typical North American diet and supplementation is not necessary.

Gamma Linolenic Acid (GLA) the "good" omega-6: The richest natural source of GLA is borage oil which contains 20–24% GLA. GLA is also found in evening primrose oil, which contains 8- 10% GLA, and black currant oil, which contains 15–17% GLA and 10–12% ALA. Many people are deficient in GLA so supplementation is necessary. GLA has been clinically indicated to have therapeutic benefits in health conditions including rheumatoid arthritis, skin diseases such as eczema and psoriasis, cardiovascular disease, PMS and menopause, and diabetic neuropathy. Research has shown that GLA acts as an anti-inflammatory, dilates the blood vessels, and reduces blood clotting.

Arachidonic Acid (AA) omega-6: AA is found in meat, eggs, and some shellfish. It is necessary for infant brain development and proper functioning of the brain and nervous system. Although recommended for infant development, recent research has shown that excessive amounts of AA may be linked to chronic inflammatory conditions in adults. Diets in industrialized countries are high in AA, so supplementation with AA is not required.

Alpha Linolenic Acid (ALA) vegetarian omega-3: ALA is found primarily in flax oil, perilla oil and in black currant oil. The positive effects of supplementation with ALA have been documented in a number of areas including regulating blood cholesterol, blood pressure, and immune system function. The oil extracted from flaxseed contains 50–60% ALA. In addition to ALA, flaxseed contains other important nutrients such as fiber, protein, and lignans. Supplementation with flax oil and milled flax is good for the heart, skin, immune function, and digestion.

Eicosapentaenoic Acid and Docosahexaenoic Acid (EPA and DHA) omega-3: Fish oil prepared from certain species of cold-water fish including salmon, mackerel, sardines, and tuna provide rich sources of the essential fatty acids EPA and DHA. A standard fish oil blend provides 18% EPA and 12% DHA, with concentrations up to 70% available. Research demonstrates that supplementation with fish oils containing EPA and DHA have therapeutic benefits in areas such as regulating blood triglycerides and blood pressure, cardiac arrhythmia (irregular heartbeat), infant brain and eye development, mental health and more recently inflammation.

Source	Omega-3			Omega-6		
	DHA	EPA	ALA	LA	GLA	AA
Fish	✓	✓				
Borage				✓	✓	
Flax			✓	✓		
Black Currant			✓	✓	✓	
Evening Primrose				✓	✓	
Shellfish				✓		
Processed Foods				✓		✓

Supplementation for Specific Conditions

Research done in the last 30 years, as documented in thousands of publications, indicates that supplementation with EFAs may be beneficial for joint, cardiovascular, skin, women's and immune response health, diabetes, brain function and other conditions. EFA supplementation with specific EFAs, or EFA combinations, can correct the imbalance of good and bad fats and ensure the efficient use of good fats in the body to maintain good health.

Arthritis and Joint Health

People with arthritis, joint problems, or sports injuries who begin supplementation with GLA, EPA and DHA may notice the following:

- Decreased pain, inflammation, swelling and other symptoms
- Reduced need for other drugs
- Reduced side effects of NSAID drugs
- Eased symptoms associated with the disease and reduced complications such as osteoporosis

GLA has extensive research in this area.

Women's Health

- **PMS:** Women who suffer from PMS have low GLA levels. Supplementation with GLA may reduce symptoms such as breast pain and tenderness, headache, fluid retention, depression, and irritability.
- **Menopause:** For women going through menopause GLA supplementation can normalize hormone levels and relieve symptoms such as nighttime flushes, breast pain, and inflammation.
- **Osteoporosis:** For women with osteoporosis GLA, EPA and DHA supplementation can enhance calcium absorption, increase calcium deposition in bone and increase vitamin D activity.

Cardiovascular Health

Supplementation with EPA and DHA and/or ALA may assist those with cardiovascular problems by:

- Reducing the risk of heart disease and fatal cardiac events
- Lowering blood pressure
- Reducing atherosclerosis
- Improving the lipid profile by reducing LDL ("bad") cholesterol and increasing HDL ("good") cholesterol

Skin Health

Supplementation with GLA may help reduce symptoms of the following skin conditions:

- Atopic dermatitis (eczema) and psoriasis
- Dry skin
- Rashes and minor skin irritations
- Redness and sunburn
- Cradle cap
- Acne

Eczema sufferers have decreased levels of GLA which causes inflammation and itching. Dramatic improvements occur with both oral and topical GLA supplementation. Most patients using GLA are able to reduce the use of other drugs such as topical and oral steroids, antihistamines and antibiotics. GLA also has cosmetic applications and is commonly used as an ingredient in skin creams and cosmetics.