# FISH OIL

FOR SKIN & HAIR



OMEGA-3 FOR YOUR HEALTH SERIES



- Supports skin health as we age
- **Hydrates** skin naturally
- **Promotes** healthy skin texture
- Supports skin health during adolescence
- Is natural and safe for long-term use

Deficiencies of EPA, DHA, and GLA can lead to dry, rough, problematic skin that is prone to inflammation, premature aging, and uneven pigmentation



### What are EPA, DHA, and GLA?

Extensive research finds that the most beneficial omega-3s are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Fish is a good food source of EPA and DHA, but due to concerns about toxins such as mercury, a purified fish oil supplement is the safest and most reliable source of these essential fatty acids.<sup>1,2</sup> In addition, people with health issues often require a minimum of 2–4 grams a day for symptom relief, which is difficult to obtain from food alone.

Research shows that flax is not an efficient source of EPA and DHA. Flax contains another omega-3 named ALA (alpha-linolenic acid). Our bodies can convert ALA to EPA and DHA, but very inefficiently. Only about 5% of ALA converts to EPA, and it may not convert to DHA at all.

EPA and DHA work together in the body. However, each fatty acid has unique benefits. EPA supports cardiovascular, circulatory, and mood health, and can be beneficial for optimizing immune health. DHA is a crucial foundation for cells in the brain, nervous system, and eyes, and, as a result, benefits cognition, mood, fetal and infant development, and a healthy pregnancy.

GLA (gamma-linolenic acid) offers further support for optimal skin health. GLA is found in borage oil, evening primrose oil, and black currant seed oil. GLA works best when taken with EPA and DHA.

Research shows that the most reliable source of omega-3s is a high-quality fish oil supplement



#### Fish Oil for Internal Skin Nutrition

Skin is the largest organ in the human body, and can often be the first visual indicator of an omega-3 essential fatty acid deficiency. EPA and DHA, the omega-3 essential fatty acids in fish oil, and GLA, the essential fatty acid found commonly in borage oil and evening primrose oil, are crucial nutrients for skin health and function. These essential fatty acids (EFAs) control a large number of cellular processes that directly impact skin health.

EFAs reside in the membranes that surround skin cells, where they facilitate vital cellular functions, including transporting nutrients into and wastes out of the cell, regulating inflammation, retaining moisture, promoting cell turnover, distributing melanin evenly, and preventing the free radical and oxidative damage that underlies skin aging.

Unfortunately, the vast majority of Americans do not consume the minimum recommended amounts of EFAs. Deficiencies of EPA, DHA, and GLA can lead to dry, rough, problematic skin that is prone to inflammation, premature aging, and uneven pigmentation. EFA deficiencies have even been associated with several clinical disorders such as atopic dermatitis, psoriasis, and acne.<sup>3</sup>

A large and growing body of evidence indicates that supplementing with EPA and DHA from fish oil, and GLA from borage or evening primrose oils, benefits all skin types. Studies have shown that increased intake of DHA lead to measured improvements in eczema<sup>4</sup>, and that increased levels of GLA in elderly patients lead to a reduction of skin water loss and to improved skin function.<sup>5</sup> Recent studies have also shown that EPA inhibits the ultraviolet radiation-related damage that causes premature aging, and wrinkles.<sup>6,7</sup>



# How To Choose A Fish Oil Supplement

There is a wide range of quality among fish oil supplements. Use the following guidelines to ensure a high-quality product:

- Purity: purified of mercury, lead, and other harmful toxins
- **Freshness:** minimized oxidation for no fishy taste
- Taste: fishy smell or taste means a poorly made oil
- Triglyceride Form: for optimal absorption and results
- Third-Party Testing: ensures quality, freshness, and purity
- **Sustainability:** responsible fishing protects our seas

## **How Much is Enough?**

International experts recommend:

500 mg EPA+DHA	for deficiency prevention	
1 g EPA+DHA	for proactive support	
2–4 g EPA+DHA	for high-intensity support	

Omega-3 product labels can often be confusing. Make sure to read the supplement facts to know how much EPA+DHA you are getting. A 1000 mg soft gel refers only to the size of the soft gel, not the levels of EPA+DHA.

Total Omega-3s	1280 mg	†
EPA (Eicosapentaenoic Acid)	650 mg	
DHA (Docosahexaenoic Acid)	450 mg	+
Other Omega-3s	180 mg	†

## REFERENCES

- Melanson SF, et al. Measurement of organochlorines in commercial over-the-counter fish oil preparations: implications for dietary and therapeutic recommendations for omega-3 fatty acids and a review of the literature. Arch Pathol Lab Med 2005;129:74–77.
- Foran SE, et al. Measurement of mercury levels in concentrated over-the-counter fish oil preparations: is fish oil healthier than fish? Arch Pathol Lab Med 2003;127:1603–1605.
- Wright S. Essential fatty acids and the skin. Prostaglandins Leukot Essent Fatty Acids 1989;38:229–236.
- Koch C, Dölle S, Metzger M, et al. Docosahexaenoic acid (DHA) supplementation in atopic eczema: A randomized, double-blind, controlled trial. Br J Dermatol 2008;158:786–792.
- T Brosche and D Platt. Effect of borage oil consumption on fatty acid metabolism, transepidermal water loss and skin parameters in elderly people. Arch Gerontol Geriatr 2000;30(2):139–150.
- Kim HH, Shin CM, Park CH, et al. Eicosapentaenoic acid (EPA) inhibits UV-induced 7. MMP-1 expression in human dermal fibroblasts. J Lipid Research 2005;46:1712–1720.
- Black HS, Rhodes LE. The potential of omega-3 fatty acids in the prevention of non-melanoma skin cancer. Cancer Detect Prev 2006;30:224–232.