



AHIFLOWER[®], OMEGA-3s, AND HOW WE CAN GROW FROM HERE

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Industrial seed oils, ultra processed foods, red dye no.3... it feels like there are a lot of bad actors making nutritional headlines in 2025. So we want to shine some new positive light on a classically good actor – omega-3, whilst further illuminating some of the modern day and forward-looking thinking in this area.

Our evolutionary diets and metabolic pathways favor a roughly equal intake of omega-3 and 6, approximating to the amounts and types of fat we encountered as hunter gatherers. It appears our enzymes have a slight selective preference for omega-3s vs. 6s, possibly to reflect that omega-6s are more abundant in nature than 3s. And that has pretty much been the case for millennia until the 1900's when industrial oilseeds (soy, corn, canola etc.) came along, experiencing explosive growth from the 1960's onwards. Our intake of fat skyrocketed, most notably in the form of omega-6 and their trans-fat derivatives, such that today's typical diets have 20-40 times more omega-6 than omega-3. It also brought some unforeseen consequences including the reduction in agricultural biodiversity and the increased use of synthetic fertilizers and glyphosate.

Closely following this in the 1970's, a new understanding of omega-3s emerged, focusing on EPA and DHA in the often cited studies done on Greenlandic Inuits, which became foundational to the strategy of countering the growing prevalence of O6s by increasing dietary O3s. Simple, effective and it made sense. However, research also showed that against this slew of plant-based omega-6 (LA) in our diets, plant-based omega-3 (ALA) did not seem to deliver enough 'metabolic punch' to metabolize to EPA and DHA, and we should boost our direct consumption of these two fatty acids, primarily from oily fish or fish oil.





Unfortunately, since this research was conducted and then marketed to consumers and healthcare professionals, and then further amplified by trade associations, it morphed into the widely coined phrase 'humans are inefficient at converting ALA to EPA and DHA'. No context, it just emerged as a statement of fact. Thinking about this, of course, begs the questions, 'have we always been so inefficient, do all 9bn of us carry some sort of omega metabolism impairment, and how did nature get it so wrong that we rely on an ever increasing amount of something that so few of us have natural access to?'



Two words are making this omega-3 conundrum a lot clearer, 'precursor' and 'preformed'. A precursor is 'a substance from which another is formed, especially by metabolic reaction'. Preformed is 'formed or shaped beforehand' and omega-3 fatty acids are a great example. ALA and SDA are found in plants and are precursors to EPA and DHA, neither of which are found in plants, other than those genetically modified to produce them. SDA or stearidonic acid is the plant kingdom's most powerful precursor omega-3, being readily converted to both EPA and DHA, far more so than ALA. When taken as EPA and DHA, these fatty acids are preformed before we consume them.

Precursor and preformed omega-3s are different. They are metabolized differently yet have equally important roles to play in improving omega nutrition. Instead of labeling humans and omega-3s as efficient / inefficient, or effective / ineffective, we should look at them as being synergistic and delivering unique health benefits greater than the sum of their parts. Including preformed and precursor omegas into our diets is a sound nutritional strategy and is what our bodies are optimized to take.



Here are some of their synergies and differences:

- EPA and DHA, taken as preformed fatty acids deliver many health benefits.
- ALA, SDA and GLA taken as precursor fatty acids deliver many health benefits.
- ALA, SDA, EPA and DHA share similar health claims and can all be produced sustainably and safely.
- ALA and most notably SDA convert to EPA and DHA efficiently and as needed by the body.
- During the conversion of ALA and SDA to EPA and DHA, a new, additional array of metabolites are produced, delivering anti-inflammatory, gut-brain protective and glucose sensitivity benefits amongst others.
- Excessive consumption of preformed EPA and DHA has an inhibitory effect on how ALA and SDA metabolize to EPA and DHA.

Many consumers actively seek this synergy as their preferred way of increasing their omega intakes, through a complete and balanced, or multi-omega (3-6-9) offering. From our studies, a significantly greater number of consumers state a preference for omega 3-6-9 than for EPA and DHA.

Natures Crops International believe all businesses in the omega-3 supplement and nutritional space share a common goal: improving omega nutrition to deliver improved health and wellness outcomes that don't cost the earth. We also believe there is a need and an opportunity to develop new, innovative and great tasting products, supported by effective marketing campaigns that deliver omega solutions to the 80% of consumers that are currently being underserved.



As nature's richest source of omega-3, Ahiflower® can play a significant role in achieving this, either as single source, regeneratively grown, cold pressed omega 3-6-9 oil, or to use in combination with marine oils or other non-marine sources such as algae and chia. Omega nutrition is, and has largely been, the domain of fish oil in soft gelatin capsules. By introducing ingredients like Ahiflower, new consumers are being attracted to this category, and brands are increasingly meeting the goal of improving omega nutrition to deliver improved health and wellness outcomes without costing the earth.

