DR.VEGAN®

Omega 3: Beyond the basics

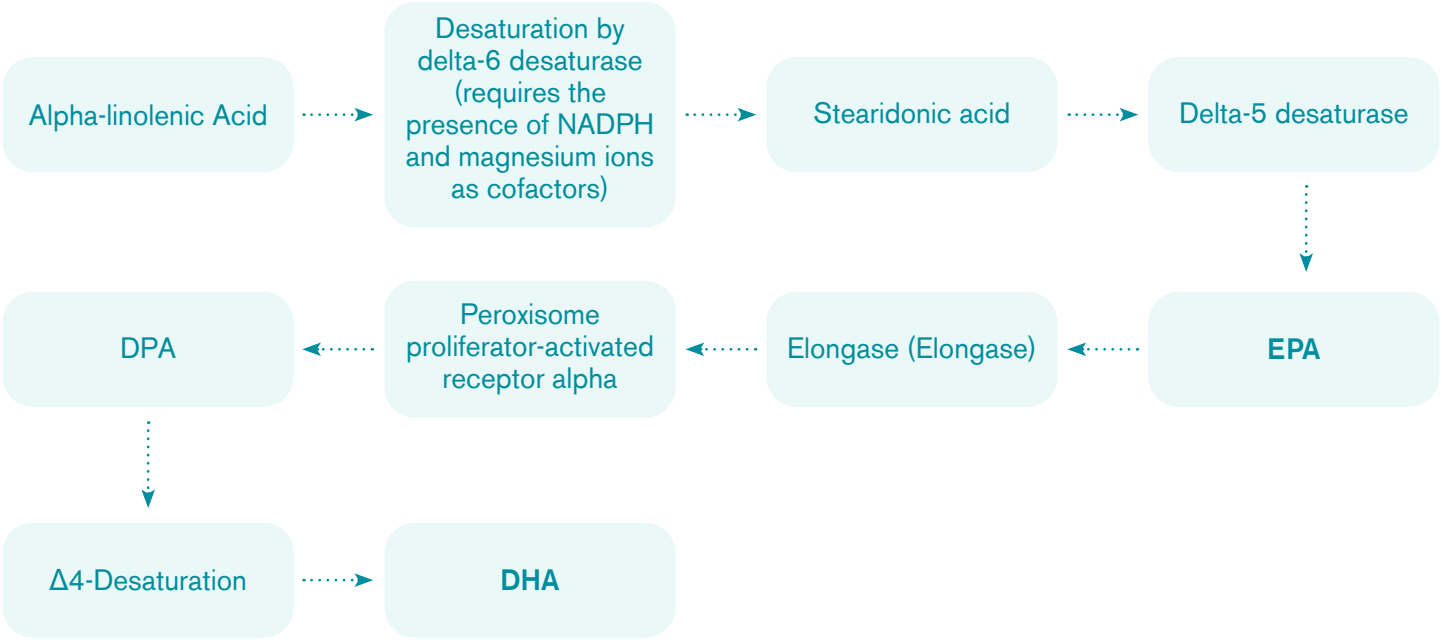
The role of omega 3 fatty acids

Practitioner Paper ▪ *For practitioner use only*

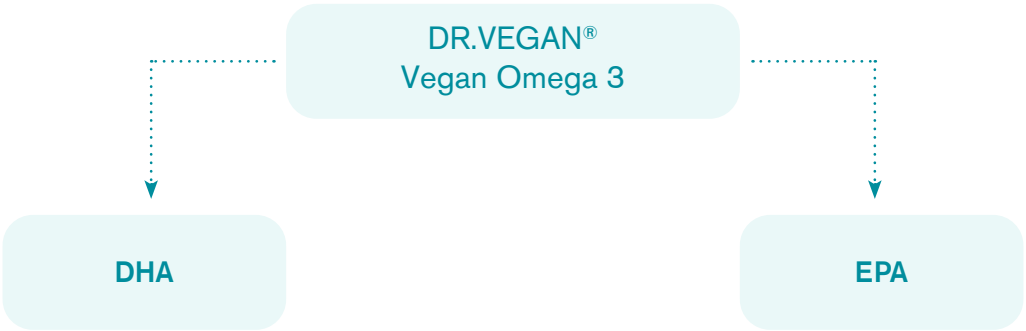
KEY DIFFERENCES BETWEEN EPA AND DHA

	EPA *(Eicosapentaenoic Acid)*	**DHA** *(Docosahexaenoic Acid)*
Brain Health	Supports mood regulation and may help reduce symptoms of depression and anxiety.	Essential for brain development, cognitive function and neuroprotection.
Cardiovascular Health	Reduces triglycerides, improves blood flow, reduces inflammation in arteries.	Supports heart rhythm regulation and reduces the risk of arrhythmias.
Inflammation and Immunity	Potent anti-inflammatory effects, reduces chronic inflammation in conditions like arthritis.	Modulates immune responses, supports anti-inflammatory pathways.
Eye Health	Some benefits for reducing dry eye symptoms.	Major structural component of the retina, supports visual function.
Pregnancy and Foetal Development	Supports a healthy inflammatory response.	Critical for foetal brain and eye development.
Cognitive Function and Ageing	Helps with mental wellbeing, potential role in slowing cognitive decline.	Key for memory, learning and reducing risk of neurodegenerative diseases.
Muscle and Joint Health	Reduces exercise-induced muscle soreness and joint inflammation.	Aids muscle recovery and helps maintain joint lubrication.
Metabolism and Weight Management	May help with fat metabolism and insulin sensitivity.	Supports metabolic function and energy balance.
Skin Health	Reduces skin inflammation and may help with conditions like eczema.	Maintains skin elasticity and hydration.
Liver Health	Helps reduce liver fat in non-alcoholic fatty liver disease (NAFLD).	Supports liver cell function and overall metabolic health.

STANDARD PLANT OMEGA 3 SUPPLEMENTS



DR.VEGAN® VEGAN OMEGA 3



BENEFITS OF EPA AND DHA SUPPLEMENTATION FROM ALGAE OIL

EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) are essential omega 3 fatty acids that have been extensively studied. Algae Oil, a plant-based source of EPA and DHA, has gained popularity as a sustainable and vegan-friendly alternative to traditional fish oil supplements.

Cardiovascular health

EPA and DHA from Algae Oil have been shown to support cardiovascular health by reducing triglycerides, blood pressure and inflammation.[1]

Reduction in inflammation

Omega 3 fatty acids are required to synthesise series 2 prostaglandins, which are anti-inflammatory prostaglandins and are necessary to balance inflammation within the body. A study found that EPA and DHA from Algae Oil reduced inflammation and improved cardiovascular health in patients with hypertriglyceridemia.[2]

Inhibition of hepatic triglyceride synthesis

EPA and DHA reduce triglycerides by decreasing the liver's production of triglycerides and very low-density lipoproteins (VLDL). EPA and DHA inhibit diacylglycerol acyltransferase (DGAT), an enzyme involved in triglyceride synthesis.[3] A meta-analysis of randomised controlled trials (RCTs) found that EPA and DHA supplementation, including from Algae Oil, significantly reduced triglycerides and improved cardiovascular risk factors.[4]

Increased fatty acid oxidation

EPA and DHA enhance beta-oxidation of fatty acids in the liver via activation of peroxisome proliferator-activated receptor alpha (PPAR-α), leading to reduced triglyceride accumulation.[5]

Enhanced lipoprotein lipase (LPL) activity

Omega 3s increase LPL activity, promoting the clearance of triglyceride-rich lipoproteins from the bloodstream.[6]

Mental health

EPA and DHA from Algae Oil may also have benefits for mental health. A study found that EPA and DHA from Algae Oil improved symptoms of depression in patients with major depressive disorder.[7]

Increased serotonin production and function

DHA is crucial for serotonin receptor fluidity and function in neuronal membranes. EPA reduces the activity of pro-inflammatory cytokines that can interfere with serotonin production. Both EPA and DHA may enhance serotonin release and signalling by modulating the tryptophan-serotonin pathway.

Anti-Inflammatory effects

Patients with Major Depressive Disorder (MDD) often have increased levels of pro-inflammatory cytokines (e.g. TNF-α, IL-6, IL-1β), which can impair neurotransmitter function and neuroplasticity. EPA and DHA reduce neuroinflammation by inhibiting nuclear factor kappa B (NF-κB), a key regulator of inflammation. EPA and DHA promote the production of resolvins and protectins, which actively resolve inflammation. EPA and DHA lower levels of C-reactive protein (CRP), a marker of systemic inflammation associated with depression.

Enhancement of neuroplasticity and brain-derived neurotrophic factor (BDNF)

BDNF is essential for neurone growth, survival, and synaptic plasticity. Those with depression often have low BDNF levels, impairing brain function and mood regulation. EPA and DHA upregulate BDNF expression, helping to support synaptic connectivity and resilience in the hippocampus, a brain region involved in mood regulation.[8]

Cell membrane fluidity and neuroprotection

DHA is a major component of neuronal cell membranes and contributes to membrane fluidity, allowing better function of receptors and neurotransmitters. DHA and EPA also reduce oxidative stress by lowering lipid peroxidation and increasing antioxidant enzyme activity.[9]

Modulation of the HPA axis and cortisol regulation

Chronic stress and depression often involve dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, leading to excess cortisol, which damages neurones. EPA and DHA help normalise cortisol levels and reduce stress-induced brain damage.[10]

Inflammation and immune function

EPA and DHA from Algae Oil have anti-inflammatory properties, which may help reduce inflammation and improve immune function. A study found that EPA and DHA from Algae Oil reduced inflammation and enhanced immune function in patients with acute lung injury.[12] Another study found that EPA and DHA from Algae Oil inhibited the production of pro-inflammatory cytokines and enhanced immune function in healthy individuals.

DIET TIPS FOR CLIENTS

Diet guidance for increasing omega 3 intake

Type	Full Name	Common Sources
ALA	Alpha-linolenic acid	Plant-based (e.g. flax and chia)
EPA	Eicosapentaenoic acid	Oily fish or algae
DHA	Docosahexaenoic acid	Oily fish or algae

Omega 3-rich food sources

Ground flaxseeds
or flaxseed oil
(1 tbsp/day)

Chia seeds
(2 tbsp/day)

Hemp seeds
(2–3 tbsp/day)

Walnuts

Seaweed or algae

Tips for including omega 3-rich foods info food

- Add ground flaxseed or chia to smoothies, porridge or yoghurt.
- Snack on walnuts or make walnut pesto.
- Use walnut oil or chia oil as a salad dressing.
- Take Algae Oil daily.

Vegan Omega 3

Our Vegan Omega 3, with 1,000mg Omega oil, provides the optimal dosage of 300mg DHA and 150mg EPA per serving, improving and maintaining your brain's performance, heart health, and skin and eye health.

	PER 2 SOFTGELS	EC NRV % *
Algae Omega Oil	1000mg	**
Providing Omega 3	550mg	**
DHA	300mg	**
EPA	150mg	**
Vitamin E	6mg a-TE	50%

* NRV - Nutrient Reference Value ** No NRV Established

Ingredients

Algae Oil (Life's Omega™ from *Schizochytrium* sp.), Capsule Shell (Tapioca Starch, Glycerin), Vitamin E (as d-Alpha Tocopherol).

Free from

Added Sugar, Starch, Sweeteners, Gluten, Wheat, Soya, Lactose, Dairy, Artificial Flavours, Colours and Preservatives.

Directions

- Take two softgels daily.
- Can be taken in the morning, daytime or evening, together or separately, with or without food.

Pairs well with

HeartPro®

Brain Fuel®

Skin Saviour®

DRUG INTERACTIONS

Interaction Severity **Moderate**

Antidiabetes Drugs	Algae Oil may interfere with the effects of these drugs.
Antihypertensive Drugs	Algae Oil may increase the risk of hypotension when taken with these drugs.
Anticoagulant Drugs	DHA may increase the risk of bleeding when taken with these drugs.

Drug-nutrient interactions have been taken from the Natural Medicines Database, October 2024. Please do your own due diligence before recommending this product to individuals taking medicines.

REFERENCES

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