

This scientific information is intended for healthcare professionals.

EPA/DHA for quickly increasing the Omega-3 Index 1000 IU vitamin D₃

- EPA and DHA contribute to the normal **function of the heart**¹
- DHA helps maintain normal **brain function** and **vision**²
- Vitamin D₃ helps maintain normal **bones, muscle function** and **immune system function**, and contributes to normal **blood calcium levels**

With a daily intake of ⁽¹⁾ at least 250 mg EPA+DHA, ⁽²⁾ 250 mg DHA

Applications and recommended use

Heart, vision and brain support

Positive mood support

Maintenance of strong bones

Suitable for athletes

Vitamin D for individuals with inadequate sunlight exposure (nursing homes, use of high UV protection factor, during winter)

Typical indications for EPA+DHA with vitamin D₃:

- Secondary prevention myocardial infarction (e.g. typical during autumn and winter)
- Depressive symptoms (e.g. in case of PMS, fibromyalgia, winter blues)
- Alzheimer prevention
- Prevention of osteoporosis
- Immune system weakening (e.g. flu prevention)

Combination with drugs

Omega-3 may be combined with a cardio-aspirin, β -blockers, ACE-inhibitors, fibrates, sartans, diuretics, statins, antidepressants and/or mood stabilizers.

Blood test: fatty acid analysis by HS-Omega-3 Index®

Due to an uncontrolled emergence of analytical methods the outcome of a fatty acid analysis may not always be judged against the 8-11% Omega-3 Index reference value that was derived from scientific research. Prof. von schacky and prof. Harris, the inventors of the Omega-3 Index, fine-tuned a “standardized” HS-Omega-3 Index® test. It is the only test that is used in clinical studies and to which the 8-11% reference value applies.¹⁻² This original HS-Omega-3 Index® test kit is available via Nutrogenics. Order your test kit on www.omega-3-index.com



Scientific information

Omega-3 Index represents the content of EPA+DHA in red blood cells and is expressed as a % of total fatty acid composition. It is a surrogate for the EPA+DHA content of the cardiac muscle (in both atrial and ventricular tissues), and a **risk factor for death due to coronary heart diseases**.^{1,3} Individuals with an Omega-3 Index \leq 4% have a tenfold higher risk of sudden, fatal cardiac death as compared to individuals with an Omega-3 Index \geq 8%. In between 8-11% is a healthy **target value**.^{1,3} In Western countries Omega-3 Index values of 3% or 5% make no exceptions.³ Supplementation with a high enough daily dose (e.g. 1000 mg EPA+DHA) is thus advisable to increase the Omega-3 Index.

Moreover, a preventive dosage of 250 mg **DHA** per day has a beneficial effect on **vision**⁴ and **brain activity**^{4,6}. DHA is a structural fatty acid of rod outer segments, while neuroprotectin D₁ that is synthesized from DHA protects the retinal pigment cells from oxidative damage.⁷ DHA also stimulates neurogenesis in the hippocampus, the brain region that is involved in memory forming. Having early Alzheimer or mild cognitive impairment and being a non-carrier of the ApoE ϵ 4-gene improve the chances of a beneficial response to DHA supplementation.⁵

EPA has been the omega-3 fatty acid with the most important contribution to a **reduction of depressive feelings** in research with major depressive patients.⁸⁻¹⁰ EPA influences the dopaminergic system (feel good effect).¹¹

Athletes may also benefit from EPA+DHA supplementation. EPA and DHA amplify the **mental focus**¹², induce a **lower baseline inflammatory state**¹³ and increase **oxygen delivery** during physical exercises¹⁴.

Vitamin D facilitates the intestinal absorption of calcium, making it important for **calcium homeostasis** and the maintenance of strong bones. Moreover, vitamin D is associated with several physiological systems outside the skeleton: **immune system**, **heart muscle** functioning, **blood pressure regulation** (via the renin-angiotensin system), pancreatic β -cells (promotion of **insulin secretion**), musculature (**fall prevention**).¹⁵ Serum calcidiol levels are measured to determine an individual's vitamin D status. The minimal target value is 50 nmol/l (20 ng/ml), but 75 nmol/l (30 ng/ml) might even be better to experience the full range of health benefits of vitamin D.¹⁵⁻²⁰ To reach a serum calcidiol level of 75 nmol/l a dosage of 25-50 μ g/d (1000-2000 IE/d) is usually needed.¹⁸⁻¹⁹

References

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