

New Research

Nordic Naturals is a Research Leader
in Demonstrated Product Efficacy

A Study to Evaluate the Comparative Bioavailability of Omega Fatty Acids from Four Leading Omega-3 Products

Results show ProOmega® is:

47% more bioavailable
than *ethyl ester omega-3*

227% more bioavailable
than *salmon oil*

382% more bioavailable
than *krill oil*



This is a study overview of a full report prepared by Nutrasource Diagnostics, Inc. dated August 9, 2013.
Nutrasource Diagnostics, Inc. is a third-party, independent research laboratory located in
the world-renowned University of Guelph Research Park.

STUDY OVERVIEW

OBJECTIVE

This trial was designed to assess the bioavailability of the long-chain omega-3 essential fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) in Nordic Naturals' triglyceride-form dietary supplement ProOmega®, compared to three other leading commercially available omega-3 products.

STUDY TYPE

This was an intervention study, in which each of the healthy volunteers was measured against themselves to assess bioavailability between products.

STUDY POPULATION

A total of 32 healthy subjects completed the study.

METHODOLOGY

- ProOmega, which is manufactured in triglyceride form, was compared to three leading omega-3 products: a fish oil product in ethyl ester form, a salmon oil product in triglyceride form, and a krill oil product in phospholipid form.
- The dose chosen was based on the product manufacturer's recommended dose (on the label of each product), which within these products' marketing materials is often referred to by the manufacturer as "all you need."
- Healthy volunteers were administered each of the four products, in accordance with the manufacturer's recommended dose on each product label, over the course of the study (approximately 28 weeks, or 7 months).
- For the duration of the study, each participant was randomly assigned to consume one of four products for a 28-day period, followed by a 4-week washout period, then was reassigned a new omega-3 product for a 28-day period. Subsequent 4-week washout periods and the remaining two omega-3 products were provided for each study participant. Products were provided in random order, and following each product administration was a 4-week washout period.
- The daily dose on the labels of each of the four products is different; therefore, in addition to the product comparison based on each manufacturer's recommended dose, results were also calculated to reflect supplemental intake per 100 mg of EPA, of DHA, and of EPA+DHA to demonstrate how each product affected the bioavailability of each participant's omega-3 blood levels.

CONCLUSION

Based on the administration of the manufacturer's recommended dose for each product, Nordic Naturals' triglyceride-form ProOmega dietary supplement, when compared to three other leading omega-3 supplements, demonstrates superior bioavailability of EPA to krill oil and salmon oil.

ProOmega also demonstrated superior bioavailability of EPA, DHA, total omega-3s, and EPA+DHA to all three comparator products, including the ethyl ester product.

ProOmega and the ethyl ester product show similar bioavailability of EPA at the suggested dose; however, after correcting for the mg to mg amount of EPA and DHA administered per 1000 mg of supplemental intake, ProOmega still remains superior to all of the comparator products, including the ethyl ester product.

When calculations were prepared based on the suggested manufacturer's dose in a given supplement, and the rise in EPA and DHA in the blood, *ProOmega was 47% more bioavailable than the comparator ethyl ester product, 227% more bioavailable than the comparator salmon oil product, and 382% more bioavailable than the comparator krill oil product.*

FINAL RESULT

At the manufacturer's recommended dose, Nordic Naturals ProOmega is more bioavailable and, as a result, helps an individual achieve a higher and faster level of omega-3s than the three other retail omega-3 products.

PRODUCTS

The four study products include:

Nordic Naturals ProOmega Fish Oil

- FORM: EPA and DHA in triglyceride form

Krill Oil

- FORM: EPA and DHA in phospholipid form

Ethyl Ester Fish Oil

- FORM: EPA and DHA in ethyl ester form

Salmon Oil

- FORM: EPA and DHA in triglyceride form

DOSE

Product	EPA+DHA per Capsule	Label Recommended Dose (caps / day)	Daily EPA+DHA Dosage
<i>Nordic Naturals ProOmega</i>	EPA: 325 mg DHA: 225 mg	2	EPA: 650 mg DHA: 450 mg
<i>Ethyl Ester Fish Oil</i>	EPA: 756 mg DHA: 228 mg	1	EPA: 756 mg DHA: 228 mg
<i>Salmon Oil</i>	EPA: 90 mg DHA: 110 mg	2	EPA: 180 mg DHA: 220 mg
<i>Krill Oil</i>	EPA: 75 mg DHA: 45 mg	2	EPA: 150 mg DHA: 90 mg

CHART

Total mean levels of EPA and DHA before and after 28 days of supplementation.

