

# Nutritional Oils



NOW® Guide to Nutritional Oils

# The Health Benefits of Nutritional Oils



## *Fatty Acids & Nutritional Oils for Health*

Nutritional oils are a class of lipids (fats) that belong to a larger family that includes dietary fats and oils, sterols, triglycerides, and aromatic oils. Nutritional oils are derived from a variety of natural sources, including marine oils, animal fats, shellfish, microalgae, seaweed, plant seed

oils, and more. They're arguably the best known sources of the essential fatty acids that are critical for human health. Essential fatty acids provide a wide range of health benefits for humans.\* They support cardiovascular health, cognitive function, skin health, and much more.\*



\*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.



## Omega-3 Fatty Acids

The omega-3 fatty acids include **eicosapentaenoic acid (EPA)**, **docosahexaenoic acid (DHA)** and **alpha-linolenic acid (ALA)**. They are by far the most well-known and well-regarded of the essential fatty acids, and omega-3 supplements dominate the essential fatty acid market.

Omega-3 fatty acids and their benefits for cardiovascular health\* are so well regarded that the U.S. FDA approved a qualified health claim in 2004 for the omega-3 fatty acids EPA and DHA: "Supportive but not conclusive research shows that

consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease."

**Eicosapentaenoic acid (EPA)** is a polyunsaturated fatty acid (PUFA) obtained primarily from fish oil or from cold water fish species, such as herring and mackerel. It's also found in shellfish, seaweed, and certain microalgae. Studies indicate that EPA is important for cardiovascular health.\* It helps to maintain already-normal triglyceride levels and promotes a healthy vascular system among other benefits.\* EPA is also important for balanced immune system function and, along with DHA, is critical for proper brain development in newborns and young children.\*

Like EPA, **docosahexaenoic acid (DHA)** is a PUFA found in cold water fish, shellfish, and microalgae. Approximately 40% of the PUFA in the brain and 60% of the PUFA in the eye's retina is DHA. DHA is critically important for proper brain development

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in newborns and young children, and is important for healthy cognitive and neurological function at any age.\* DHA also supports healthy cardiovascular function, visual function, and more.\*

**Alpha linolenic acid (ALA)** is another PUFA but is found primarily in vegetable seed oils such as flax seed oil (one of the best plant sources of ALA). Like all essential fatty acids, ALA must be obtained through the diet. Both EPA and DHA can be synthesized from dietary ALA but not efficiently, making a balanced dietary intake of omega-3 fatty acids highly desirable. Like EPA and DHA, studies have shown that ALA supports healthy cardiovascular and brain function.\*

### **Krill (*Euphausia superba*)** is a

crustacean that, collectively, is thought to represent the largest biomass on Earth.

A few studies have indicated that the omega-3 fatty acids found in krill oil have superior bioavailability as compared to those in fish oil. This superior bioavailability is due to the fact that the omega-3 in krill oil is bound to phospholipids, which make it easier for omega-3 to be absorbed by the body.\* This means that not only does krill oil provide phospholipid-derived fatty acids, but also phosphatidyl choline and the free radical scavenger astaxanthin.\*



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## Omega-6 Fatty Acids

Lesser known than their omega-3 cousins are the omega-6 fatty acids: **linoleic acid and gamma-linolenic acid**.

Early humans are thought to have consumed a diet that provided omega-3 and omega-6 fatty acids in a 1:1 ratio. Modern

Western diets typically contain

excessive amounts of omega-6 compared to omega-3 with a 10:1

ratio of omega-6 to omega-3 fatty acids; some estimates are as high as 30:1.

This unbalanced fatty acid intake is believed by some to play a role in the incidence of certain diseases in modern society. Experts recommend a ratio of 3:1 omega-6 to omega-3 as ideal for good health.\*

Like omega-3s, omega-6 fatty acids are important for healthy brain function as well as normal growth and development.\* They're also necessary for healthy skin and hair, reproductive health, and more.\* There needs to be a better balance in the diet of omega-6 to omega-3, and there are certain omega-6 fatty acids that are more beneficial for the body than others.

**Linoleic acid** is a polyunsaturated fatty acid that's considered essential, meaning it must be obtained from the diet. Linoleic acid is found primarily in plant and vegetable oils. This fatty acid is required for the production of gamma-linolenic acid (GLA)\*

**Gamma-linolenic acid (GLA)** is a particularly beneficial omega-6 polyunsaturated fatty acid found in a variety of vegetable oils such as evening primrose, borage, and black currant. It can be

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obtained in the diet through these sources, as well as through synthesis from linoleic acid. Studies have shown that GLA may support a healthy, normal response to physiological stress and may provide nutritional support for healthy skin and female endocrine function.\*

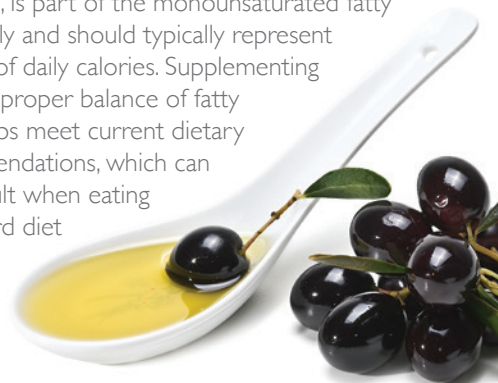
## *Omega-9 Fatty Acids*

The Omega-9 fatty acids include oleic acid, elaidic acid, gondoic acid, mead acid, erucic acid, and nervonic acid (oleic acid is the omega-9 commonly used in supplements). You don't hear much about omega-9 fatty acids since they're not considered essential fatty acids, but they still play an important role in human health, primarily cardiovascular health.\*

## *Properly Balance Omega 3, 6, and 9*

Fats and fatty acids are essential to everyday nutrition. Since they play a major role in cardiovascular, neurological, skin, immune, and hormonal health, it is important to get the right balance of each type.\*

Omega-3 and omega-6 combined should represent 6-11% of daily calories. Oleic acid, an omega-9 fatty acid, is part of the monounsaturated fatty acid family and should typically represent 15-20% of daily calories. Supplementing with the proper balance of fatty acids helps meet current dietary recommendations, which can be difficult when eating a standard diet alone.



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## NOW® Offers a Diverse Selection of Nutritional Oils

As natural sources of omega -3, -6, and -9 fatty acids, the following NOW nutritional oils support a broad range of health benefits, including healthy cardiovascular and neurological function, proper growth and development, and much more.\*



### ***Black Cumin Seed Oil***

1,000 mg of nutritional oil per softgel for cardiovascular support.\* Recent scientific studies indicate that black cumin seed oil has phenolic compounds and fatty acids that contribute to its ability to support balanced immune system responses.\* Studies also show that black cumin seed oil can help to support a healthy vascular system.\* Black cumin seed has been used traditionally in the Middle East, Asia, and Africa for thousands of years.

### ***Black Currant Oil (GLA)***

An abundant natural source of gamma-linolenic acid (GLA) is the seed of black currant (*Ribes nigrum*). Although the human body is capable of producing GLA from dietary linoleic acid, it's more efficiently used for body functions when obtained directly from a dietary source.

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### **Borage Oil (GLA)**

Borage (*Borago officinalis*) is an annual herb whose seeds have the highest amount of gamma-linolenic acid (GLA) found in nature. GLA is classified as an omega-6 fatty acid and is believed to help support anormal, healthy response to typical metabolic stress.\*

### **Castor Oil**

Castor oil is a plant seed oil derived from the seed (sometimes referred to as a bean) of the castor plant (*Ricinus communis*). Castor oil's unique characteristic unsaturated fatty acid, ricinoleic acid, is believed to be responsible for castor oil's health benefits.\* Castor oil is used as an effective natural laxative for the relief of non-chronic constipation.\*

### **Coconut Oil Softgels**

NOW® Virgin Coconut Oil Softgels are made with unrefined, cold-pressed oil, and no solvents are used in the manufacturing process. Coconut oil has no *trans*-fats and is abundant in medium-chain triglycerides (MCTs), such as lauric acid and caprylic acid. MCTs are less likely to be stored as fat in the body when compared with most other fatty acids.\* When combined with essential fatty acids, Coconut Oil Softgels can be a great addition to an overall healthy lipid program.



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## NOW Offers a Diverse Selection of Nutritional Oils (continued)

### Cod Liver Oil

As the name indicates, cod liver oil is a nutritional oil extracted from the liver of cod fish. It's an excellent way to obtain the omega-3 fatty acids

DHA and EPA.

NOW® Cod Liver Oil is manufactured under strict quality control standards and tested and tested to be free of potentially harmful levels of contaminants (i.e., mercury and other heavy metals, PCB's, dioxins, and other contaminants.)



### DHA (Docosahexaenoic Acid)

An important omega-3 fatty acid, docosahexaenoic acid (DHA) is a major building block of cell membranes. It can be found in high concentrations especially in the brain, nerve tissue, and in the retina of the eye and is therefore essential for the development and maintenance of these cells and organs throughout life.\* NOW® offers a variety of DHA supplements including a chewable version for kids.

### Evening & Super Primrose Oil

Like borage and black currant oils, evening primrose oil (*Oenothera biennis*) is abundant in natural gamma-linolenic acid (GLA). Evening primrose oil is comprised of approximately 70% linoleic acid, an omega-6 essential fatty acid.

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### *Flax Seed Oil*

NOW® Organic Flax Seed Oil is an excellent, natural vegetarian source of the omega-3 fatty acid alpha-linolenic acid (ALA), which can be converted in the body to EPA and DHA, although the conversion rate is low. In addition to ALA, NOW® Flax Seed Oil also has linoleic acid (omega-6) and oleic acid (omega-9) and is available in both liquid and softgel forms.

### *Hemp Seed Oil*

Hemp seed oil has a unique and impressive fatty acid profile that consists mainly of the essential fatty acids omega-6, linoleic acid and gamma-linolenic acid (GLA), and omega-3, alpha-linolenic acid, in the optimal ratio of 3:1.

### *High Lignan Flax Oil*

Lignans are a class of phytoestrogens found in many plants, with flax seeds having the highest known levels. Phytoestrogens are chemically similar to estrogen and compete for estrogen receptor sites in the human body, which confers a variety of health benefits.\* Lignans are also excellent free radical scavengers.\* NOW® High Lignan Flax Seed Oil is an abundant natural source of plant-derived omega-3 fatty acids as well as high levels of lignans.

### *Neptune Krill Oil*

Krill oil's omega-3 essential fatty acids are phospholipid-bound, making them more bioavailable to the body than traditional fish oil-derived omega-3. NOW offers 500 mg softgels, as well as enteric-coated, 1,000 mg softgels.

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## NOW Offers a Diverse Selection of Nutritional Oils (continued)

### Omega-3

NOW's Omega-3 and Super Omega-3 supplements from fish oil and krill oil make it easy to ensure you're getting plenty of health-promoting omega-3

fatty acids each and every day. NOW® offers a variety of different omega-3 products. All of NOW's Omega-3 Fish Oil products are tested to be free of potentially harmful levels of contaminants such as mercury and other heavy metals, PCBs, dioxins, and other contaminants. NOW Available in Fish Gelatin Softgels!



### Omega 3-6-9

NOW® Omega 3-6-9 and Super Omega 3-6-9 represent balanced blends of two essential polyunsaturated fatty acids – omega-3 and omega-6. Omega-9 from canola and flax seed is a monounsaturated fat not considered “essential”, but it does play a beneficial role in human health.\*

### Ultra Omega 3-D™

Ultra Omega 3-D™ is NOW's most potent omega-3 supplement yet. This product has a whopping 600 mg of EPA and 300 mg of DHA per one softgel serving, as well as 1,000 IU of vitamin D-3 as cholecalciferol. This combination supports cardiovascular health and facilitates the absorption of vitamin D, which can be difficult for some individuals.\*

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## Pumpkin Seed Oil

Pumpkin seed oil is a nutritional oil that is abundant in essential fatty acids. Pumpkin seed oil is also known for its characteristic phytosterols. Phytosterols are a class of phytochemicals that include plant sterols and stanols, compounds that are structurally similar to cholesterol and compete with it for absorption in the digestive tract.\* NOW® Pumpkin Seed Oil is unrefined, cold pressed without the use of solvents, and derived only from the highest quality pumpkin seeds.

## Red Omega™

NOW® Red Omega™ is a specialized product that combines organic red yeast rice and coenzyme Q10 (CoQ10) with the omega-3 fatty acids EPA and DHA. Red Omega™ is an outstanding cardiovascular support supplement.\*



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## NOW Offers a Diverse Selection of Nutritional Oils (continued)



### Wheat Germ Oil

NOW® Wheat Germ Oil is a nutritional oil produced from wheat germ, a component of the wheat kernel. It's a natural source of the vegetable wax octacosanol and has the omega-3, -6, and -9 fatty acids, linolenic acid (omega-3), linoleic acid (omega-6), and oleic acid (omega-9).

### Wild Alaskan Salmon Oil

NOW® Wild Alaskan Salmon Oil offers 150 mg omega-3 from EPA and DHA per softgel as triglyceride form. This fish oil is derived from salmon sustainably wild caught in Alaska, USA and is manufactured under strict quality control standards. It is tested to be free of potentially harmful levels of contaminants such as PCBs, dioxins, mercury, and other heavy metals.

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