

Dr. Baddaky Omega-3

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High amounts of EPA and DHA

Excellent for fur, skin, joints, kidneys and immune system

Dr. Baddaky Omega-3 fish oil is a very good source of the essential Omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The positive health effects of these two fatty acids are widely documented for dogs, cats, horses and humans. **Dr. Baddaky Omega-3** is a pure and natural high quality fish oil. **Dr. Baddaky Omega-3** has among the market's highest content of the Omega-3 fatty acids EPA and DHA.

The fish oil is treated gently from capture until it is bottled. The fish oil undergoes a mild form of treatment called molecular distillation. This process removes the proteins and unwanted substances from the oil without damaging the fatty acids.

Each delivery of **Dr. Baddaky Omega-3** fish oil is analyzed for fatty acid composition, undergoes a sensory analysis (taste panel) and is tested in an independent laboratory for heavy metals and environmental toxins. **Dr. Baddaky Omega-3** is produced in Norway. Our fish oil comes from small fish such as herring and anchovies from the Pacific areas outside South America. We take no shortcuts in terms of quality! The fish oil comes from sustainable fishing and is approved for human consumption. There is full traceability of **Dr. Baddaky Omega-3** fish oil all the way to the fishing boat that has caught the fish. The oil is certified by the organization **Friends of the Sea - Certified sustainable fish oil** and meets the strict requirements of the State Medicines Agency of Norway (GMP production), the European Pharmacopoeia, the International Global Organization for EPA and DHA Omega-3s (GOED) and is approved by the US Food and Drug Administration (FDA) for the production of Food Quality Oil.



Amount of omega-3 fatty acids in Dr. Baddaky Omega-3

Product	EPA ¹		DHA ¹		Total Omega-3 ^{1 og 2}	
Dr. Baddaky Omega-3 fish oil	18 %	750 mg/5 ml	12 %	470 mg/5 ml	35 %	1400 mg/5 ml
Dr. Baddaky Omega-3 fish oil capsule		300 mg/capsule		200 mg/capsule		600 mg/ capsule

1) The amount and composition of fatty acids in fish oil can vary according to the season and the diet of the fish. Each batch of Dr. Baddaky Omega-3 is analyzed for fatty acid composition. The quantities in the table are the guaranteed minimum values for EPA, DHA and total omega-3 fatty acids in our fish oil.

2) According to the European Pharmacopoeia (Ph.Eur.2.4.29), the omega-3 fatty acids included in the calculation of total omega-3 in fish oil, will be EPA, DHA plus the other omega-3 fatty acids Alpha-linolenic acid (ALA), Stearidonic acid, Eicosatetraenoic acid, Heneicosapentaenoic acid and Docosapentaenoic acid (DPA).



Dosage:

Daily recommended dosage of Dr. Baddaky Omega-3 is given on the basis of clinical trials, where supplements of the omega-3 fatty acids EPA and DHA are included as a treatment for dogs, cats and horses. We have based our dose recommendation for dogs and cats on 80 - 90 mg EPA + DHA/kg body weight per day. Clinical studies have shown that it can take up to three months before experiencing the effect of a supplement of EPA and DHA. Indicative daily dosages for dog, cat and ferret:

Indicative dosages are rounded up or down to the nearest ml of fish oil or capsule number.

Animal weight in kg	Mililiters per day	Capsules	Recommended bottle size*
< 5	1	1 every other day	200 ml
5	2	1	200 ml
7,5	2,5	1	200 ml
10	3	2	200 ml
12,5	4	2	200 ml
15	5	3	500 ml
17,5	6	3	500 ml
20	7	4	500 ml
25	8	5	500 ml
30	10	5	500 ml
35	12	6	500 ml
40	13	7	1000 ml
50	16	9	1000 ml

* An opened bottle, stored in the refrigerator, has a shelf life of 3 months.

Example of calculation of the daily dosage for a 10 kg dog:

$(10 \text{ kg} \times 80\text{-}90 \text{ mg EPA} + \text{DHA}) / 244 \text{ mg EPA} + \text{DHA per ml fish oil} = 3.3 \text{ -}3.7 \text{ ml Omega-3.}$

Indicative daily dosage for horses: 5-10 ml per 100 kg body weight.

A daily dose of **Dr. Baddaky Omega-3** can be given once a day or divided into several portions depending on what the animal and owner prefers.

For dogs and cats who have, or have had diseases that can affect the body's ability to digest fat, we recommend dividing the daily recommended dosage into several smaller servings or to offer Dr. Baddaky Omega-3 capsules.

Durability Dr. Baddaky Omega-3:

Dr. Baddaky Omega-3 is a pure natural product and should be treated as fresh produce.

Unopened bottle: two years shelf life from production date.

Opened bottle: three months shelf life in the refrigerator.



What effects does Dr. Baddaky Omega-3 have?

The omega-3 fatty acids EPA and DHA have a positive effect on:

- ▶ Skin and fur
- ▶ Claws and hooves
- ▶ Gastrointestinal tract
- ▶ The cardiovascular system
- ▶ Joints
- ▶ Kidney function
- ▶ The immune system
- ▶ Cognitive function/dementia
- ▶ Age-related health challenges
- ▶ Sperm quality
- ▶ Breeding and reproduction

Frequently Asked Questions about Dr. Baddaky Omega-3 fish oil

Where is Dr. Baddaky Omega-3 Fish Oil produced?

Dr. Baddaky Omega-3 fish oil is produced in Ålesund, Norway. Dr. Baddaky has had the same supplier and partner for over 15 years.

What fish is Omega-3 made of and where does the fish come from?

Wild-caught small fish (herring and anchovies) from the Pacific outside South America

- ▶ Natural high content of EPA and DHA
- ▶ Naturally low content of environmental toxins and heavy metals

Is Dr. Baddaky Omega-3 made from sustainable fishing?

Yes. Sustainable use of the world's fishery resources is incredibly important.

There is full traceability of Dr. Baddaky Omega-3 fish oil all the way back to the fishing boat that has caught the fish. The oil is certified by the organization Friends of the Sea - Certified sustainable fish oil. Our supplier only uses permanent, approved subcontractors and partners.

What quality requirements does Dr. Baddaky Omega-3 Fish Oil meet?

The fish oil must meet strict quality requirements both when selected from the supplier, before it arrives at the factory in Ålesund, and again before the fish oil is bottled.

Dr. Baddaky Omega-3 fish oil meets the requirements of and is approved by:

- ▶ GMP Norske Legemiddelverket (GMP Norwegian Medicines Agency)
 - ▶ US-FDA (US- Food and Drug Administration)
 - ▶ European Pharmacopoeia (fatty acid content and analysis)
 - ▶ EU's guidelines for content of unwanted elements
 - ▶ GOED (Global Organisation for EPA and DHA).
- Strict requirements for quality and oxidation (TOTOX values)

Control by Dr. Baddaky Omega-3:

- ▶ Tested for heavy metals and environmental toxins by independent laboratories
- ▶ Oxidation is tested right up to and after the expiration date
- ▶ Each delivery undergoes analysis of fatty acid content and sensory testing



Is Dr. Baddaky Omega-3 fish oil clean and free of pollution and heavy metals?

Dr. Baddaky Omega-3 fish oil is a pure and natural triglyceride fish oil. Omega-3 is completely safe to use for all pets and horses. All precautions are taken to avoid unwanted substances in the fish oil. The small fish, which are the raw material for our product, come from clean waters of the Pacific Ocean. The fish oil is thoroughly cleaned in several stages and checked by independent laboratories for heavy metals and environmental toxins.

How is Dr. Baddaky Omega-3 Fish Oil produced?

Fish oil is a product extracted from the remaining raw material after processing the fish. In order to satisfy a minimum of statutory standards for fish oil, all fish oil, regardless of the production method, is processed and undergoes a certain form of heat treatment. This is necessary to remove impurities and unwanted substances.

Dr. Baddaky Omega-3 is a pure natural fish oil (triglyceride oil) which undergoes molecular distillation. In this process, the oil is purified and proteins are removed.

Molecular distillation is a gentle distillation process. In this process a combination of low heat and vacuum is used to process the fish oil. Molecular distillation removes proteins, impurities (heavy metals, dioxins, etc.) and other unwanted substances from the fish oil.

How is the quality of the fish oil preserved?

Both oxygen from the air, heat and UV rays can lead to rancidity (oxidation) of fish oil. To counteract rancidity vitamin E is added to the fish oil as an antioxidant. Coloured, dense glass bottles protect the fish oil from light, UV rays and oxygen. Liquid nitrogen is filled into the void above the oil in the bottle before putting the stopper on and sealing. This process will reduce the possibility of contact between the fish oil and oxygen and further help protect against rancidity.

Why is Dr. Baddaky Omega-3 1000 ml bottled in a plastic bottle?

Our 1 liter bottle is intended for use in stables and kennels. To avoid accidents with glass bottles in the barn/kennel, we have chosen to use a 1000 ml, colored polyethylene terephthalate (PET) bottle.

Does Dr. Baddaky Omega-3 contain additives or artificial preservatives?

Dr. Baddaky Omega-3 is a pure natural product where we have only added vitamin E as an antioxidant.

Do dogs, cats and horses like Dr. Baddaky Omega-3 Fish Oil?

Fish oil is well accepted by both dogs, cats and horses. A good advice is to start with a small amount, then gradually increase to the recommended daily dose.

How is a new supplement introduced to a cat?

It is a good idea to spend some time introducing a new supplement to cats. Take a few drops of Omega-3 fish oil on the cat's forepaw for a few days. The cat will then lick the oil and thus get used to the taste. This advice can also be used for other supplements the cat needs to get used to.



How is a new supplement introduced to a horse?

For horses, we recommend starting off by giving small amounts of Omega-3 for a few days and increasing the amount gradually.

Why is there no pump in the bottles for Dr. Baddaky Omega-3?

We have high demands on quality and want to avoid rancidity of fish oil. Use of a pump can speed up the rancidity process of fish oil. After the pump system is taken into use, fish oil residues can remain in the pump system, which increases the risk of rancidity. The rancid fish oil in the pump system will then be mixed with the fresh oil at the next serving. We have not found a pump system that satisfies our requirements and does not contribute to faster rancidity of fish oil.

Can food allergy sufferers use Dr. Baddaky Omega-3 Fish Oil?

Allergy, whether it is an atopy or a food allergy, is due to the animal reacting to a protein (allergen) in the environment or in food. Our fish oil undergoes a gentle process called molecular distillation. This process purifies the fish oil from proteins.

We consider Omega-3 to be a safe product to give to a food allergy sufferer. Many allergic dogs and cats work really well on Omega-3. Try to add Omega-3 gradually to the animal's feed. Most food allergy sufferers will begin to itch or have gastrointestinal problems within three to ten days after provocation with a new ingredient.

Omega-3 capsules: The capsules are made of gelatin and may contain proteins. We therefore recommend the use of liquid fish oil for our food allergic patients.



Is there documented effect of fish oil for dogs, cats and horses?

The health effects of the omega-3 fish fatty acids EPA and DHA, which are found in fish oil, are among the best documented supplements in the world today, both for humans, dogs and cats. Increasingly more studies on horses are documenting the positive health effects of EPA and DHA. The fatty acids from fish oil are absorbed quickly and utilized well in the body.

Can Dr. Baddaky Omega-3 be combined with other food supplements and foods?

Yes, Omega-3 fish oil can be combined with other foods and food supplements*. Omega-3 can be given with food or alone.

*Antioxidant supplements and omega-3 supplements: for optimal effect of both supplements, we recommend to provide Omega-3 fish oil and antioxidant supplements at different times of the day. For example, fish oil in the morning and antioxidants in the evening.

Can vegetable oils like flaxseed oil and rapeseed oil be used as a source of EPA and DHA?

Vegetable oils such as flaxseed oil and rapeseed oil do not contain the omega-3 "fish fatty acids" EPA and DHA. These oils contain another essential omega-3 fatty acid

called alpha-linolenic acid (ALA). ALA, EPA and DHA are important for the body, but ALA is not a good substitute for, or covers the need for, the fish derived fatty acids EPA and DHA.

Are there enough omega-3 EPA and DHA "fish fatty acids" in commercial dog food?

The fish fatty acids, as well as other long-chain polyunsaturated fatty acids, turn rancid/oxidize very easily. In terms of quality and durability, it can be a challenge to add enough of these fatty acids in commercial dog and cat food. Most dogs and cats will, regardless of food, benefit from a supplement of fish oil.

Why do we need the omega-3 and omega-6 fatty acids?

Omega-3 and omega-6 are both essential (vital) fatty acids for the body and must be added via the food we eat. In the body, the fatty acids are converted into various neurotransmitters and tissue hormones that affect almost every system in the body. Especially important is the role of the omega-3 fatty acids in regulating inflammatory and pain responses, maintaining normal blood pressure and fat levels in the blood and their role as «building blocks» in cell membranes and in tissues such as brain and nerve tissue, eyes and sperm. Fish oil is one of the most important sources of the vital omega-3 «fish fatty acids» eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

It is these two fatty acids which have scientifically proven effects. The omega-3 fatty acids give rise to neurotransmitters which, among other things, contribute to alleviate inflammation and pain, while the omega-6 fatty acids give rise to neurotransmitters which help to increase inflammation and pain reactions. The amount, and to some extent, the balance of these fatty acids in food is of great importance to our health.

One challenge is that we, and our animals, largely eat food with a high proportion of omega-6 fatty acids, and a too low proportion of omega-3 fatty acids. This results in a skewed distribution in amount/balance between these fatty acids. It is documented that such a skewed distribution in the amount between omega-6 and omega-3 can contribute to chronic inflammation and a number of other health problems.

What is the difference between omega-3 fatty acids from fish oil and flaxseed oil?

Fatty fish and fish oil are rich in the long-chain omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), often called fish fatty acids. These two fatty acids are different from the omega-3 fatty acid alpha-linolenic acid (ALA), which is found in vegetable oils such as flaxseed oil and rapeseed oil. ALA is an essential fatty acid, that means, we must consume it through the food we eat. From ALA, the body can produce a number of other fatty acids such as EPA and DHA. The challenge is, that the body's ability to convert ALA to EPA and DHA is very limited. It is better to get a supplement of these fatty acids through the food we eat. The omega-3 fish fatty acid EPA is most

important in reducing and limiting inflammation and pain reactions in the body. The fatty acid DHA has important contributing properties helping to increase the motility/fluidity of cell membranes and thereby affecting factors such as sperm fertility, development of the nervous system, cognitive function, increased response to exercise and contributing to dampening the production of unfavorable free radicals.

How to choose the best fish oil?

There are large variations between omega-3 supplements on the market, both in quality and price. It is the omega-3 fatty acids EPA and DHA that have the documented health effect. These fatty acids are found in animal products and not in vegetable oils



(excluding marine algae products). Fish oil is one of the best sources of EPA and DHA. It is the amount of omega-3 fatty acids EPA and DHA and the quality of the raw materials in the product, that should be crucial to your choice of supplement. Omega-3 from Dr. Baddaky fishoil provides a minimum of 750 mg EPA and 470 mg DHA per 5 ml and is amongst the most concentrated fish oils on the market. For a dog of 15 kg you will only need approx. 5 ml per day of Dr. Baddaky Omega-3 to achieve the scientifically proven daily dosage of EPA and DHA. Quality cannot be "seen" on fish oil. Quality assurance is to know the origin of the fish oil and details of the raw materials coming from traceable, legal and sustainable fishing. Purity of the fish oil, production method, fatty acid and sensory analyzes, packaging and storage will all affect quality and price.

What is the difference between cod liver oil and fish oil - why should my dog or cat not have cod liver oil?

Fish oil and cod liver oil are two different products. Cod liver oil is produced from cod liver and has a high content of vitamin A and D, while fish oil is made from muscles and other parts of the fish. Both cod liver oil and fish oil are good sources of the fish fatty acids EPA and DHA. The biggest nutritional difference between cod liver oil and fish oil is the content of vitamin A and D. Cod liver oil contains relatively high amounts of vitamins A and D, while Dr. Baddaky Omega-3 and other pure fish oils, do not contain these vitamins. In general, it is not recommended to give dogs and cats a supplement of cod liver oil as there is a danger of overdosing vitamin A and D (see below).

Vitamin A and D, why is there a danger of overdosing?

Vitamin A and vitamin D are both fat-soluble vitamins. Unlike water-soluble vitamins, which are easily excreted via, among other things, urine, the fat-soluble vitamins can be stored in the body. An increased supplement of vitamin A and/or D over time, could lead to an «accumulation» of these vitamins in the body. Vitamin A plays an important role in the metabolism of bones. An overdose of vitamin A over time can lead to skeletal challenges, loss of appetite, reduced weight, skin-, eye-, liver- and kidney problems. An overdose of vitamin A in dogs and cats is especially seen in connection with supplementation of cod liver oil or pure liver over longer periods of time. Vitamin D is closely linked to the body's calcium and phosphorus regulation, and thus also bone and joint strength. An overdose of vitamin D can affect bone and joint development in puppies and cause challenges with hypercalcemia (a too high level of calcium in the blood).

Hypercalcemia can lead to more diseases and health problems. Commercial, balanced complete food for dogs and cats is fortified with vitamins A and D. Healthy dogs and cats, that receive a complete food, generally do not need a supplement of these vitamins. If you combine a commercial complete food or vitamin supplement with daily supplementation of cod liver oil, it could lead to an overdose. Fish oil, without vitamins A and D, is recommended as a supplement of fish fatty acids for dogs and cats. For those dogs that receive homemade food, the owner must take responsibility for having an overview of the raw material content of vitamin A and D. In the vast majority of cases, fish oil is recommended (not cod liver oil) for these dogs and cats too.



What is the difference between "good" and "bad" Omega-3 products?

There are large quality differences in omega-3 products on the market for dogs, cats, horses and humans. Recommended dosages of many omega-3 products for animals will often not satisfy scientifically proven quantities for good effect. This is often due to the concentration or amount of EPA and DHA in the product being low. For some products one must increase the recommended daily dose on the label 5-6 times to achieve those levels of EPA and DHA, which have been documented to have an effect. Few products show the amount of EPA and DHA in the finished fish oil. The total amount of fish oil or total Omega-3 levels make dosage difficult and may indicate low levels of the vital omega-3 fatty acids EPA and DHA.

How is the degree of rancidity in fish oil measured and what is sensory analysis?

TOTOX - a value for oxidation/degree of rancidity

TOTOX (total oxidation value) describes the total oxidation the fish oil has been exposed to. TOTOX is the sum of PV and AV values and is calculated using the formula

$$\text{TOTOX} = 2 \times \text{PV} + \text{AV}$$

Anisidine value (AV) measures previous oxidation of the fish oil. More specifically, it is the target of aldehyde production during oxidation of fat. AV will reflect how an oil has been handled and stored.

Peroxide value (PV) measures current oxidation.

Low AV and PV values are good.

The fish oil used in Dr. Baddaky Omega-3 is always within the strict and voluntary standard for fish oil specified by GOED. Our fish oil is analyzed before, during and after production and until and after the expiration date.

Sensory analysis: a separate and really experienced taste panel smells and tastes each batch of the oil before filling the bottle (performed approximately as a qualified wine tasting). The human sense of taste and smell is much more sensitive than any machine. This applies to rancidity or other indications of a deficiency in the quality of the fish oil.

