# Omega-3: the Good, the Bad and the Ugly



Since beginning her holistically oriented veterinary practice over 25 years ago, Deva Khalsa VMD has been incorporating homeopathy, acupuncture, Chinese herbs, nutritional advice, allergy elimination techniques such as NAET and also JMT into her approach. Today her work is a blend of sophisticated holistic techniques and traditional veterinary medicine designed to best enhance the natural strengths and attributes of her patient.

ogs require two types of essential fatty acids for healthy development and maintenance of their cardiovascular and nervous systems: Omega-3 and Omega-6. While Omega-6 fatty acids are plentiful in a dog's diet, regardless of what they eat, Omega-3s are not. Because the Omega-3s are fragile and break down quickly in the presence of heat, air or light, they are lacking in both the commercial and fresh foods that we tend to feed our dogs.

While pet food labels may state that Omega-3 and Omega-6 essential fatty acids have been added, the reality is that the food is deficient in Omega-3 due to unavoidable exposure to air and light. Feeding a good Omega-3 supplement is therefore advisable. But which one is best to use? The topic of Omega-3s is not as simple as it sounds.

#### Fish oil concerns

The two best Omega-3 fatty acids for dogs, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), are found in the oils of fatty fish such as salmon, sardines and anchovies. Cod liver oil also contains EPA and DHA, along with the healthy vitamins A and D. However, the Environmental Protection Agency (EPA)

recommends that humans eat no more than six 6 oz servings of cod per month due to mercury levels in this fish; because the oil concentrates the mercury in the liver, cod liver oil will contain even higher levels of mercury, and it is therefore safer to use fish body oils rather than those extracted from the liver.

Contamination is still a concern. Ocean dwelling fish absorb toxins and heavy metals as they feed, so the larger fish at the top of the food chain contain more toxic compounds.

When buying any kind of fish oil, here are some considerations to keep in mind.

#### The source

Look for an eco-friendly, sustainable source of fish oil. The fish used in most high-grade products are wild caught, non-threatened anchovies, sardines and mackerel, which feed off small plankton, from the deep clear Pacific waters off the coast of South America. Since these small fish are lower on the food chain, they do not have as many toxins in them as larger fish that live longer and are higher on the food chain. These smaller fish have the lowest levels of mercury and are the safest to eat. When supplementing your dog's diet with Omega-3s, it's vital to understand what you're buying and how to identify a safe, contaminant-free product.



## Where the fish is processed

The most reputable fish oil processing plants are in Norway where they process these smaller South American fish. Look for "Product of Norway" on the label.

## Smell and taste

High quality fish oil should have a very pleasant smell, whether in liquid form or capsule. The refining process has a great impact on smell and taste. The Norwegians have done extensive research on the development of good tasting fish oil.

## How the fish oil is distilled

When our mothers' mothers made children take cod liver oil it was in a time when producers didn't have as many contaminants to worry about. The fish oil was boiled in a still and separated from harder to boil materials like waxes, mercury and other pollutants that had different boiling points. The process was crude but it did the trick. While many processes exist today, the preferable process is triple phase molecular distillation, which is much gentler. The oil is placed under vacuum and then the Omega-3s and pollutants like PCBs and mercury are boiled off at extremely low temperatures, molecule by molecule. The EPA and DHA Omega-3s are separated from toxins. The resulting product is then converted back to triglyceride form, a costly process, making the fish oil more stable and less likely to degrade, while improving the bioavailability of the product. Companies using this process will freely share this information.

Avoid fish oil produced via the synthetic ethyl ester process which is easier and cheaper. It uses ethanol in the distillation process to produce a higher concentration of EPA and DHA. Ethanol is a free radical and makes the fish oil unstable, even though the oil may be more concentrated and contain a higher amount of Omega-3s. Left in this form as ethyl ester, it is less bioavailable than the natural form of trigycerides.

A quick home test will show what kind of fish oil you have. Pour some of your fish oil into a styrofoam cup. If the fish oil eats through the cup in 30 minutes or less, you may have fish oil with ethanol content. Also, if the container does not say natural triglyceride or TG from the fish oil, it is likely the ethyl ester form.

## Caution with salmon oil

Salmon oil is very popular and is probably the first fish oil that comes to mind. But it may not be the healthiest option.

# Farmed vs wild

Since so much of the salmon in grocery stores today is raised in fish farms, it could be the most polluted food our dogs eat. Researchers analyzed both farm raised and wild salmon from eight major regions around the world and found that the farm raised salmon contained dangerous levels of PCBs, dioxins and the insecticides dieldrin and toxaphene.

- PCBs, or polychlorinated byphenyls, are highly toxic and carcinogenic. PCBs are now banned but are still in the environment, and contaminated fish is the most likely source of exposure.
- Dioxins are a group of carcinogenic, chemically related compounds that are found primarily in fish and shellfish. If one uses the EPA's guidelines for exposure to dioxin, one meal of farmed salmon a month can pose unacceptable cancer risks.
- Dieldrin is a highly toxic, long-lasting insecticide, restricted by law to non-agricultural use.
- Toxaphene is a toxic solid polychlorinated camphene used as an insecticide. It was banned from use in the United States in 1990 because it is a suspected carcinogen.

DogsNaturally Store

**Dogs Naturally Approved Products** 



New products added weekly store.dogsnaturallymagazine.com This great difference in concentration of contaminants in farmed versus wild salmon is a result of the diets fed the fish. Farm raised salmon consume pellets made of other fish made into fishmeal mixed with fish oil to encourage rapid growth, concentrating the toxins in their bodies. The salmon farms also release large quantities of antibiotics into the water, as well as other chemicals generated during farming.

"Norwegian salmon" are not wild salmon but farm raised. Farm raised salmon can be potentially high in the pro-inflammatory Omega-6 fats and low in healthy Omega-3s. Wild caught Alaskan salmon has a much more favorable Omega-3 to Omega-6 ratio and fewer toxins and contaminants.

If buying salmon oil, make sure it is from wild caught Alaskan salmon. If the label says that it is made from salmon caught in the pristine waters of Norway or the Atlantic Ocean think twice about buying it.

## Other Omega-3 sources

EPA and DHA are two long-term fatty acids that are essential for cardiovascular function and the prevention of dementia. The richest sources are fatty fish. Alpha-linolenic acid (ALA), a short-chain Omega-3 fatty acid is found in appreciable quantities in walnuts, hemp and chia seeds, flaxseeds and soybeans. On its own, ALA is an inefficient source of DHA because its effect depends on its conversion first to EPA and then to DHA. Canines can only convert about 20 percent of the ALA to DHA.

Data indicates that algae oil supplements are more concentrated in Omega-3s. Algae supplements can provide both EPA and DHA and are a good alternative to fish oils. Just as selecting a trusted Omega-3 source is important, so is the selection of an algae supplement. Research the company and ensure you are dealing with the producer, not a third party or broker. You'll want a product tested by a reputable, independent third party, and confirm it is from organic sources produced outdoors with plenty of natural sunlight. Just like fish oils, you want to avoid contaminants.

A combination of crushed chia seeds and an algae supplement can supply a combination of healthy ALAs, DHAs and EPAs. My recommendation for Omega-3 supplementation is to follow the regimen below.

- Crushed chia seeds: 1 teaspoon (small dogs) to 1 tablespoon (large dogs) per day
- Walnut Oil: 1 teaspoon to 1 tablespoon a day, according to your dog's size as above
- Quality fish oil supplement or algae oil supplement: twice per week. If using a pet product, dose as instructed on the container. If using a human product, assume it's for a 150 lb human and adjust for your dog's weight.

There is a third party testing and certification program for fish oil that rates these products based on a criteria of Omega-3 content, contaminants and stability of the product. The International Fish Oil Standards Program (IFOS), the only one of its kind, has contracted Nutrasource Diagnostics (nutrasource.ca), which specializes in regulatory consulting, clinical trials and product testing. Enter the product, company or batch/lot number of your fish oil or select from almost 100 producers to get the IFOS rating of your fish oil.