

Use of Fish Oils as a Therapeutic/Preventive Supplement



Highlights

- Decreases inflammation throughout the body at 20mg/lb EPA & 12mg/lb DHA
- Helpful for arthritis, skin conditions, cognitive, heart & kidney disease
- Wide concentration range between products
- Dose is the critical issue to allow effective treatment or prevention
- More evidence based studies than any other supplement and most new ingredient being added to pet foods

Background: Fish oils have better evidence in human and pet literature than practically all other supplements combined. These claims have been substantiated by good studies and put them in the lead of the evidence based supplements. The challenges are finding the correct dose and the best way to deliver it in a convenient cost effective way.

Reported desired effects: High doses are used to treat and may prevent skin conditions, heart problems, kidney disease, osteoarthritis, cancer, "inflammation associated with daily activity" and improved cognitive function.

Active Ingredients: Eicosapentanoic Acid (EPA) & Docosahexanoic Acid (DHA) or fish oils
[Also referred to as Omega 3's, polyunsaturated fatty acids (PUFA's) and Free Fatty Acids (FFA's)]

Dosage: 20mg /lb EPA & 12mg/lb DHA per day. Concentration varies widely among products but typical fish oil capsules contain 1000mg of oil of which 180 mg is EPA and 120 mg is DHA. (So a 60lb dog requires 7 capsules per day) Read labels closely for mg of EPA per capsule, serving size etc. **Almost all label doses require doubling or tripling to reach the 20mg/lb per day.** Skin inflammation can require much higher dosing.

Natural sources: Sardines, anchovies, deep ocean fish which all convert plankton a natural source of EPA.

Drug interactions: none

Side effects: diarrhea at higher doses (start at a lower dose and increase slowly and use newer high concentration products to prevent GI upset)

10 Important Things You Need to Know

1) Fish oils are highly prone to oxidation so they **need to be protected from light** and need adequate levels of Vitamin E or other antioxidants to preserve them.

2) EPA (Eicosapentanoic Acid) is most active for skin, joints, and heart. DHA (Docosahexanoic Acid) is most active for brain and retina. **The combination, if given at 40mg/kg & 25mg/kg respectively has been proven to turn off inflammatory mediators that cause damage throughout the body (1).**

3) Flax seeds (and other Omega 3 fatty acids) are NOT readily converted to active forms (EPA/DHA) in pets, therefore are probably **ineffective** for preventing inflammation. (They may do other good things)

4) The ratio of Omega 6 to 3 appears much less important (if at all) than previously believed.

5) There is **CONSIDERABLE** variability in the amount of EPA & DHA per capsule or ml in both human and pet products. Dosing is vital to achieve desired effects. (See dosing chart below)

6) DHA may be more important in cats (bladder & joint disease), and cognitive issues in both older dogs & puppies-where it is now been proven to increase learning.

7) There are now 5 prescription dog foods and 2 prescription cat foods (see below) that deliver at least 20mg/lb of EPA. They range from 290 to over 600mg EPA per cup. Although "fish oil" is now the most commonly added pet food ingredient the amount of EPA per cup must be established to determine if therapeutic and to know how much to supplement.

8) Bioavailability of triglyceride, ethyl ester and free form now being debated.

9) In overweight pets you need to account for additional calories (10 cal per 1 gm capsule, so this adds 70 cal to an overweight pet's daily intake). High potency formulations can cut the calories by 2/3.

10) Finding a convenient way to dose to achieve daily compliance can be a challenge!

Your pets wt _____ in lbs EPA 20mg/lb = _____ mg DHA 12mg/lb = _____ mg

Typical Human Products:

_____ caps Fish oil capsule usually 180mg of EPA per capsule (Walgreens, Costco etc)

_____ caps of high potency human products (Carlson, Nature's Bounty & others range from 300 to 700mg EPA per capsule)

_____ mls Liquid fish oil _____ up to 180mg of EPA per ml) Need to make sure it is **NOT** citrus flavored, for pet taste buds!

Veterinary Products:

_____ caps DVM Free Form Snip Tips® 515mg EPA/capsule

_____ mls Omega AllerG3® 180 mg EPA/ml

_____ mls Omega-3 Ascenta™ 148mg EPA/ml

Prescription Dog Foods:

_____ cups Purina Prescription JM® (290mg EPA/cup)

_____ cups Hills Prescription J/D® (394mg EPA/cup)

_____ cups Royal Canin Joint Mobility (330mg EPA/cup) (also contains green lipped mussel)

_____ cups Royal Canin Prescription Joint Mobility Lg Breed (500mg EPA/cup) also contains Perna green lipped mussel

_____ cups Purina DRM® Trout & Salmon Food Allergy Diet (640mg EPA per cup)

Prescription Cat foods:

_____ cups Hills Feline J/D (605.7mg EPA/cup 388 mg DHA/cup)

_____ cups Royal Canine Feline Mobility JS (440mg EPA/cup 222 mg/DHA-also contains Perna green lipped mussel)

Checklist (if shopped): () light protected () fresh, reliable source () Hg (mercury) free () stabilized with Vit E

This information provided based on the scientific papers listed below as well as seminars, and evidence based sources. More information on the human nutraceutical site consumerlab.com Visit our clinic website for most recent updates: <http://westtownvet.com/prebiotics-probiotics/>

Evaluation of a Therapeutic Diet for Feline Degenerative Joint Disease
Duncan Lascelles J Vet Intern Med 2010, 1-9

Evaluation of the effects of dietary supplementation with fish oil omega-3 fatty acids on weight bearing in dogs with osteo arthritis James K Rousch DVM,MS,DACVS; Alan R. Cross DVM ,MS,DACVS et al JAVMA Vol236, No.1, January 1, 2010

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