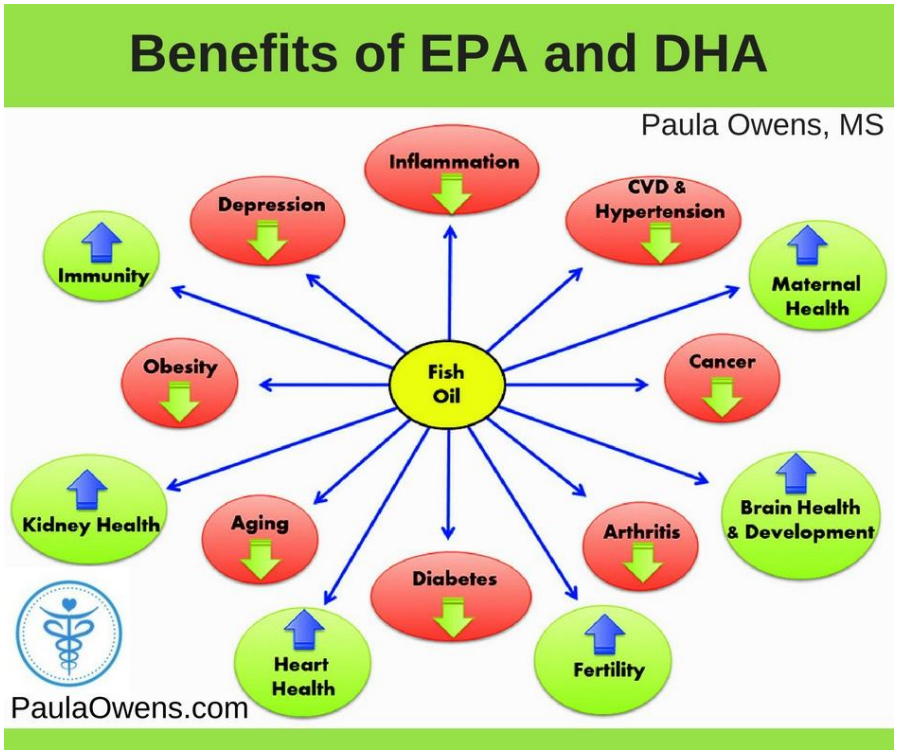
Eicosapentaenoic Acid (EPA) Benefits

Eicosapentaenoic acid (EPA) is a type of omega-3 fatty acid that is found in fatty fish, such as salmon, sardines, and mackerel, as well as in some algae. Here are some of the potential health benefits associated with EPA:

1. Reducing inflammation: EPA has anti-inflammatory properties and can help reduce inflammation in the body, which is linked to a variety of chronic diseases, including heart disease, cancer, arthritis, and allergies in dogs.
2. Improving joint and bone health: EPA has been shown to improve joint health and mobility in dogs with arthritis by reducing inflammation in the joints.
3. Promoting healthy skin and coat: EPA can help maintain healthy skin and coat in dogs by reducing inflammation and improving the skin's barrier function.
4. Help reduce metabolic syndrome associated with geriatric and Cushingoid dogs.
5. Improving heart health: EPA may help lower triglyceride levels and reduce the risk of heart disease by reducing inflammation, improving blood vessel function, and reducing the risk of blood clots.
6. Supporting brain health: EPA is important for brain function and may help reduce the risk of age-related cognitive decline, depression, and anxiety.
7. Omega-3s may help improve inattention and decrease hyperactivity, impulsiveness, restlessness, and aggression.
8. Improve eye health and KCS dry-eye symptoms.
9. Omega-3 fatty acids may help treat and prevent several autoimmune diseases.

EPA Benefits in Humans:



[Omega-3 fatty acids EPA and DHA: health benefits throughout life]
Studies have shown that EPA and DHA are important for proper fetal development, including neuronal, retinal, and immune function. EPA and DHA may affect many aspects of cardiovascular function including inflammation, peripheral artery disease, major coronary events, and anticoagulation. EPA and DHA have been linked to promising results in prevention, weight management, and cognitive function in those with very mild Alzheimer's disease.
https://pubmed.ncbi.nlm.nih.gov/22332096/

General Data Links:

Small Animal Dermatology References:

Muller and Kirk's Small Animal Dermatology - 9781416000280
https://www.elsevier.com/books/muller-and-kirks-small-animal-dermatology/miller/978-1-4160-0028-0

Small Animal Dermatology - 9780323376518
https://www.us.elsevierhealth.com/small-animal-dermatology-9780323376518.html

https://ods.od.nih.gov/pdf/factsheets/omega3fattyacids-consumer.pdf

17 Science-Based Benefits of Omega-3 Fatty Acids
https://www.healthline.com/nutrition/17-health-benefits-of-omega-3

PubMed Research Results Summary

https://pubmed.ncbi.nlm.nih.gov/?term=Eicosapentaenoic+Acid+%28EPA%29&filter=pubt.review

SKIN AND GLAND SUPPORT

The Potential Uses of Omega-3 Fatty Acids in Dermatology: A Review?
https://journals.sagepub.com/doi/10.1177/1203475420929925?

ANTI-INFLAMMATORY

Effects of dietary supplementation with fish oil on in vivo production of inflammatory mediators in clinically normal dogs
Results supported the use of EPA- and DHA-enriched diets as part of antiinflammatory treatments for dogs with chronic inflammatory diseases.
https://pubmed.ncbi.nlm.nih.gov/18380580/

Canine plasma and erythrocyte response to a docosahexaenoic acid-enriched supplement: characterization and potential benefits
Studies describing some of the neurologic, renal, cardiovascular, immune, and musculoskeletal effects of elevated blood levels of n-3 fatty acids are reviewed.
https://pubmed.ncbi.nlm.nih.gov/15906268/

IMMUNE SUPPORT

Effects of Omega-3 Fatty Acids on Immune Cells - PMC
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6834330/

Omega-3 backed to boost immune response, not just battle inflammation: Study
https://www.nutraingredients.com/Article/2013/04/02/Omega-3-backed-to-boost-immune-health-not-just-battle-inflammation

ALLERGY CONTROL

Omega-3 fatty acids can potentially help dogs with allergies by reducing inflammation and improving the overall health of their skin and coat. Allergies in dogs can manifest in various ways, including skin irritation, itching, and inflammation, and omega-3s may help alleviate these symptoms. Essential Fatty Acids for Integumentary Disease in Animals - Pharmacology - Merck Veterinary Manual

Lipid mediators have important roles for the pathophysiology of the allergic diseases
https://pubmed.ncbi.nlm.nih.gov/31465315/

JOINT HEALTH

A prospective, randomized, double blind, placebo-controlled evaluation of the effects of eicosapentaenoic acid and docosahexaenoic acid on the clinical signs and erythrocyte membrane polyunsaturated fatty acid concentrations in dogs with osteoarthritis
This study demonstrated that the daily supplementation of a dogs diet with EPA and DHA shifts the blood fatty acid concentrations correlating to relief of clinical signs associated with OA in dogs.
https://pubmed.ncbi.nlm.nih.gov/27269707/

MENTAL HEALTH AND BRAIN SUPPORT

EPA but not DHA appears to be responsible for the efficacy of omega-3 long chain polyunsaturated fatty acid supplementation in depression: evidence from a meta-analysis of randomized controlled trials
The current meta-analysis provides evidence that EPA may be more efficacious than DHA in treating depression.
https://pubmed.ncbi.nlm.nih.gov/20439549/

International Society for Nutritional Psychiatry Research Practice Guidelines for Omega-3 Fatty Acids in the Treatment of Major Depressive Disorder
https://pubmed.ncbi.nlm.nih.gov/31480057/

The differential effects of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) on seizure frequency in patients with drug-resistant epilepsy - A randomized, double-blind, placebo-controlled trial

This study demonstrates that EPA and DHA are effective in reducing seizure frequency in patients with DRE.
https://pubmed.ncbi.nlm.nih.gov/30170260/

HEART HEALTHY

Effect of omega-3 fatty acids on cardiovascular outcomes: A systematic review and meta-analysis
Omega-3 FAs reduced cardiovascular mortality and improved cardiovascular outcomes. The cardiovascular risk reduction was more prominent with EPA monotherapy than with EPA+DHA.
https://pubmed.ncbi.nlm.nih.gov/34505026/

KCS (keratoconjunctivitis sicca) - DRY EYE

Oral omega 3 in different proportions of EPA, DHA, and antioxidants as adjuvant in treatment of keratoconjunctivitis sicca in dogs
https://pubmed.ncbi.nlm.nih.gov/30208145/

CANCER PREVENTION

Therapeutic Effect of EPA/DHA Supplementation in Neoplastic and Non-neoplastic Companion Animal Diseases: A Systematic Review
EPA; Eicosapentaenoic acid; cats; docosahexaenoic acid; dogs; omega-3 fatty acids; review; supplementation.
https://pubmed.ncbi.nlm.nih.gov/33910819/

Therapeutic Effect of EPA/DHA Supplementation in Neoplastic and Non-neoplastic Companion Animal Diseases: A Systematic Review
EPA and DHA supplementation has proven benefits in the adjuvant treatment of various neoplastic and non-neoplastic diseases in dogs and cats.
https://pubmed.ncbi.nlm.nih.gov/33910819/