

Essential Fatty Acid Supplementation

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In the Literature

Martinez N, McDonald B, Martínez-Taboada F. Exploring the use of essential fatty acids in veterinary dermatology. *Vet Rec.* 2019. doi: 10.1136/vr.105360

FROM THE PAGE ...

Essential fatty acids (EFAs) are unsaturated fatty acids that cannot be produced and therefore must be ingested. EFAs in dogs include linoleic acid and α -linolenic acid; in cats, EFAs include linoleic acid, α -linolenic acid, and arachidonic acid. Fatty acids are commonly used in oral form to decrease skin inflammation, reduce pruritus caused by atopic dermatitis, and improve skin barrier function, which may be measured as a decrease in transepidermal water loss. Oral supplements (eg, capsules, chews) or diets that contain high levels of eicosapentaenoic acid and docosahexaenoic acid may be selected. Diets labeled for skin or joint conditions are more likely to contain therapeutic levels of fatty acids.

This study aimed to assess, via an online survey, the frequency of and rationale for EFA use in a population of clinicians, including general practitioners and specialists. The type of EFA selected, factors influencing product choices, reason for choosing EFAs, and awareness of EFA oxidation over time were evaluated in the 309 respondents. Common reasons for using EFAs for skin disease included barrier dysfunction, atopic dermatitis (environmental or food induced), immune-mediated diseases, and food allergies. Veterinary-branded products were recommended most often, and scientific studies influenced product decisions. More than 50% of respondents were not aware that fatty acids could oxidize over time.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** EFA products must be within date and kept in a cool, dry location away from direct sunlight to slow the rate of oxidation. Oral EFA supplements may take 8 to 12 weeks to take effect, and long-term use is required for continued efficacy. Topical fatty acid and ceramide products may improve skin barrier function, but continued use is needed for sustained benefit.
- 2** A dose of 60-70 mg/kg per day of combined eicosapentaenoic acid and docosahexaenoic acid is recommended. A veterinary formula is preferred and is typically easier to dose in larger dogs. Higher doses may lead to flatulence and diarrhea; pancreatitis is a rare but serious complication.
- 3** EFAs at recommended doses can lower steroid and cyclosporine requirements in the treatment of atopic dermatitis.

Suggested Reading

- Marsella R, Cornegliani L, Ozmen I, Bohannon M, Ahrens K, Santoro D. Randomized, double-blind, placebo-controlled pilot study on the effects of topical blackcurrant emulsion enriched in essential fatty acids, ceramides and 18-beta glycyrrhetic acid on clinical signs and skin barrier function in dogs with atopic dermatitis. *Vet Dermatol.* 2017;28(6):577-e140.
- Müller MR, Linek M, Löwenstein C, et al. Evaluation of cyclosporine-sparing effects of polyunsaturated fatty acids in the treatment of canine atopic dermatitis. *Vet J.* 2016;210:77-81.
- Sævik BK, Bergvall K, Holm BR, et al. A randomized, controlled study to evaluate the steroid sparing effect of essential fatty acid supplementation in the treatment of canine atopic dermatitis. *Vet Dermatol.* 2004;15(3):137-145.
- Scott DW, Miller WH Jr, Reinhart GA, Mohammed HO, Bagladi MS. Effect of an omega-3/omega-6 fatty-acid containing commercial lamb and rice diet on pruritus in atopic dogs: results of a single-blinded study. *Can J Vet Res.* 1997;61(2):145-153.