

## Nearly 1 in 3 Dogs Suffer from This Often Easily Fixed Issue

It's a leading cause of animals being relinquished to shelters, and that's tragic because oftentimes it's an issue that can be fixed. Sometimes it's as easy as increasing this one nutrient in your pet's food, but don't waste time waiting for your veterinarian to recommend it. Try it.

Reviewed by **Dr. Becker**

### STORY AT-A-GLANCE

- Nearly 30% of dogs may exhibit signs of anxiety, which may include excessive barking, trying to escape, excessive energy, destructive behaviors and even aggression
- Increased intake of omega-3 fats had a calming effect on anxious dogs and led to improvements in behavior
- Bifidobacterium longum, a type of beneficial bacteria, was effective in reducing anxiety in anxious dogs
- Herbs and nutraceuticals that may benefit your anxious pet include 5-Hydroxytryptohan (HTP), calming milk protein, L-theanine and Ashwagandha
- In addition to addressing your pet's nutritional needs, try to get to the bottom of what's causing your pet's anxiety

***Editor's Note: This article is a reprint. It was originally published June 13, 2016.***

Nearly 30% of dogs may exhibit signs of anxiety, which may include excessive barking, trying to escape, excessive energy, destructive behaviors and even aggression.<sup>1</sup>

Such behavioral issues are a leading cause of animals being relinquished to shelters, which is unfortunate because oftentimes these issues can be fixed.

Behavior modification techniques are the foundation of reshaping unwanted behaviors, along with a variety of supportive supplements and even pheromone-releasing collars, which can help reduce stress.<sup>2</sup>

However, many people — veterinarians included — tend to overlook the importance of diet in relieving anxiety in pets. As noted by Ragen T.S. McGowan, Ph.D., of Nestlé Purina Research, at the 2016 Nestlé Purina Companion Animal Nutrition Summit:<sup>3</sup>

*"Altering diet to manipulate the availability of precursors for the hormones and neurotransmitters that regulate behavior has merit as a means to mitigate many behavioral issues."*

Amino acids are important for healthy cognitive function, including tryptophan, which is oftentimes deficient in poorly designed, meat-based ("all meat"), and high-fat diets.

This has led to the erroneous conclusion that meat-based diets foster aggression, when the real issue at hand is tryptophan deficiency. But there are other nutritional factors besides adequate amino acid consumption that play into a dog's behavior as well.

## **Omega-3 Fats May Help Relieve Anxiety in Dogs**

If your dog suffers from anxiety, be sure he is consuming a high-quality source of omega-3 fats. These fats have antioxidant and anti-inflammatory properties while also modulating neurotransmitters and neuroplasticity in the brain.

When researchers pitted the omega-3 fat eicosapentaenoic acid (EPA) against the antidepressant drug fluoxetine (brand name Prozac), EPA was just as effective as the drug in relieving symptoms of depression in humans — and the same may be true in dogs as well.<sup>4</sup>

Research involving 24 dogs, conducted by McGowan and colleagues, found increased intake of omega-3 fats had a calming effect on anxious dogs and led to improvements in behavior.<sup>5</sup>

Clinical studies show that omega-3s are helpful in treating many disorders in dogs and cats, including heart and kidney disease, inflammatory skin conditions and arthritis, as well as boosting cognitive function.

It's a good idea for virtually all pets to eat a diet rich in omega-3s, so any behavioral improvements are the icing on the cake.

## **How Much Omega-3 Should You Feed Your Pet?**

If you feed your pet a commercial diet, there's a good chance he's deficient in omega-3 fats. It's very common. In addition to anxiety, omega-3-deficient animals may struggle with dry skin, chronic inflammation (mouth, ears, or paws) or recurrent skin and ear infections (decreased immune function).

To boost his intake, you can feed your pet sardines packed in water or wild-caught salmon.

If your pet is currently in good health but has symptoms of omega-3 deficiency, supplementing with marine oils is recommended. Capsule or airless pump form is preferable to pourable oils, as the latter may easily turn rancid:

- 250 milligrams (mg) daily for toy breeds and cats (1 to 14 pounds)
- 500 mg daily for small dogs (15 to 29 pounds)
- 1,000 mg daily for medium dogs (30 to 49 pounds)
- 1,500 mg daily for large dogs (50 to 79 pounds)
- 2,000 mg daily for dogs 80 pounds and above

## **Reducing Anxiety Via the Gut-Brain Axis**

It's well-established that the gut and the brain communicate via what's known as the "gut-brain axis." Microbial compounds in the gut communicate with the immune system and brain, and vice versa.

This communication happens via the vagus nerve, which connects the brain and the digestive tract, and explains why modifying your pet's gut health may have a significant effect on his mood and anxiety.

Bacteria known as *Bifidobacterium longum* have been shown to normalize anxiety-like behavior in mice, for instance. The *Journal of Neurogastroenterology and Motility* reported that this bacteria's effect on anxiety involves modulating the vagal pathways within the gut-brain (also known as the enteric nervous system).<sup>6</sup>

Research conducted by McGowan and colleagues also found *B. longum* to be effective in reducing anxiety in anxious dogs.<sup>7</sup> In addition, studies have found the bacteria to help relieve anxiety-like behavior in rats and psychological stress in humans.<sup>8</sup>

Like omega-3s, probiotics offer many benefits to your pet's health even beyond the potential for anxiety relief, including improving digestion, calming digestive upset and boosting immune system function.

## **What Types of Probiotics Are Best for Pets?**

Such promising results pave the way for commercial pet food manufacturers to add beneficial bacteria (probiotics) and omega-3s to pet foods and claim it may improve your dog's behavior, but be careful with relying on these heavily processed sources.

The heat required for processing can damage both probiotics and omega-3s, meaning there may be very little benefit to your pet in the end product (and consuming oxidized oils like omega-3s may cause your pet more harm than good). Most commercial pet foods containing probiotics or omega-3s are a waste of money.

You also need to be careful when purchasing commercially available probiotic supplements for pets, which are often low-quality, "animal-grade" products, not human-grade products like the ones you may take. That being said, in most cases, probiotic formulas developed for human consumption aren't appropriate, in terms of being most efficacious, for companion animals.

Pets have strains of bacteria unique to them — they require organisms derived from their own species for best results, for instance the "poo probiotic" species *Enterococcus faecium*.

This strain is considered a pathogen in human medicine (many production companies will not bring this strain into their facilities), but is one of the more effective strains used for dogs and cats. There are three crucial components to choosing a high-quality pet probiotic:

1. It should contain 10 or more strains of beneficial bacteria
2. Each serving should contain a minimum 20 million beneficial bacteria — the higher the number, the better
3. It should be GMP-certified to assure the viability, potency and purity of the product

If your dog or cat has specific health challenges, like anxiety, talk with your veterinarian about the best approach to probiotic supplementation for your pet's individual needs. Keep in mind that you can also feed your pet fermented vegetables, which will provide powerful probiotic benefits naturally.

## Is Your Pet Eating a Fresh, Species-Appropriate Diet?

If your pet struggles with anxiety, the dietary addition of omega-3 fats and probiotics is important. But please don't make the mistake of adding these healthy supplements to a poor-quality, highly processed diet. For best behavior and physical health, be sure your pet is eating a fresh, balanced, and species-appropriate diet that you either make yourself or choose carefully from a high-quality brand at the store.

In addition, contact an **integrative veterinarian** who can recommend additional herbs and nutraceuticals that may benefit your anxious pet. Examples include:

- 5-Hydroxytryptohan (HTP)
- Calming milk protein
- L-theanine
- Ashwagandha
- Vitamin B3 and B6
- GABA
- Rhodiola
- Chamomile
- Holy basil (Tulsi)
- Traditional Chinese herbs
- Homeopathic remedies

Finally, in addition to addressing your pet's nutritional needs, try to get to the bottom of what's causing your pet's anxiety. Your pet may need more mental or physical stimulation (i.e., playtime and exercise), for example. He could also be fighting an underlying illness that's contributing to the anxious behaviors.

In the event your pet's anxiety appears to be getting worse instead of better, board-certified veterinary behaviorist can help with behavior modification and training to, hopefully, give your pet long-term relief.

### Sources and References

<sup>1, 5, 7</sup> [Proceedings, ACVB/AVSAB Veterinary Behavior Symposium, 2013;50-51](#)

<sup>2</sup> [Veterinary Record doi:10.1136/vr.103172](#)

<sup>3</sup> [DVM 360 April 26, 2016](#)

<sup>4</sup> [Aust N Z J Psychiatry, 2008 Mar;42\(3\):192-8](#)

<sup>6</sup> [Neurogastroenterol Motil. 2011 Dec;23\(12\):1132-9.](#)

<sup>8</sup> [Br J Nutr. 2011 Mar;105\(5\):755-64.](#)