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Anxiety & nutrition.

Boosting tranquility through nutrition.

Exploring the impact of **fatty acids and probiotics** on **anxiety** in dogs.



[Heather Lewellen, DVM](#)

The path to serenity is through the stomach?

It is well-known that one of the top reasons dogs are relinquished to shelters **is for behavioral issues.**

Many of these owner-dog relationship-threatening behaviors are a direct result of **anxiety experienced by the dog.**

Although the number may be higher, some have estimated that 29% of dogs exhibit signs of anxiety.¹

{Ragen T.S. McGowan, PhD}, of Nestlé Purina Research, presented some cutting-edge information on potential new treatments for canine anxiety at the 2016 Nestlé Purina Companion Animal Nutrition Summit)

When dog owner clients choose to treat rather than relinquish a dog exhibiting anxious behavior – then looking at; behavior modification techniques pharmaceutical intervention pheromone exposure are the current staples of treatment but also Nutrition as an avenue of intervention addressing anxiety in dogs.

Nutrition.

A small number of studies on herbal,² milk^{3,4} or fish derivative⁵ supplementation and amino acid or protein level manipulation⁶⁻⁸ have lent support to the theory that diet may have a positive impact on problematic behavior in dogs.

Dr. McGowan proposed that, “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.”⁹

She presented information about two promising therapeutics that her research team had studied.

Diving into the Kill and or fish oil factor.

The precise mechanism by which omega-3 fatty acid exerts effects on behavior is not known.

However, fatty acids have been proven to have antioxidant and anti-inflammatory effects as well as to modulate neurotransmitters and to affect neuroplasticity.

In fact, fatty acids have been found to influence the same pathways that antianxiety medications do, most notably **fluoxetine**, a commonly prescribed treatment for anxiety disorders in dogs.¹⁰

In a study of 24 dogs, Dr. McGowan's team found that, "from both a behavioral and physiological standpoint, increased intake of fish oil had a calming effect on anxious dogs."¹¹

There is a plethora of evidence in the literature that supports using fish oil as a potential reliever of depression, anxiety, and hyperactivity in numerous species.

It appears that this may hold true for dogs, as well.

Scrutinizing bacterial influence.

The "gut-brain axis."

Have you heard of it?

It is generally recognized that the gut and the brain are engaged in constant bidirectional communication through this axis.

Dr. McGowan says there is now robust evidence that vagal pathways within the enteric nervous system (gut) transmit signals from the gut microbiota to the central nervous system (brain).¹²

She also says, "There is mounting evidence that in the literature that manipulation of the gut microbiota **can influence anxious behavior specifically.**"¹³⁻¹⁶

Bifidobacterium longum a promising bacterium that Dr. McGowan's team studied.

A few studies have found that exposure to a probiotic blend containing *B. longum* alleviated psychological stress in human volunteers and reduced anxiety-like behavior in rats.¹⁷

Studies have also shown that this anxiolytic effect is achieved through the vagal pathway.¹²

In Dr. McGowan's own study in 24 dogs, they found that;
"From both a behavioral and psychological standpoint *B. longum* had an anxiolytic effect on anxious dogs."¹¹

Digesting the findings.

"Our understanding of the impact of diet on anxious behavior is in its infancy," says Dr. McGowan. "Although there are a handful of studies available in the literature, they are not without confounds and limitations."

However, given the growing body of evidence that nutrition can play a role in behavior, our obligation to relieve animal suffering, and the potential seriousness of the consequences of anxious behavior in dogs, it stands to reason that we should keep ourselves abreast of promising developments in the treatment of canine anxiety disorders.

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