

Teach an Old Dog New Tricks? Nestlé Scientists Confirm a Beneficial Role of Dietary MCTs for Cognitive Function in Older Dogs

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Can you really teach an old dog new tricks? Scientists at the Nestlé Purina Research Center in St. Louis, Missouri, USA, set out to answer this question with a dietary intervention for older dogs. Study results confirmed that supplementing the dogs' diets with medium-chain triglycerides (MCTs) imparted long-lasting cognitive benefits. The full article contribution is available in the [British Journal of Nutrition](#).

Cognitive decline is a normal part of ageing in animals and humans and in dogs is associated with behavioural changes similar to dementia in humans. This age-associated decline is closely linked with the decreased ability of the brain cells to utilize glucose. Though glucose is the main source of energy for the brain, brain cells can use ketone bodies as an alternative energy source, which typically occurs during starvation or under the condition of high fat, low carbohydrate diets.

Nestlé Purina scientists supplemented the diet of older dogs with MCTs to help improve their cognitive performance. Older-aged dogs (7.5-11.5 years) were placed in two cognitively equivalent groups – one group received a control diet, while the other received a diet with an equal amount of energy and macronutrients but with added MCTs. The respective diet regimens were followed by the dogs for eight consecutive months, while they also learned and performed three different types of cognitive tasks.

The outcomes of the study revealed that dogs supplemented with MCTs showed significantly better performance for most of the cognitive tests. Furthermore, the MCT-containing diet increased circulating ketones in the blood, supporting the concept that MCTs may provide an alternative energy source for the brain.

“Supplementation of dietary MCTs is especially beneficial for ageing dogs, because in their state of decreased brain glucose metabolism, ketones produced from the MCTs can help boost the brain's energy supply,” said Dr. Yuanlong Pan, Nestlé Purina scientist leading the study. “Our findings suggest that MCT supplementation helps enhance cognitive performance during ageing, improving the lives of pets, thus easing the minds of pet owners too.”

Nestlé scientists continue to use science as the foundation for innovative products that bring Nutrition, Health and Wellness, not only to human consumers, but also to their beloved pets.

Article Reference:

Pan Y, Larson B, Araujo JA, Lau W, de Rivera C, Santana R, Gore A, Milgram NW. Dietary supplementation with medium-chain TAG has long-lasting cognition-enhancing effects in aged dogs. *Brit J of Nutr*; doi:10.1017/S0007114510000097, Published online by Cambridge University Press 9 February 2010.

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