



**CARB IS A
4-LETTER
WORD ******



**THE LOWDOWN
ON LOW-CARB
DOG FOOD**



BONES & CO
HANDCRAFTED FOOD AND TREATS FOR DOGS

DOGS ARE BROKEN



METABOLIC DISEASE IS PLAGUING OUR PETS AT EPIDEMIC RATES.

- **One in four** dogs will be diagnosed with cancer, and those odds increase to 1 in 2 for dogs over the age of 10. Cancer is the leading cause of death for dogs beyond middle age according to the [Vet Cancer Society](#).
- In 2022, **59% of dogs** in the U.S. were classified as overweight or obese, according a 2022 study released by the [Association for Pet Obesity Prevention](#)¹.
- And [peer-reviewed research published in 2022](#) in The Veterinary Journal demonstrated the connection between metabolism and disease in **canine epilepsy treatment**².

The first time you hear these devastating odds our dogs are facing, a four-letter word might run through your brain. Ours too.

BUT IT'S NOT THE WORD YOU THINK.

¹ Association for Pet Obesity Prevention. (2023). 2022 State of U.S. Pet Obesity. <https://www.petobesityprevention.org/>.

² Fien Verdoodt, Antja Watanangura, Sofie F.M. Bhatti, Teresa Schmidt, Jan S. Suchodolski, Luc Van Ham, Sebastian Meller, Holger A. Volk, Myriam Hesta, The role of nutrition in canine idiopathic epilepsy management: Fact or fiction?, The Veterinary Journal, Volume 290, 2022, 105917, ISSN 1090-0233, <https://doi.org/10.1016/j.tvjl.2022.105917>

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When we start asking why metabolic diseases are increasingly common among dogs, one factor is hiding in plain sight in many dogs' bowls: carbohydrates.

Canines, as descendants of wolves, are natural carnivores who evolved over millennia to thrive on a diet primarily composed of animal-based fat and protein (i.e., low-carb dog food). The wolf's feeding ecology and nutrient uptake help us better understand what dogs need to be fed optimize their health and longevity³: fat and protein, not carbs.

While domesticated dogs have evolved genetic adaptations that do allow them to digest carbohydrates better than their wolf ancestors⁴, these adaptations reflect humans' agrarian development, rather than dogs' metabolic needs.

³ Bosch, G., Hagen-Plantinga, E., & Hendriks, W. (2015). Dietary nutrient profiles of wild wolves: Insights for optimal dog nutrition? *British Journal of Nutrition*, 113(S1), S40-S54. doi:10.1017/S0007114514002311.

⁴ Axelsson, E., Ratnakumar, A., Arendt, M. L., Maqbool, K., Webster, M. T., Perloski, M., Liberg, O., Arnemo, J. M., Hedhammar, A., & Lindblad-Toh, K. (2013). The genomic signature of dog domestication reveals adaptation to a starch-rich diet. *Nature*, 495(7441), 360-364. <https://doi.org/10.1038/nature11837>

The development of a carbohydrate-flooded food system (impacting the health of both humans and dogs) has accelerated in the U.S. in recent decades, as public policy drives the over-production of wheat, soybeans and corn.

Writing in the 2004 Annual Review of Nutrition, James Tillotson, a professor of food policy and international business at Tufts University, argues that U.S public policy encourages obesity at the expense of sound nutritional practices:

“You have a whole régime here that’s worked to increase agricultural efficiency,” Tillotson says. And what U.S. farmers are most efficient at producing, he says, are just a few highly subsidized crops—wheat, soybeans, and especially corn⁵.

Additionally, recent studies focused on domesticated dogs support that fat- and protein-rich diets are metabolically appropriate, based on self-selection behavior:

- In a [2013 study](#)⁶, Hewson-Hughes et al. conducted a macronutrient selection analysis in adult domestic dogs. The study observed

⁵ Fields S. (2004). The fat of the land: do agricultural subsidies foster poor health?. *Environmental health perspectives*, 112(14), A820-A823. <https://doi.org/10.1289/ehp.112-a820>

⁶ Hewson-Hughes, A. K. et al. (2013). Gemoetric analysis of macronutrient selection in breeds of the domestic dog, *Canis lupus familiaris*. *Behavioral Ecology*, 24(1), 293-304. <https://doi.org/10.1093/beheco/ars168>

that when given the opportunity to self-select their diets, dogs primarily opted for higher proportions of protein and fat compared to carbohydrates. This behavior aligns with their carnivorous nature, indicating that canines have a natural preference for animal-based nutrients.

- A [2017 study](#)⁷ by Roberts et al. showed that dogs prioritize energy-dense fat as an energy source, and, when given the option, do not select carbohydrates as a significant portion of their diet.

Despite this growing body of scientific evidence, no one is talking about it.

What do we mean by this? Shouldn't all pet parents be on the hunt for the lowest-carb food?

Let's start with weight management in dogs: although research (and common sense) shows that dogs experience increased vitality when they are their ideal weight⁸, less than half of pet parents reported in 2022 that they discuss their

⁷ Roberts, M. T., Bermingham, E. N., Cave, N. J., Young, W., McKenzie, C. M., & Thomas, D. G. (2018). Macronutrient intake of dogs, self-selecting diets varying in composition offered ad libitum. *Journal of animal physiology and animal nutrition*, 102(2), 568–575. <https://doi.org/10.1111/jpn.12794>.

⁸ German, A. J., Holden, S. L., Wiseman-Orr, M. L., Reid, J., Nolan, A. M., Biourge, V., Morris, P. J., & Scott, E. M. (2012). Quality of life is reduced in obese dogs but improves after successful weight loss. *Veterinary journal (London, England : 1997)*, 192(3), 428–434. <https://doi.org/10.1016/j.tvjl.2011.09.015>

pet's healthy weight with their vet yearly (Source: Association for Pet Obesity Prevention).

Research also shows that carbohydrates feed cancer cells, while dogs who are fed an extremely low-carb diet have successfully “starved” their cancer into remission⁹. With so many families impacted by pet cancer (remember: 6 million cancer diagnoses a year in dogs alone!), why isn't this more widely known?

The conversation is further complicated – if not downright discouraged – by some of the top influences in the pet food industry, specifically the American Association of Feed Control Officials (AAFCO).

AAFCO is a voluntary membership association founded in 1909 by state regulatory officials and pet food industry representatives to establish and promote uniform regulations for the proper labeling, sale, and distribution of animal feeds, including pet foods, to ensure consumer protection and the well-being of animals. (And we should note: these are important activities!) AAFCO's guidelines are not laws but serve as a model for states to adopt in their regulations, which most states do.

⁹ Lv M, Zhu X, Wang H, Wang F, Guan W (2014) Roles of Caloric Restriction, Ketogenic Diet and Intermittent Fasting during Initiation, Progression and Metastasis of Cancer in Animal Models: A Systematic Review and Meta-Analysis. *PLoS ONE* 9(12): e115147. <https://doi.org/10.1371/journal.pone.0115147>



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And that brings us back to our four-letter word, carbs.

Carbohydrates are one primary macronutrient found in dog food and are commonly derived from grains like corn, wheat, and rice, as well as potatoes and other starchy ingredients. Conveniently, these ingredients tend to be cheaper for companies producing pet food than meat, organs and bone. However, carbohydrates are not considered "essential nutrients" for dogs – and this means that AAFCO does not set specific standards or minimum requirements for them in complete and balanced dog food formulations.

This also means that pet food companies do not have to call out carbohydrate content (in technical terms, "Dietary Starch" and "Sugar") on packaging and, importantly, cannot make "low-carb" claims about the relative amount of carbohydrates in their formulas. It is illegal for us to market our products as "low-carb dog food", even though they are.

The result: pet parents who want to avoid feeding their dogs carb-heavy diets are at a significant disadvantage in decoding the actual nutritional content of a dog food. It also makes it easier for brands to disguise cheaply made, carb-laden formulas with healthy-sounding ingredients like sweet potatoes, brown rice, and peas. And this doesn't just happen in dry food – even fresh food options like gently cooked and low-fat raw can contain more carbohydrates than your dog metabolically needs.

While AAFCO recently published [new guidance](#) that could make it simpler for pet parents to understand the carbohydrate content in their dog food, the recommended timeline for individual state feed regulatory agencies to adopt and enforce this guidance is SIX years from the printed version of the organization's 2024 Official Publication.

So what can we do?

Carb-heavy diets are killing our pets, and we aren't talking about it enough. We refuse to accept that, and suspect that you do, too.

Join a growing movement of pet parents doing right by dog:

- Prioritize feeding your dog Metabolically Appropriate® food – low in carbohydrates, high in healthy fats and protein.
- Feed fresh foods.
- Tell other pet parents about the dangers of feeding their dog carb-heavy diets.
- Petition the Agriculture Department in your state to quickly adopt AAFCO's latest [Model Regulations for Pet Food and Specialty Pet Food](#).
- Petition the Agriculture Department in your state to support your right to access and small business' right to sell raw food for pets.

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