

Big dogs vs. small dogs: Which sizes face higher risks of which diseases?

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Large dog. Credit: Valeria Boltneva on Pexels

A study of more than 25,000 U.S. dogs and 238 breeds has linked dog size to varying patterns of risk for health conditions over the course of a dog's lifespan. Yunbi Nam of the University of Washington, U.S., and

colleagues present these findings in the open-access journal *PLOS ONE*.

On average, smaller dogs tend to live longer than larger dogs. Evidence suggests that larger dogs do not tend to have more [health conditions](#), but that dogs of different sizes may face different levels of risk for different conditions. However, more research is needed to clarify links between dog age, size, and [disease prevalence](#).

To deepen understanding, Nam and colleagues analyzed [survey data](#) on 27,541 dogs representing 238 breeds, as reported by dog owners participating in the ongoing Dog Aging Project.

Overall, larger dogs in the study were more likely to have faced certain types of health conditions at some point in their lives, including cancer, bone-related disease, gastrointestinal problems, ear/nose/throat issues, neurological and endocrine conditions, and [infectious diseases](#). Meanwhile, smaller dogs were more likely to have experienced ocular, cardiac, liver/pancreas and [respiratory diseases](#). History of kidney/urinary disease did not differ significantly for larger versus smaller dogs.

For many types of conditions—including cancer, ocular, cardiac, orthopedic, and ear/nose/throat conditions—different dog sizes were associated with differing patterns of risk over the course of a dog's lifespan.

The results held up even after the researchers statistically accounted for the dogs' sex, where they lived, and whether they were purebred or mixed-breed.

The researchers note that this study does not confirm any [causal relationship](#) between dog size, age, and disease. Still, the findings could help lead to deeper understanding of the types of conditions that may

underlie the lower lifespan of larger dogs. For instance, within the disease categories explored in this study, future research could home in on age and size patterns associated with specific conditions.

The authors add, "These results provide insights into the disease categories that may contribute to reduced lifespan in larger dogs and suggest multiple further avenues for further exploration."

More information: Dog size and patterns of disease history across the canine age spectrum: Results from the Dog Aging Project, *PLoS ONE* (2024). [DOI: 10.1371/journal.pone.0295840](https://doi.org/10.1371/journal.pone.0295840)

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