

# How AI could help prevent pet obesity

**A new partnership between Companion and the Association for Pet Obesity Prevention uses artificial intelligence to help veterinarians and pet owners manage pets' weight.**

Pet obesity is a pressing issue in the veterinary space, but it's difficult to diagnose with precision. A new partnership aims to help veterinarians make a clear diagnosis and enable easier conversations with pet owners.

The Association for Pet Obesity Prevention is teaming up with Companion, a startup that uses artificial intelligence to analyze pet health. Technology in development can use a camera—for example, on a smartphone or

in Companion's own device—along with AI-powered computer vision to more accurately determine whether the animal is overweight or has obesity.

Leaders on the new partnership hope this technology will make it radically easier to collect and track this key metric for animal health. By using machine learning, they hope to avoid missed diagnoses and help pet owners and veterinarians work together more easily to bring the pet to a healthy weight.

## Highlights:

- ➔ The Association for Pet Obesity Prevention and Companion are teaming up to develop an artificial intelligence tool that aims to address pet obesity.
- ➔ Through the partnership, pet owners and veterinarians will be able use a camera to help determine whether the animal is overweight or has obesity.
- ➔ While the software will initially be available on a device available from Companion, the partners plan to make it available for smartphones and tablets, both at home and in the clinic.



Fifty-nine percent of dogs and 61% of cats were classified as overweight or having obesity in 2022, according to APOP's recently released "**State of U.S. Pet Obesity**" report. This was up from numbers recorded in 2017 and 2018.

Right now, veterinarians use a tool called body condition scoring to determine how much excess body fat a cat or dog has. By looking at and feeling the animal, veterinarians decide whether it's overweight or has obesity.

But BCS is "entirely subjective," said Dr. Ernie Ward, founder and president of the Association for Pet Obesity Prevention. Veterinarians are trained to analyze body condition score, but ultimately, it still depends on the person making the diagnosis. Ward has

been looking for a way to take that subjectivity out of the process.

Companion has created software that can alert pet owners if their animal is trending overweight or has obesity. Right now at [joincompanion.com](https://joincompanion.com), pet owners can secure a reservation for the next available ship date of Companion units in August 2024. In addition to its other capabilities that focus on enrichment, training and behavior interactions with the pet, the device will be able to autonomously detect BCS daily and alert pet owners to unhealthy levels. From there, they can go to the veterinarian for confirmation and next steps.

The software has been trained to evaluate BCS in dogs, but developers plan to train it to evaluate cats too.

Companion's team plans to make the software available for smartphones and tablets as well. This could be used by veterinarians as a diagnostic tool in the clinic. Other companies in the pet health care space—for example, insurers—could also make the technology available on their own apps to make it easier for pet owners and veterinarians to track and improve animal health.

In analysis by APOP and Companion, the proof-of-concept software has correctly diagnosed 65% of dogs with obesity 100% of the time, or 100% of dogs with obesity 90% of the time. Officials note the software does this with 0.01% of the normal amount of data an AI program would typically use to learn.

"We're just scratching the surface of this technology," said John Honchariw, Companion's founder and CEO. As it's trained

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further using a bigger database of photos, and eventually videos, it will presumably be able to diagnose obesity more precisely. Additionally, its ability to analyze consumer-quality photos—at crooked angles and limited resolutions—makes it a more powerful and user-friendly tool.

Weighing pets is difficult, so it usually only happens once a year at the veterinary clinic, Ward said. Offering a product that allows pet owners to assess their pet's body condition at home could help spur early conversations with their veterinarian about dietary changes like reducing food intake.

When the technology advances, Ward and Honchariw envision it being used as part of the check-in process at the clinic. The veterinary team will be able to take a picture using a smartphone or tablet, and Companion's software will be able to compare the pet against previous photos and assess how its weight changes over time.

They also hope using this software will allow veterinarians and pet owners to work together rather than be at odds. Patient weight is a sensitive topic. Replacing human analysis with AI analysis may encourage clients to

readily accept the diagnosis and be more willing to think of solutions with the doctor.

The software "positions the vet as an ally in the fight against pet obesity rather than an adversary to the pet parent," Ward said.

He and Honchariw predict veterinarians will eventually be able to use the software to diagnose other conditions like diet and behavior changes. "We believe that most conditions of animal health can be detected somehow visually," Honchariw said, quoting Companion advisory board member Mike McFarland (who's also the chief medical officer at Zoetis). They see AI as a transformative influence on veterinary medicine. This partnership is just the beginning.

Right now, they're trying to raise awareness of the technology among veterinary teams. If veterinary professionals submit patient photos, Companion will be able to train its technology faster, creating a database that improves the tool's accuracy and makes it ready not only for pet owners but clinics too.

"We really see this as becoming a standard diagnostic tool that you would use during every exam," Ward said.