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Vitamin D levels predict survival chances for sick cats, study finds

Cats may hold vital clues about the health benefits of vitamin D, a study suggests.

Researchers found that higher levels of vitamin D are linked to better survival chances for hospitalised pet cats.

Cats could prove useful for investigating the complex link between vitamin D and a range of health problems that also affect people, the researchers say.

The findings may also help vets to give owners better advice about their pets' prognosis, according to researchers at the University of Edinburgh's Royal (Dick) School of Veterinary Studies.

Researchers examined blood samples from 99 pet cats that were admitted to the University's Small Animal Hospital with life-threatening conditions.

With the owners' permission, the team checked the levels of vitamin D in the cats' blood on admission.

They found that cats with higher levels of vitamin D in their blood were more likely to be alive 30 days after admission than those with the lowest levels.

This could help vets to predict which animals are more likely to survive their illness.

The study highlights the need to understand more about whether vitamin D influences the risk of cats developing a disease and how it impacts on the outcome of their illness, the researchers say.

Vitamin D has been linked to helping a range of health problems in people, including cancer, infections and multiple sclerosis.

It is found in oily fish, cheese and egg yolks and is available as a supplement from health food stores.

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Humans can also produce vitamin D in the skin after exposure to sunshine but cats can only obtain it from their food.

The research provides the foundations for studies to investigate whether adding vitamin D to hospitalised cats' diets improves their survival chances. The results of these studies could help to inform clinical trials of vitamin D supplements in people.

Dr Richard Mellanby, Head of Small Animal Medicine at the Royal (Dick) School of Veterinary Studies, said: "At the moment, it is difficult for veterinarians to offer accurate prognostic information to the owners of sick cats. Our study demonstrates that measuring a key vitamin D metabolite in the blood predicts disease outcome with a much greater degree of accuracy than many other many other widely used measures of disease severity.

"It is important to remember that too much vitamin D can be poisonous to cats. Most cat foods contain a standard amount of vitamin D and there is no need for owners to add supplements."

The study is published today in the journal *PLOS ONE*. It was funded by Petplan Charitable Trust. Dr Richard Mellanby is a Wellcome Trust Intermediate Clinical Fellow.

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The paper will be available online after the embargo lifts from:

<http://dx.plos.org/10.1371/journal.pone.0125997>