

Bisgaard and colleagues have found something quite substantial in the relationship between cats and genes, says Doctor Arne Høst, who lectures in childhood disease at the University of Southern Denmark. He also studies asthma at H.C. Andersen's Children's Hospital in Odense, Denmark, but was not involved in the study.

“It's a very thorough study and they have investigated many things, so it's a plausible connection. It's very exciting that they find this connection because other studies have struggled to conclude anything final,” says Høst.

“Now it looks like the effect is linked to a particular gene-variant, which goes to show just how complex the development of asthma and allergies are. It's not only about genes and the environment, but how the two interact, and there's so much that we still don't know,” he says.

How much exposure do you need?

Høst would like to see other studies confirm the results. As would Tove Fall, lecturer in epidemiology at Uppsala University, Sweden. She has previously studied the connection between animals and human disease in large register studies.

“The study is well-thought-out and the findings are very interesting. If they are confirmed by subsequent studies, then it would be interesting to figure out what kind of exposure to cats during childhood is needed to lower the risk of childhood asthma among bearers of the risk-variant,” writes Fall in an email to ScienceNordic's partner, Videnskab.dk.

Growing up with cats also has disadvantages

The new study does not show what it is about the cats, which help protect children against asthma.

An [earlier study](#) [8] from COPSAC showed that cats activate a particular gene in the body, which triggers eczema in children. Trials to deactivate the asthma gene, revealed that doing so can activate the eczema gene.

Another unresolved issue in the study is how cats actually influence our genes. And why there are no similar effects with dogs who also walk around on four legs and live in our homes?

For now, this is pure guess work.

Lead-author Jakob Stokholm suspects that it could be related to the bacteria that cats carry and perhaps fungi or viruses that they bring into the home, which can influence our immune system.

“This [research] is of course interesting to develop, because if we can explain these mechanisms, it opens up opportunities to isolate them and to protect against the disease,” says Stokholm, a post doc at COPSAC.

[Read more in the Danish version of this story on Videnskab.dk](#) [9]

 [Cats do not only protect against asthma, scientists speculate that they could also help fight obesity and diabetes. But cat ownership also comes with downsides. \(Photo: Shutterstock\)](#) [10]

 [Development of asthma in the group carrying gene variant TT \(left\) compared with other children. The solid line indicates children with high levels of cat allergens at home. \(Graph: COPSAC / Journal of Allergy and Clinical Immunology\).](#) [11]

 [Cats do not only protect against asthma, and scientists speculate that they could also help fight obesity and diabetes. But cat ownership also comes with downsides. \(Photo: Shutterstock\) \[12\]](#)

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[Cat exposure in early life decreases asthma risk from the 17q21 high-risk variant; Journal of Allergy and Clinical Immunology; <https://doi.org/10.1016/j.jaci.2017.07.044> \[6\]](#)

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November 7, 2017 - 07:57

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