

## Cat antigen in homes with and without cats may induce allergic symptoms

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Although Fel d 1, the major cat allergen, has been found in settled dust samples from homes both with and without cats, the clinical relevance of this allergen has never been studied. In this study we measured airborne concentrations of Fel d 1 in homes both with and without cats and then attempted to relate these levels to those obtained in our experimental cat challenge model to assess their clinical significance. In baseline samples we found measurable levels of airborne Fel d 1 in all 37 homes with cats (range, 1.8 to 578 ng/m<sup>3</sup>; median, 45.9 ng/m<sup>3</sup>) and in 10 of the 40 homes without cats (for detectable samples: range, 2.8 to 88.5 ng/m<sup>3</sup>; median, 17 ng/m<sup>3</sup>). **Fel d 1 was present in the settled dust of 38 of 40 homes without cats (range, 39 to 3750 ng/gm; median, 258 ng/gm)**, although these levels were only weakly predictive of airborne levels. **Repeat samples obtained weekly from 12 homes without cats yielded measurable airborne Fel d 1 in at least one of the four samples from all homes.** When compared with challenges performed in our cat room facility at low levels of airborne Fel d 1 (<500 ng/m<sup>3</sup>), these home levels are within the range capable of causing upper and lower respiratory symptoms in subjects allergic to cats. **We therefore conclude that the low level cat exposure that occurs in many homes without cats is capable of inducing symptoms in some patients who are sensitive to cats. The assessment of cat exposure should not be based solely on the presence or absence of a cat in the home.**

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