Castration of pets does not prevent allergy to pets

Cat allergen *Fel d* I is produced primarily by sebaceous glands in the skin, which are under hormonal control. Zielonka *et al.* [1] reported that castration of male cats was followed by a fall in *Fel d* I, and that subsequent treatment of the castrated cats with injected testosterone was followed by a return to normal *Fel d* I levels. The authors state that they 'do not know if the fall could be maintained over a prolonged period and therefore we can not give any documented advice about castration of domestic cats in managing cat allergy'.

If these changes are clinically relevant, male cats would be more allergenic than female cats, and non-neutered males more allergenic than castrated males. To help assess the clinical relevance of these findings, we surveyed all patients in our private allergy practice who were on allergen immunotherapy treatment for allergic rhinitis or allergic asthma with extracts of cat or dog dander.

All patients had positive skin-prick or intradermal skin-test reactions, at least equal in size to the histamine control, to the pet to which they were exposed at home. Patients had been placed on injection therapy only if they had a history of symptoms correlating with their pet exposure, and if they refused to fo ow advice to remove the pet from the home. All such patients were asked to list the number of pets at home, the sex of the pets, and whether or not the pets had been neutered.

Seventy-four patients had a total of 76 cats and 53 dogs. Only five of the 74 patients had pets which had not been neutered. Twenty-five male cats, 50 female cats, 23 male dogs and 26 female dogs had been neutered. One male cat and four male dogs had not been neutered.

Table 1.

	Cats	Dogs
Male — not neutered	1	4
Male — neutered	25	23
Female — not spayed	0	0
Female — spayed	50	26

Since only one of 76 cats in the homes of cat-allergic patients was a non-castrated male, this survey suggests that even if female or castrated male cats are less allergenic, this fact is of limited clinical relevance. At least in this patient population, the great majority of pet-allergic patients are not exposed to uncastrated male pets. Since these patients were symptomatic, it seems clear that female or castrated male pets produce sufficient allergen to provoke symptoms when sensitized patients live with them.

References

1 Zielonka TM, Charpin D, Berbis P, Luciani P, Casanova D, Vervloet D. Effects of castration and testosterone on Fel d I production by sebaceous glands of male cats: I — immunological assessment. Clin Exp Allergy 1994; 24:1169–73.

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Reply

We agree with the comments of Dr Miller *et al.* assuming from their experience that female or castrated male pets produce sufficient allergen to provoke symptoms when sensitized patients live with them.

What we do not know is if symptoms would be worse in presence of non-castrated males.

On another hand, even if castrated males produce less *Fel d* I allergen than non-castrated animals, mattresses, carpeted floors, soft toys, blankets can act as 'reservoirs' for *Fel d* I which can reach sufficient levels for initiating clinical symptoms.

At the present time, no definitive conclusions can be drawn and much work is needed for the understanding of the production, of the control, and of the role of *Fel d* I.

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