

Association of neutering with health and welfare of urban free-roaming cat population

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Introduction

- 'Trap-Neutering by gonadectomy-Return' (TNR) is currently becoming an accepted method for managing free-roaming cat populations, especially in human habitation.
- Data regarding its impact on cat health and welfare are limited.

Objectives

- To determine neutering effect on cat morbidity.
- To compare morbidity between adults to kittens.

Hypothesis

- Neutering has favorable effect on free-roaming cat body condition scoring (BCS) and health of the neutered cats themselves, as well as on the surrounded cats.
- Kittens have lower body condition scoring and higher morbidity in comparison to intact adults.

Methods

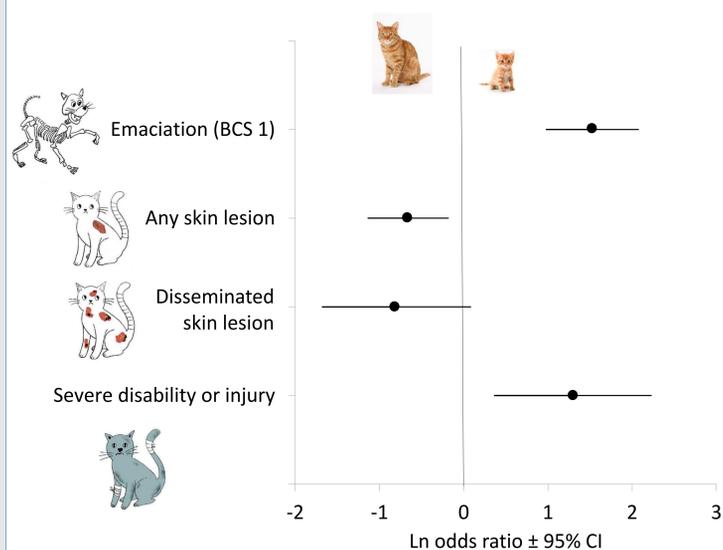
- We followed free-roaming cat populations in the city of Rishon LeZion, Israel, during 2012-2014.
- Age status (kitten/adult), contraceptive status (neutered/intact), sex, body-condition-scoring (BCS 1-5/5; 1= emaciation, 5= obesity), skin lesions, and external signs of disabilities and injuries were recorded and analyzed
- A mixed effects generalized linear model was fitted to each cat-condition

Results (n=4,615)

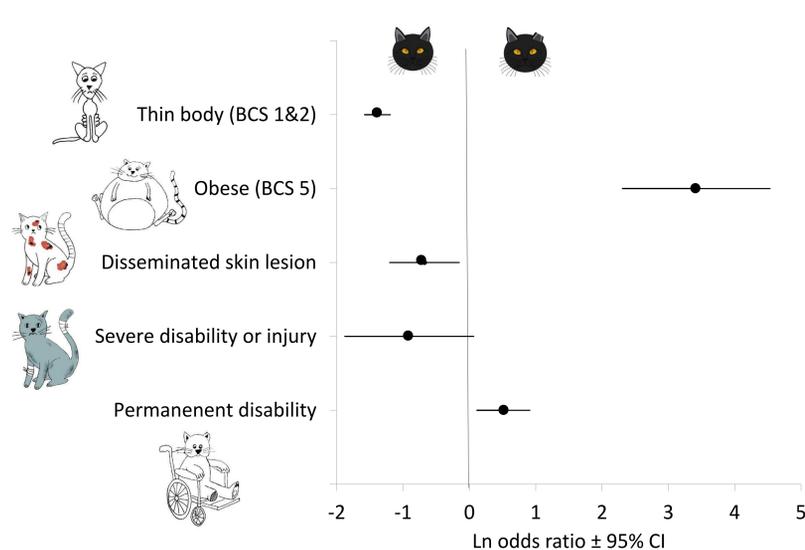
Neutered cat 

Intact cat 

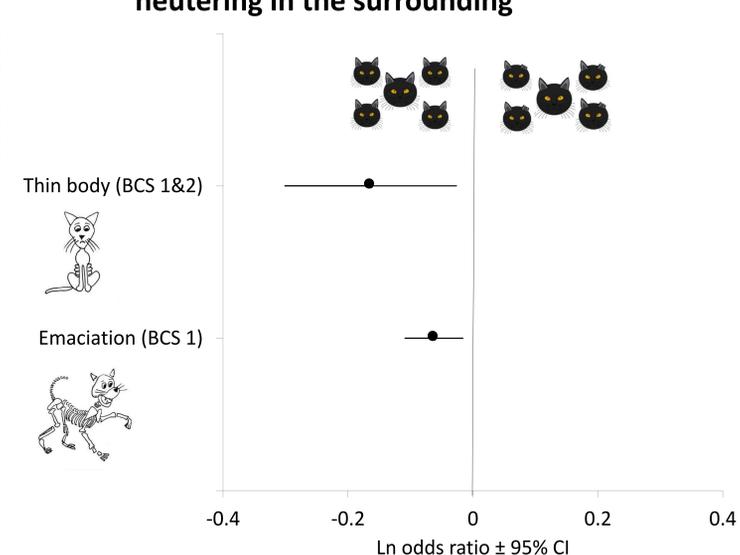
Association of cat condition with age



Association of cat condition with neutering status



Association of cat condition with proportion of neutering in the surrounding



Discussion

- The direct and indirect effects of neutering on cats' health is probably due to reducing competitive behavior of the neutered cats, which may enable other cats to gain additional access to vital resources.
- Neutering has a further indirect effect on cats' welfare by reducing the number of kittens which suffer from lower body condition scoring and higher morbidity.
- Higher prevalence of permanent disability among the neutered free-roaming cats might be attributed to their potentially prolonged lifespan.

Conclusions

- **Neutering has a favorable effect on free-roaming cats' health and welfare mainly in three ways:**
 1. **Direct influence on the neutered cats themselves**
 2. **Indirect effect on the general cat population**
 3. **Potential reduction of kitten numbers**