

## Will a hiding box provide stress reduction for shelter cats?

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### Abstract

Domestic cats (*Felis sylvestris catus*) can experience serious stress in shelters. Stressful experiences can have a major impact on the cats' welfare and may cause higher incidences of infectious diseases in the shelters due to raised cortisol levels causing immunodeficiency. These stress reducing effects are crucial in the first weeks after admission in which novelty stress is highest.

The aim of the present study was to determine the effect of a hiding box on the stress levels of newly arrived cats in a Dutch animal shelter. Therefore, 19 newly arrived shelter cats were randomly divided into two groups, with ( $N = 10$ ) and without a hiding box ( $N = 9$ ). To determine the stress levels of recently admitted cats, behavioural observations were done during a 14-day period according to the Kessler and Turner Cat-Stress-Score (CSS).

The main results of this study are that: (1) a significant difference was found between groups in the mean CSS on observation day 3 and 4, whereby the hiding box group had a lower mean CSS ( $p < 0.01$ ); (2) the mean CSS of the hiding box group showed minimal variance, meaning that the hiding box had its effect on most experimental cats, whereas, high variance could be seen in the group without hiding boxes; (3) the mean CSS for both groups was equal at day 14, but this level of recovery was already reached around day 3 in the hiding box group.

These findings suggest that cats provided with a hiding box were able to recover faster in their new environment compared to cats without a hiding box, as measured by the CCS. In summary, the hiding box appears to be an important enrichment for the cat to cope effectively with stressors in a new shelter environment the first weeks after arrival.