

Effect of dietary intake of L-Tryptophan supplementation on multi-housed cats presenting stress related behaviours

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Each day, cats are living in more enclosed environments with none or almost no access to the outside environment. In cats living in confinement, the lack of physical space, the absence of activity and environmental stimulus are the major causes of stress. This situation can be worse for those cats living in multi-housed environments. Suppression of the stress response and associated stereotyped behaviours may be beneficial in terms of animal welfare.

The aim of the current study is to evaluate the possible effect of L-Tryptophan (L-Trp) on the general behaviour of cats and the efficacy of short-term supplementation of L-Trp, specifically the therapeutic effectiveness on behavioural responses associated with anxiety and stress related disorders. A total of 25 multi-housed cats (mean=8 years, std=3,5), 10 males and 15 females, were observed. All animals went through a health check-up at the beginning and at the end of the study. Cats were observed during 3,5 months (2 weeks for habituation, 4 weeks without supplementation and 8 weeks with supplementation), 5 days *per week*. Each data recording session took 10 minutes of detailed observation, *per cat*, by a trained observer providing a continuous focal sample. This was a double blinded controlled study, where animals were randomly assigned to dietary supplementation of L-Trp starting at the 7th week (13 cats took L-Trp dietary supplementation and 12 took a placebo dietary supplementation). L-Trp daily dose was 12,5mg/kg administrated with daily meals. After L-Trp supplementation all the Stereotypy's ($p<0.01$), Vocalization ($p>0.05$), Agonistic Behaviour ($p<0.01$), Affiliative Behaviour ($p<0.01$), Exploring ($p<0.01$) and Sustaining ($p<0.01$) behaviours decreased. In the same way House Soiling, Scratching and Agonistic Interactions inside the group significantly decreased ($p<0.05$).

These results suggest that L-Trp supplementation had an effect in changing the frequency of the stress related behaviours, decreasing anxiety signals. Consequently L-Trp supplementation can be a very efficient tool to help treat some behavioural disorders in cats as part of behavioural therapy. As the L-Trp supplementation reduces some of the cat anxiety signs we conclude that this effect improves their welfare.