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Routine handling does not lead to chronic stress in captive green anole (*Anolis carolinensis*)

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Abstract

*Routine handling has been shown to affect stress levels in a variety of animal species. This could result in a general decrease in welfare and may confound the results of scientific experiments or observations on captive study animals. In reptiles, there seems to be variation in the effects of handling on stress levels. Furthermore, most studies on reptiles only look at the effect of handling in the short term. In this study we quantified the physiological and behavioural impact of being held, twice daily, for 1 min at a time over a three-week period on the green anole (*Anolis carolinensis*). Measurements were collected at the end of the three-week repeated handling period. Our results showed no effect of repeated handling on body mass, tail-base width, heterophil to lymphocyte ratios (H/L ratios), behaviour and faecal corticosterone metabolite (FCM) levels for both males and females in the experimental treatments ('handled', 'unhandled'). Our study animals did score very highly for several stress-indicating variables in the three weeks preceding the experiments — suggesting that they had experienced considerable stress during capture, transport and temporary housing in the pet store.*

Keywords: animal welfare, captivity, green anole, handling, reptiles, stress