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The effect of cage size on stress levels in captive green anole (Anolis carolinensis)

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Abstract

*Reptiles are often used as model species in scientific research and are popular in the pet trade, yet how they cope with captive conditions has not been well studied. Stress caused by captivity could affect the endocrinology, physiology and behaviour of animals, resulting in a general decrease in welfare and could confound the results of scientific experiments. One of the factors that could influence stress in a captive environment is the size of the cage. However, the effect of cage size on stress has rarely been investigated in reptiles. In this study, the effect of cage size on the behaviour, morphology and physiology of the green anole (*Anolis carolinensis*) was quantified. We were unable to find an effect of cage dimensions (range 0.05 to 0.2 m^3) on body mass, tail-base width, heterophil to lymphocyte ratios (H/L ratios), behaviour and faecal corticosterone metabolite (FCM) levels.*

Keywords: *animal welfare, cage size, captivity, green anole, reptiles, stress*