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Does ‘playtime’ reduce stimulus-seeking and other boredom-like behaviour in laboratory ferrets?

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Abstract

*Much environmental enrichment for laboratory animals is intended to enhance animal welfare and normalcy by providing stimulation to reduce ‘boredom’. Behavioural manifestations of boredom include restless sensation-seeking behaviours combined with indicators of sub-optimal arousal. Here, we explored whether these signs could be reduced by extra daily play opportunity in laboratory ferrets (*Mustela putorius furo*). Specifically, we hypothesised that playtime would reduce restlessness, aggression, sensation-seeking and awake drowsiness, even 24 h later in the home-cage. Female ferrets ($n = 14$) were group-housed in enriched multi-level cages. Playtime involved exploring a room containing a ball pool, paper bags, balls containing bells, and a familiar interactive human for 1 h. This was repeated on three consecutive mornings, and on the fourth, home-cage behaviour was compared between ferrets which had experienced the playtime treatment versus control cage-mates which had not. Their investigation of stimuli (positive = mouse odour or ball; ambiguous = empty bottle or tea-strainer; and negative = peppermint or bitter apple odour) was also recorded. We then swapped treatments, creating a paired experimental design. Ferrets under control conditions lay awake with their eyes open and screeched significantly more, but slept and sat/stood less, than following playtime. They also contacted negative and ambiguous stimuli for significantly longer under control conditions than following playtime; contact with positive stimuli showed no effects. Attempts to blind the observer to treatments were unsuccessful, so replication is required, but the findings suggest that playtime may have reduced both sub-optimal arousal and restless sensation-seeking behaviour, consistent with reducing boredom.*

Keywords: animal welfare, boredom, environmental enrichment, exploration, ferrets, laboratory animals