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Title: Effect of age and severity of cognitive dysfunction on spontaneous activity in pet dogs – Part 1: Locomotor and exploratory behavior.

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Abstract:

Age-related cognitive dysfunction syndrome (CDS) has been reported in dogs and it is considered a natural model for Alzheimer's disease in humans. Changes in spontaneous activity (including locomotor and exploratory behaviour) and social responsiveness have been related to the age and cognitive status of kennel-reared Beagle dogs. The aim of this study was to assess the influence of age and severity of CDS on locomotor and exploratory behaviour of privately owned dogs. This is the first part of a two-part report on spontaneous activity in pet dogs. An open-field (OF) test and a curiosity test were administered at baseline and 6 months later to young (1-4 years, n=9), middle-aged (5-8 years, n=9), cognitively unimpaired aged (≥ 9 years, n=31), and cognitively impaired aged (≥ 9 years, n=36) animals. Classification of cognitive status was carried out using an owner-based observational questionnaire, and in the cognitively impaired group, the dogs were categorised as having either mild or severe cognitive impairment. Dogs were recorded during sessions in the testing room and the video-recordings were subsequently analysed. The severity of CDS (but not age) influenced locomotion and exploratory behaviour so that the more severe the impairment, the higher the locomotor activity and frequency of corner-directed (aimless) behaviours, and the lower the frequency of door-aimed activities. Curiosity directed toward novel stimuli exhibited an age-dependent decline although severely affected animals displayed more sniffing episodes directed towards the objects. OF activity did not change after 6 months. Testing aged pet dogs for spontaneous behaviour might help to better characterise cognitively affected individuals.

Erratum: Erratum to “Effect of age and severity of cognitive dysfunction on spontaneous activity in pet dogs – Part 1: Locomotor and exploratory behavior” [The Veterinary Journal 194 (2013) 189–195]

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