Effects of husbandry and management systems on physiology and behaviour of farmed and laboratory rabbits

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Abstract

The major issues regarding the welfare of both farmed and laboratory rabbits are reviewed, according to husbandry and management systems. The main stressors that can affect welfare and homeostatic responses in rabbits are also reviewed. An overview of the most widespread housing systems for both farmed and laboratory rabbits is presented. The main problems related to housing and management are identified, in particular those related to individual and group housing, space requirements and group size, as well as human-animal interaction. The effects of psychological and physical stressors on physiology and behaviour are illustrated through examples in various rearing conditions. Psychological stressors include social stress and fear, while physical stressors include environmental variables such as housing system and climatic factors, i.e. heat. Welfare indicators are identified that can be monitored to determine the effects of individual and environmental variables on the animals' possible coping strategies. Physiological indicators include the neuro-endocrine and psycho-neuro-immuno-endocrine measurements, while behavioural indicators include the behavioural repertoire and responses to behavioural tests. Some possible ways to enhance welfare are indicated, such as enrichment of the environment and improved handling procedures.

Key words: Welfare, Physiology, Behaviour, Behavioural test, Coping strategy, Husbandry, Management, Handling, Environmental enrichment

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