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THE EFFECT OF EARLY PAINFUL EXPERIENCES ON SUBSEQUENT PAIN
SENSITIVITY IN LAMBS

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Abstract

There is evidence that painful events in early life can alter subsequent pain processing and sensitivity, at least in altricial species. However, it is not known whether similar effects occur in precocial species, such as lambs, which are relatively mature at birth. Lambs in New Zealand are routinely exposed to painful procedures like castration and tail docking at a young age. The possibility that these early procedures result in hypersensitivity to subsequent painful events is a serious welfare issue. The aim of this study was to assess the effect of early castration on the behavioural responses of lambs to subsequent tail docking. The effect of age at first treatment (castration or control handling) and age at docking were also assessed.

Lambs were castrated (C) or handled (H) at either 1 (Group 1, N=21; Group 2, N=27; Group 3, N=23; Group 4, N=24) or 21 (Group 5, N=26; Group 6, N=24) days of age and their behavioural responses to docking measured 3-6 weeks later. Differences between C and H lambs were evident before docking had taken place; C lambs walked backwards less frequently and spent less time standing unsteadily than H lambs. After docking, C lambs stamped their feet more frequently and spent less time lying laterally than H lambs. Age at first treatment was not found to have a significant effect on behaviour in response to docking. Interestingly, lambs docked at 42 days of age differed from those docked at 21 days of age in their response. Twenty-one-day old lambs displayed significantly higher frequencies and durations of a number of pain-related behaviours when compared to their 42 day old counterparts. Only one behaviour, unsteady standing, was performed for longer durations by the older lambs.

It can be concluded that castration does affect the behavioural response of lambs to subsequent docking and that age at docking is also a significant factor in this response. Further research is required to further clarify the magnitude of these effects.

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