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## Welfare implications of tail docking and castration in sheep

Dwyer CM 2008. The welfare of the neonatal lamb. *Small Ruminant Research* 76: 31-41.

Futro A, Masłowska K, Dwyer CM 2015. Ewes direct most maternal attention towards lambs that show the greatest pain-related behavioural responses. *PLoS ONE* 10(7): e0134024. doi:10.1371/journal.pone.0134024

Guesgen MJ, Beausoleil NJ, Minot EO, Stewart M, Jones G, Stafford KJ 2011. The effects of age and sex on pain sensitivity in young lambs. *Applied Animal Behaviour Science* 135: 51-56.

Guesgen MJ, Beausoleil NJ, Minot EO, Stewart M, Stafford KJ 2014. Social context and other factors influence the behavioural expression of pain by lambs. *Applied Animal Behaviour Science* 159: 41-49.

Kent JE, Jackson RE, Molony V, Hoise BD 2000. Effects of acute pain reduction methods on the chronic inflammatory lesions and behavior of lambs castrated and tail docked with rubber rings at less than two days of age. *The Veterinary Journal* 160: 35-41.

Kent JE, Molony V, Robertson IS, 1993. Changes in plasma cortisol concentrations in lambs of three ages after three methods of castration and tail docking. *Res Vet Sci* 55: 246-251.

Marini D, Colditz IG, Hinch G, Petherick JC, Lee C 2017. Self-administration by consumption of flunixin in feed alleviates the pain and inflammation associated with castration and tail docking of lambs. *Applied Animal Behaviour Science* 188: 26-33.

McCracken L, Waran N, Mitchinson S, Johnson CB 2010. Effect of age at castration on behavioural responses to subsequent tail docking in lambs. *Veterinary Anaesthesia and Analgesia* 37: 375-381.

Paull DR, Small AH, Lee C, Palladin P, Colditz IG 2012. Evaluating a novel analgesic strategy for ring castration of ram lambs. *Veterinary Anaesthesia and Analgesia* 39: 539-549.

Rault J-L, Lay Jr DC, Marchant-Forde JN, 2011. Castration induced pain in pigs and other livestock. *Applied Animal Behaviour Science* 135: 214-225.

Small AH, Belson S, Holm M, Colditz IG 2014. Efficacy of a buccal meloxicam formulation for pain relief in Merino lambs undergoing knife castration and tail docking in a randomized field trial. *Australian Veterinary Journal* 92: 381-388.

Stewart M, Beausoleil NJ, Johnson CB, Webster JR, Schütz KE, Cox N, Stafford KJ 2014. Do rubber rings coated with lignocaine reduce the pain associated with ring castration of lambs? *Applied Animal Behaviour Science* 160: 56-63.

Sutherland MA, Tucker CB, 2011. The long and short of it: A review of tail docking in farm animals. *Applied Animal Behaviour Science* 135: 179-191.

Tellam RL, Bowles VM 1997. Control of blowfly strike in sheep: current strategies and future prospects. *International Journal for Parasitology* 27: 261-273