

Dr Craig Johnson, Massey University, Institute of Veterinary Animal and Biomedical Sciences

There are no scientific studies that have been carried out in dogs about whether pups perceive pain at a very young age. In other mammalian species the perception of pain develops from birth onwards and is present by different ages in different species (references below).

It would appear that animals subjected to painful stimuli prior to their ability to consciously perceive them develop a long-lasting hyperalgesia (an increased sensitivity to pain). We don't know how long lasting, possibly lifelong. This has now been demonstrated in lambs for at least a month¹ and people for at least 16 years². Other aspects of mental health, such as depression and psychoses may also be associated with early noxious stimulation in humans².

References

1. L McCracken, N Waran, S Mitchinson and CB Johnson (2010). Effect of age at castration on behavioural response to subsequent tail docking in lambs. *Veterinary Anaesthesia and Analgesia* 37 375-381
2. Grunnau (2000). Long-term consequences of pain in human neonates. In: Pain in neonates. Eds KJS Anand, BJ Stevens and PJ McGrath. Elsevier, Amsterdam. 55-76

Other references

TJ Diesch, DJ Mellor, CB Johnson and RG Lentle (2010). Developmental changes in the electroencephalogram and responses to a noxious stimulus in anaesthetised tammar wallaby joeys (*Macropus eugenii eugenii*). *Laboratory Animals* 44 79-87

TJ Diesch, DJ Mellor, CB Johnson and RG Lentle (2009). Electroencephalographic responses to tail clamping in anaesthetised rat pups. *Laboratory Animals* 43 224-231

CB Johnson, S Sylvester, K Stafford, S Mitchinson, R Ward and D Mellor (2009). Effects of age on the electroencephalographic response to castration in lambs anaesthetised using halothane in oxygen from birth to six weeks old. *Veterinary Anaesthesia and Analgesia* 36 273-279