

# Analgesia in pet rabbits: a survey study on how pain is assessed and ameliorated by veterinary surgeons

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## Introduction

In the past 20 years, two studies were published on the use of perioperative analgesia in small mammals. These studies reported limited use of analgesics in rabbits, with the difficulty of recognising pain in rabbits and unclear protocols on the most effective pain management for this species being suggested as explanations for the infrequent administration of analgesics. However, they also suggested that the use of analgesics in rabbits was increasing over time.

As no follow-up studies have been conducted since 2007, it is unknown if analgesia use in rabbits has further increased in the intervening years. This study aimed to address this knowledge gap and shed light on how pain is currently assessed and ameliorated in rabbits undergoing veterinary treatment.

## Approach

An online survey was developed and advertised at national and international veterinary conferences, in veterinary publications and on social media.

Respondents were asked to provide demographic information, including the number of rabbits they treat monthly. They were also asked to detail what they thought the most common clinical signs of pain in rabbits were, how confident they felt recognising pain in rabbits and how painful they thought a range of common surgical procedures were. In addition, they were asked to provide information regarding the drugs and protocols they prescribed for rabbits during the perioperative period.

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## KEY FINDINGS

- In total, 94.3 per cent of respondents routinely administered NSAIDs to rabbits undergoing surgical procedures, with 70.3 per cent routinely administering a multimodal analgesia regimen.
- Buprenorphine and meloxicam were the most common analgesic drugs prescribed, although dosages varied widely and, in some cases, were subtherapeutic.
- The majority of respondents prescribed postoperative analgesia for two to four days for those procedures considered less painful, such as castration and ovariohysterectomy, and between four and seven days for those considered more painful, such as orthopaedic surgeries.

Spearman's rank correlation was then used to evaluate the effects that respondents' demographics had on their approach to pain assessment and amelioration in rabbits.

## Results

A total of 350 usable responses were received, of which 88 per cent were from the UK, 8 per cent were from the rest of Europe and 5 per cent were from outside Europe. Overall, 6 per cent of respondents reported they were very confident in recognising signs of pain in rabbits, 64 per cent were fairly confident and 29 per cent were not very confident.

Confidence in recognising pain in rabbits was weakly correlated with the number of rabbits treated per month ( $r_s=0.23$ ,  $P=0.0001$ ) and the frequency with which a pain scale was used ( $r_s=0.118$ ,  $P=0.027$ ).

However, 77.1 per cent of respondents did not use a pain scale in rabbits. Instead, they relied on physiological and behavioural indicators, with decreased food intake (63.7 per cent), abnormal posturing (43.7 per cent) and grinding

teeth (41.4 per cent) being considered the three most reliable indicators.

In total, 94.3 per cent of respondents routinely administered NSAIDs to rabbits undergoing surgical procedures such as neutering, 71.4 per cent administered an opioid and 70.3 per cent routinely administered a multimodal analgesia regimen. Buprenorphine was the most commonly prescribed opioid and meloxicam was the most commonly prescribed NSAID. However, the dosage of meloxicam prescribed by the respondents varied widely, with the majority reporting administering meloxicam at a dosage of 0.6 mg/kg.

The length of the analgesic treatment course prescribed at discharge was two to four days for those procedures considered less painful, such as castration and ovariohysterectomy, and between four and seven days for those considered more painful, such as orthopaedic surgeries.

## Interpretation

In this study, 94 per cent of respondents reported prescribing analgesia to rabbits during routine surgical procedures, which is an increase compared with previous studies. The majority of the respondents reported administering meloxicam at the recommended minimum dosage of 0.6 mg/kg. However, many vets appear to be prescribing subtherapeutic doses.

The demographic data suggest that vets with more experience in treating rabbits were more likely to respond to the survey, and, as such, the findings may not be representative. In addition, the majority of the responses were from the UK, so caution should be used when extrapolating the findings more widely.

## Significance of findings

The findings of this study indicate that the use of analgesia in rabbits has improved over recent years, with multimodal analgesia regimens now common practice. However, the continuing use of subtherapeutic dosages of meloxicam suggests that further education of vets is needed to improve rabbit welfare.