

# Cats and dogs suffer from post operative stress

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Surgery is regularly carried out on cats and dogs, but up until now little has been known about the surgical stress response in these animals.

Dogs and cats that are sterilised or castrated develop a stress response: inflammatory changes and an increased tendency to coagulation after the operation.

An injection of local anaesthetic into the testicles of male cats lead to reduced stress response during the operation.

However, the postoperative stress response in cats was not affected by the use of local anaesthetic. Similarly, the choice of sterilisation method did not affect the response in bitches.

Elena R. Moldal has studied stress response development after routine surgical operations on cats and dogs.

She is a doctorate at the Norwegian School of Veterinary Science and has focused on changes in physiological parameters during the operation and also on changes in various inflammation markers and in coagulation parameters after the operation.

## 81 sterilised animals

Moldal's research included two studies involving 42 bitches and 39 male cats.

In the first study, the dogs were divided into two groups, of which the bitches in the first group only had their ovaries removed, while the second group had both their womb and ovaries removed.

In the second study, the male cats were divided into two groups and both groups were given a full anaesthetic, but the cats in one group were also given a local anaesthetic in their testicles.

Based on the results of the research, the use of local anaesthetic, with Lidocaine as a supplement to a general anaesthetic, can be recommended as a better painkiller for cats during the operation.

The postoperative stress response was the same in the bitches, whether only the ovaries or both the ovaries and womb were removed. Neither was there any difference in response between the cats that were given a general anaesthetic and those that were given a local anaesthetic in addition.

Both thromboelastography and the analysis of heart rate variability are useful tools for studying operative stress response in cats and dogs.

The results of this doctoral project can be used to conduct further experiments on the complications that can arise after cats and dogs undergo surgery.

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 [Elena R. Moldal has examined 81 animals for post operative stress \(Photo: NVH\) \[6\]](#)  
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