

# Diagnosis and treatment now possible for osteoarthritic cats

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Scientists at the University of Montreal's Quebec Research Group in Animal Pharmacology have found a way to recognize and treat osteoarthritis in cats -- a condition that the owner might not notice and that can make even petting painful. Credit: GREPAQ, Université de Montréal

(Phys.org)—Scientists at the University of Montreal's Quebec Research Group in Animal Pharmacology have found a way to recognize and treat osteoarthritis in cats – a condition that the owner might not notice and that can make even petting painful.

"[Osteoarthritis](#) frequently affects [cats](#)' elbows, backs and hips and joints in the hind limbs, and its prevalence increases dramatically with age. More than 80 % of cats older than 11 years old have it," explained lead author Eric Troncy of the university's Faculty of Veterinary Medicine. "Despite the fact that cats are the most popular pet in North America, nobody had found a way to easily diagnose and treat cat osteoarthritis. We used our knowledge of cat behaviour and worked with experts in human osteoarthritis to develop a diagnosis tool and test an effective medication: meloxicam." Osteoarthritis induces [chronic pain](#) that results in a decrease in cat's daily activity, a reluctance to jump and other behaviours that owners may notice.

The researchers examined 120 cats and found that 39 were suffering from osteoarthritis. They established an evaluation chart for measuring the cats' pain by looking at their kinetic gait analysis, which reveals impairment in their limbs, their daily activity as recorded by an [accelerometer](#), and how sensitive the cat is to touch by testing what level of force will cause the cat to withdraw its paw.

Once the researchers had standardized their evaluation tools, they proceeded to the treatment part of the study. For 74 days, a control group was fed a placebo while the others were fed different dosages of meloxicam. Meloxicam is an anti-[inflammatory drug](#) that is already used in the treatment of other animals. "Our study demonstrated that daily oral meloxicam administration over four weeks provided various levels of pain relief, depending on the amount of the drug the cat was given. Cats that were in treated with the high dosage continued to enjoy pain relief for five weeks after dosage stopped. None of the cats had any side-effects," Professor Troncy said. "As expected, the drug unfortunately does not appear to reduce pain associated with touch, such as stroking – the same flawing occurs in hypersensitive osteoarthritic people treated with anti-inflammatory drugs."

The study opens a range of possibilities for the application of the findings. "The touch hypersensitivity occurrence rate of 30% in our osteoarthritic cats sample is quite similar to what is reported in osteoarthritis-affected human beings. In pain research and development, we have so desperately looked for validated translational experimental models, when they could be here, in front of us, with natural diseases in pet animals," Troncy said.

Nevertheless, the cats were able to regain the rest of their normal life. "Unalleviated chronic pain induces functional limitations, contributes to behaviour troubles and loss of the human-animal bond leading potentially to pet euthanasia or surrender," Troncy explained. "The development of adapted therapy protocols to correctly treat arthritis associated chronic pain will provide a better quality of life particularly in older cats and will in turn have a direct impact on owners, as their cat will be more active and sociable." The researchers will now start looking at how brain scans may further improve our understanding of pain in cats, particularly with regards to the neurophysiological hypersensitive process.v

Meloxicam will be considered for use in cats by the Europe Medicines Agency on April, 2013.

**More information:** *Research in Veterinary Science* February 13, 2013. Moreau M, et al. [doi: 10.1016/j.rvsc.2013.01.020](https://doi.org/10.1016/j.rvsc.2013.01.020)

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