

Metacam® 

PAIN COMES IN MANY SIZES.
SO DOES RELIEF.



**Trust METACAM®— effective
anti-inflammatory pain relief
for dogs and cats of all sizes.**

METACAM® TRUSTED RELIEF. FOR PETS BIG AND SMALL.



Metacam® 

The dependable choice for anti-inflammatory pain relief

As the original meloxicam, METACAM® has been trusted for over 25 years to provide anti-inflammatory pain relief for pets that are big, little or somewhere in the middle. Veterinarians and pet owners can depend on METACAM® because:



METACAM® is proven

- More published clinical studies than any other non-steroidal anti-inflammatory drug (NSAID)¹⁻⁹
- Provides round-the-clock relief at the site of inflammation^{1,10}
- Improves pain, mobility and quality of life in dogs and cats with osteoarthritis⁴⁻⁹
- Efficacious when dose is reduced using titration to the lowest effective dose—considered good clinical practice for chronic pain management^{7,11-16}
- Safe for long-term use at an efficacious low dose in well-hydrated cats with osteoarthritis and non-proteinuric chronic kidney disease (CKD)^{7,17,18,*}
- Highly palatable (92% of dogs and >94% cats)—supporting ease of administration and pet owner compliance⁶⁻⁸



METACAM® is precise

- METACAM® syringes facilitate accurate dosing to 0.5 kg in cats and small dogs and to 1 kg in medium and large dogs
- Unlike some generics, METACAM® oral suspensions are micro-ionised—suspensions remain homogenous, facilitating consistently accurate dosing

Meloxicam is recommended by experts for use in a wide range of exotic pets.¹⁹ METACAM® is licensed for dogs and cats.¹



METACAM® is flexible

- Licensed for more species than other NSAIDs:
 - METACAM® is licensed for dogs and cats¹
- Licensed for more indications than other NSAIDs:
 - Acute indications for soft tissue surgery, orthopaedic surgery and acute musculoskeletal disease (e.g., trauma)¹
 - Long-term indication for chronic musculoskeletal disease (e.g., osteoarthritis)^{1†}
- Available in more formulations than other NSAIDs:
 - Begin treatment immediately in the clinic, if needed, with METACAM® injectable
 - Continue treatment at home with METACAM® oral suspension for easy, accurate titration to the lowest effective dose^{7,11-13}



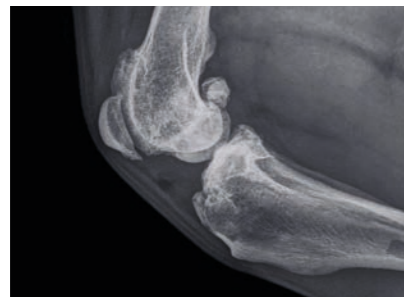
*As METACAM® may increase UP:C in CKD,²⁰ UP:C should be monitored in cats with osteoarthritis and concurrent CKD.

†Like other NSAIDs, METACAM® should not be used concomitantly with corticosteroids or other NSAIDs and should not be used in pregnant or lactating animals or patients suffering from gastrointestinal irritation or bleeding, haemorrhage, hypovolaemia or dehydration.¹

MANAGING OSTEOARTHRITIS. SO MUCH MORE THAN JUST PAIN RELIEF.



Inflammation plays a critical role in the development and progression of osteoarthritis



Osteoarthritis in dogs and cats is a dynamic, inflammatory joint disease:

- Characterised by synovitis, cartilage degeneration, bone remodelling and thickening of the joint capsule
- Resulting in fluctuating levels of pain and reduced mobility²¹

Osteoarthritis requires anti-inflammatory pain relief

The goal of osteoarthritis management is to reduce pain and inflammation, increase mobility and slow progression of disease.²¹

As chronic low-grade inflammation is a major driver of ongoing joint degeneration,²² NSAIDs are the foundation of osteoarthritis management by¹⁶:



Relieving pain



Reducing inflammation



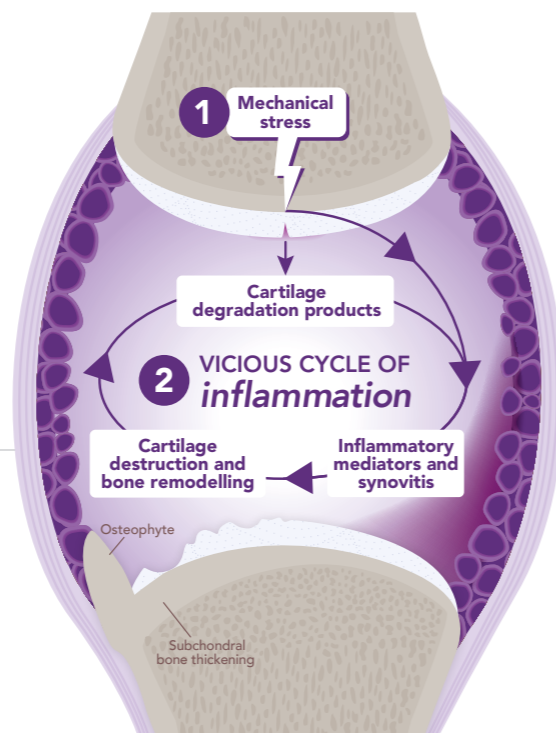
Improving mobility

2 FACTORS

ARE CENTRAL TO THE PATHOGENESIS OF OSTEOARTHRITIS²¹:

1 Mechanical stress—joint injury, conformation issue or overuse

2 A perpetuating vicious cycle of inflammation resulting in progressive cartilage destruction and bone remodelling



(1) Mechanical stress results in (2) the release of inflammatory mediators from bone, cartilage and synovial cells. This induces synovitis and further amplification of the inflammatory response, resulting in progressive cartilage destruction and bone remodelling. Ongoing release of cartilage degradation products leads to a vicious cycle of inflammation.



METACAM® reduces joint inflammation— a prerequisite to slowing osteoarthritis progression.^{23,24}

TREATING OSTEOARTHRITIS IN CATS. ENHANCING QUALITY OF LIFE.



Cats with osteoarthritis need anti-inflammatory pain relief

- Osteoarthritis in cats is more common than owners realise as the signs can be subtle^{16,25}
- In a study of 100 cats over 6 years of age, 61% had radiographic signs of osteoarthritis but only 13% were reported lame by their owners²⁵

To aid discussion with cat owners, we have developed the **7 Signs of Osteoarthritis in Cats** to showcase changes in behaviour and mobility.

Cats with comorbidities need anti-inflammatory pain relief too

- Osteoarthritis and CKD are common comorbidities in elderly cats¹⁴
- Concern about NSAID use in cats with concurrent CKD means some osteoarthritic cats do not receive anti-inflammatory pain relief¹⁴
- Experts recommend titrating METACAM[®] to the lowest effective dose in cats with osteoarthritis and concurrent CKD¹⁴

Importantly, using METACAM[®] at an efficacious low dose to treat osteoarthritis in cats with concurrent CKD:



Does not accelerate CKD^{7,17}

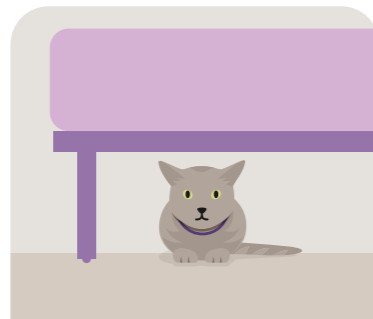


Does not reduce lifespan¹⁸



Improves mobility and quality of life^{7,18}

SIGNS OF OSTEOARTHRITIS IN CATS



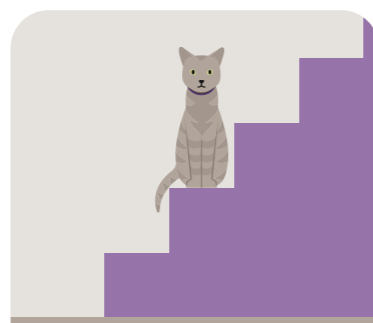
Change of temperament



Sleeping more and stiff after waking



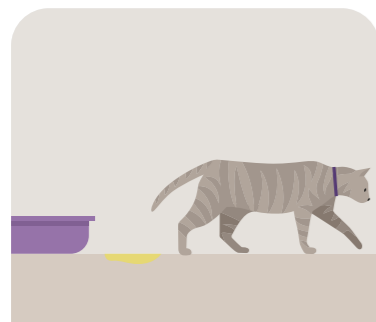
Reduced jumping ability



Difficulty with stairs



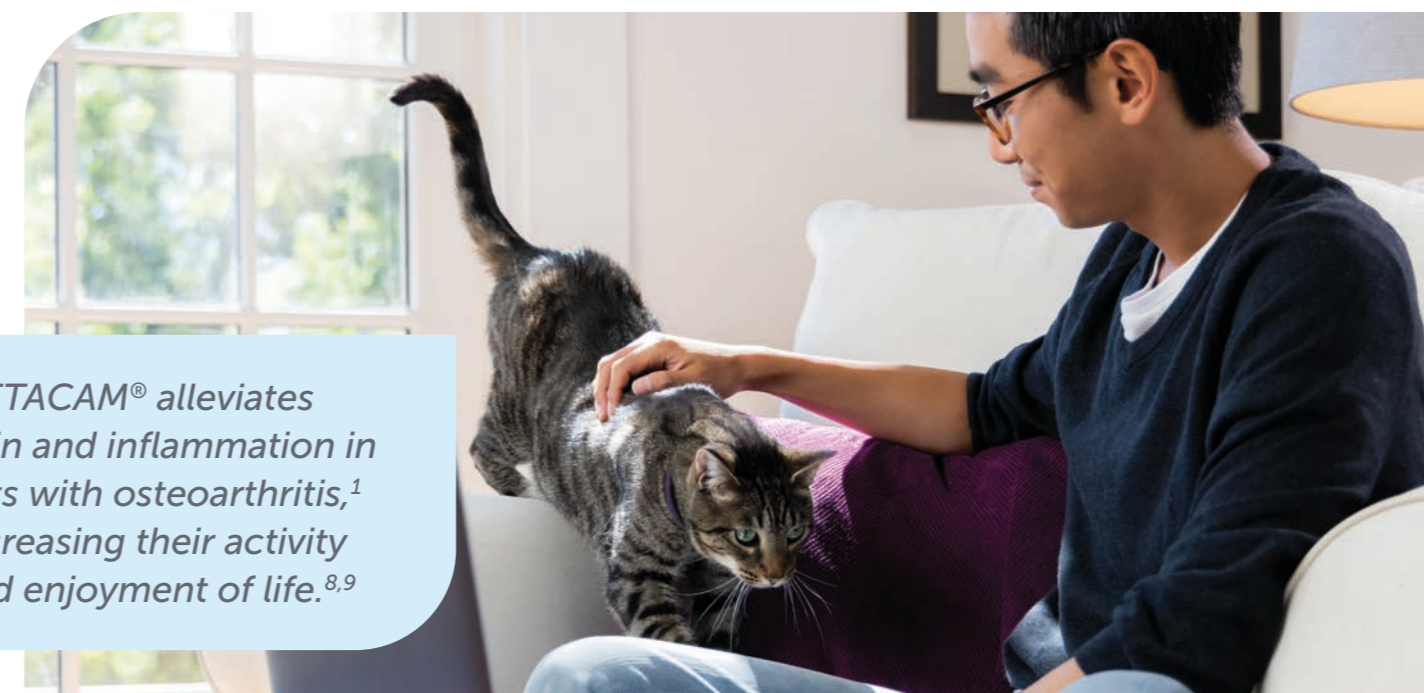
Grooming less



Inappropriate toileting



Loss of appetite



METACAM[®] alleviates pain and inflammation in cats with osteoarthritis,¹ increasing their activity and enjoyment of life.^{8,9}

METACAM[®] is safe for use in well-hydrated cats with osteoarthritis and non-proteinuric CKD, provided UP:C is monitored.^{2,17,18} The use of METACAM[®] in cats with proteinuric CKD should be on a case-by-case basis, weighing the potential risk of increasing proteinuria against the known quality of life benefits.²⁰

METACAM® LOWEST EFFECTIVE DOSE. FOR THE OPTIMAL BALANCE.



The lowest effective dose is recommended by experts

For the optimal balance of efficacy and safety, experts recommend using the lowest NSAID dose that is effective in controlling pain and inflammation in both dogs and cats.¹⁴⁻¹⁶ As osteoarthritis is a fluctuating condition, the lowest effective dose may vary over time.



Weight-bearing continues to improve in dogs with osteoarthritis while the METACAM® dose is titrated to the lowest effective dose.¹¹⁻¹³



85% of cat owners assess efficacy as good or excellent using the lowest effective dose of METACAM®.⁷



How to titrate METACAM® to the lowest effective dose

To assist you in stabilising your patients on the lowest effective dose of METACAM® oral suspension, the titration schedule below has been updated in line with best clinical practice.

METACAM® LOWEST EFFECTIVE DOSE TITRATION SCHEDULE



Initiate therapy with the oral loading dose for long-term treatment (dogs—0.2 mg/kg, cats—0.1 mg/kg) on the first day, followed by a maintenance dose (dogs—0.1 mg/kg, cats—0.05 mg/kg).



Evaluate the clinical response to therapy after at least 14 days on the maintenance dose.



If the patient is pain-free, use the METACAM® Lowest Effective Dose Calculator to reduce the dose in 10% increments no more frequently than weekly.



Adjust to the lowest effective dose, based on regular pain assessment.

Determining the lowest effective dose

Maintain the patient long-term at the lowest dose that controls pain and inflammation. If clinical signs reappear, return to the previous dose in the titration schedule. It is recommended that the long-term dose is not lower than 50% of the maintenance dose.

Write the daily doses to be given until the next recheck consultation in the patient's home monitoring diary.

WORKING TOGETHER. FOR THE HIGHEST LEVEL OF CARE.



Owner engagement is key to ensuring the best possible care

Pet owners have an essential role to play in helping manage their pet's osteoarthritis and their **active participation** in an integrated care plan is vital to its success.



Place importance on the process of 'onboarding' the pet owner^{16,26}:

- Managing pain and inflammation in clinical practice is a team effort, and the pet owner plays an integral role on the team
- It is important that pet owners understand what osteoarthritis is and all the things they can do to help their pet



Agree key individualised management objectives with the owner²⁶:

- Examples include:
 - **DOGS**—ability to walk further or climb into the car more easily
 - **CATS**—ability to jump onto furniture or use litter tray
- Develop a plan to achieve these objectives



Integrated care for a better quality of life

While METACAM[®] is the foundation of osteoarthritis management, simple changes to the patient's lifestyle and environment can make a significant difference to their mobility.²⁶ To support your discussion with pet owners, we have created the **Osteoarthritis 5-Point Integrated Care Plan** for dogs and cats. This consists of:

1 METACAM[®]



For proven, precise and flexible dosing.

2 DIET



Obesity is a chronic pro-inflammatory condition that increases risk of osteoarthritis development and mechanical stress through the joint—weight loss of as little as 6.1% improves weight-bearing in osteoarthritis.^{16,27,28}

High-protein, low-energy diets help with weight loss and promote muscle regeneration.²⁹

3 EXERCISE AND REHABILITATION



Exercise leads to faster weight loss than diet alone, maintains lean muscle mass and improves mobility.²⁷

Physical rehabilitation aims to restore musculoskeletal strength and function, and reduce pain. It usually involves exercise, joint mobilisation and massage.¹⁶

4 ENVIRONMENTAL MODIFICATION



Simple modifications around the home can aid a pet's mobility and improve their welfare²⁶:

FOR DOGS—e.g., a heavy rug on a slippery floor, a low bed without sides and a ramp to access the car.

FOR CATS—e.g., steps to their favourite spot and a litter tray with low sides.

5 MONITORING



AT HOME: Empower owners to monitor their pet's progress in a home monitoring diary to improve clinical outcomes for their pet.²⁶

IN THE CLINIC: Changes in the integrated care plan should be based on recorded behaviour changes and clinical assessment of posture, gait, muscle mass and joint mobilisation.¹⁶

Owner involvement is crucial to the successful management of osteoarthritis.²⁶



Veterinarians and pet owners can depend on METACAM® — effective anti-inflammatory pain relief for

DOGS AND CATS OF ALL SIZES.



▶ Talk to your Boehringer Ingelheim sales representative for more information and ongoing support.

References: 1. METACAM Summary of Product Characteristics (SPC). European Medicines Agency website. Available at: https://www.ema.europa.eu/en/documents/product-information/metacam-epar-product-information_en.pdf. Accessed December 29, 2020. 2. Höhner, F. Safety and efficacy of Meloxicam (Metacam®) for the use as perioperative analgesic in 3714 dogs. *Prakt Tierarzt*. 2004;85:328–334. 3. Slingsby LS, Waterman-Pearson AE. Comparison between meloxicam and carprofen for postoperative analgesia after feline ovariohysterectomy. *J Small Anim Pract*. 2002;43:286–289. 4. Doig PA, Purbrick KA, Hare JE, McKeown DB. Clinical efficacy and tolerance of meloxicam in dogs with chronic osteoarthritis. *Can Vet J*. 2000;41:296–300. 5. Peterson KD, Keefe TJ. Effects of meloxicam on severity of lameness and other clinical signs of osteoarthritis in dogs. *J Am Vet Med Assoc*. 2004;225:1056–1060. 6. Moreau M, Dupuis J, Bonneau NH, Desnoyers M. Clinical evaluation of a nutraceutical, carprofen and meloxicam for the treatment of dogs with osteoarthritis. *Vet Rec*. 2003;152:323–329. 7. Gunew MN, Menrath VH, Marshall RD. Long-term safety, efficacy and palatability of oral meloxicam at 0.01–0.03 mg/kg for treatment of osteoarthritic pain in cats. *J Feline Med Surg*. 2008;10:235–241. 8. Clarke SP, Bennett D. Feline osteoarthritis: a prospective study of 28 cases. *J Small Anim Pract*. 2006;47:439–445. 9. Lascelles BD, Hansen BD, Roe S, et al. Evaluation of client-specific outcome measures and activity monitoring to measure pain relief in cats with osteoarthritis. *J Vet Intern Med*. 2007;21:410–416. 10. Johnston L, Narbe R. Preferential accumulation of meloxicam in inflamed synovial joints of dogs. *Vet Rec*. 2012;170:207. 11. Huneault L, Moreau M, Troncy E. A pilot study of long-term, lower dose meloxicam therapy in osteoarthritic dogs. Proceedings of the 32nd World Congress of the World Small Animal Veterinary Association; August 19–23, 2007; Sydney, Australia. 12. Walton MB, Cowderoy EC, Wustefeld-Janssens B, et al. Mavacoxib and meloxicam for canine osteoarthritis a randomised clinical comparator trial. *Vet Rec*. 2014;175:280. 13. Wernham BG, Trumpatori B, Hash J, et al. Dose reduction of meloxicam in dogs with osteoarthritis-associated pain and impaired mobility. *J Vet Intern Med*. 2011;25:1298–1305. 14. Bennett D, Zainal Ariffin SM, Johnston P. Osteoarthritis in the cat: 2. How should it be managed and treated? *J Feline Med Surg*. 2012;14:76–84. 15. Sparkes AH, Heiene R, Lascelles BD, et al. ISFM and AAEP consensus guidelines: long-term use of NSAIDs in cats. *J Feline Med Surg*. 2010;12:521–538. 16. Epstein ME, Rodanm I, Griffenhagen G, et al. 2015 AAHA/AAFP pain management guidelines for dogs and cats. *J Feline Med Surg*. 2015;17:251–272. 17. Gowan RA, Lingard AE, Johnston L, Stansen W, Brown SA, Malik R. Retrospective case-control study of the effects of long-term dosing with meloxicam on renal function in aged cats with degenerative joint disease. *J Feline Med Surg*. 2011;13:752–761. 18. Gowan RA, Baral RM, Lingard AE, et al. A retrospective analysis of the effects of meloxicam on the longevity of aged cats with and without overt chronic kidney disease. *J Feline Med Surg*. 2012;14:876–881. 19. Dutton MA, Helmer P, Kolmstetter C, Lavac F, Mackensen C, Orcutt, C. The ethics of exotic animal analgesia. *J Avian Med Surg*. 2010;24:72–76. 20. KuKanich K, George C, Roush JK, et al. Effects of low-dose meloxicam in cats with chronic kidney disease. *J Feline Med Surg*. Published online: June 29, 2020. doi:1098612X20935750. 21. Bland SD. Canine osteoarthritis and treatments: a review. *Vet Sci Dev*. 2015;5:84–89. 22. Sokolove J, Lepus CM. Role of inflammation in the pathogenesis of osteoarthritis: latest findings and interpretations. *Ther Adv Musculoskelet Dis*. 2013;5:77–94. 23. Lascelles BD, Henderson AJ, Hackett IJ. Evaluation of the clinical efficacy of meloxicam in cats with painful locomotor disorders. *J Small Anim Pract*. 2001;42:587–593. 24. van Bree H, Justus C, Quirke JF. Preliminary observations on the effects of Meloxicam in a new model for acute intra-articular inflammation in dogs. *Vet Res Commun*. 1994;18:217–224. 25. Slingerland LJ, Hazewinkel HA, Meij BP, et al. Cross-sectional study of the prevalence and clinical features of osteoarthritis in 100 cats. *Vet J*. 2011;187:304–309. 26. Allan R, Carmichael S. Management of OA part 2: plan for life. *Vet Times*. 2000;50:12–15. 27. Frye CW, Shmalberg JW, Wakshlag JJ. Obesity, Exercise and Orthopedic Disease. *Vet Clin North Am Small Anim Pract*. 2016;46:831–841. 28. Marshall WG, Hazewinkel HA, Mullen D, et al. The effect of weight loss on lameness in obese dogs with osteoarthritis. *Vet Res Commun*. 2010;34:241–253. 29. German AJ. The Growing Problem of Obesity in Dogs and Cats. *J Nutr*. 2006;136:1940S–1946S.

METACAM® summary of product characteristics (SPC) available from: https://www.ema.europa.eu/en/documents/product-information/metacam-epar-product-information_en.pdf

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PAIN, INFLAMMATION AND MOBILITY SOLUTIONS. ONE TRUSTED SOURCE.