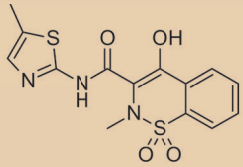
GUIDELINE BRIEFS

2024 ISFM/AAFP CONSENSUS GUIDELINES ON THE LONG-TERM USE OF NSAIDS IN CATS

Non-steroidal anti-inflammatory drugs (NSAIDs) are the most widely used analgesics in veterinary medicine, with robust evidence available for safety and efficacy in feline pain management. These Guidelines will support veterinarians in decision-making around prescribing NSAIDs in situations of chronic pain to minimize adverse effects and optimize pain management.

HOW DO NSAIDS WORK?

- NSAIDs target the arachidonic acid cascade to reduce inflammation and pain. They inhibit cyclooxygenase (COX) enzymes, which produce prostaglandins (PGs) involved in the inflammatory response.
- NSAIDs work by inhibiting cyclooxygenase (COX) enzymes, which are involved in the production of prostaglandins (PGs) from arachidonic acid.



- COX-1 generates PGs for stomach protection, kidney function, and blood clotting.
- COX-2 is mainly induced during injury and inflammation.

NSAIDS IN CATS

Meloxicam and robenacoxib are the most widely studied NSAIDs in cats, with strong evidence of safety and efficacy for the management of degenerative joint disease (DJD) related pain, including in cats with stable, early chronic kidney disease (CKD). They are licensed for long-term use in several countries. In practice, the choice of one vs the other is based on preference, availability, palatability and formulation.

INDICATIONS FOR LONG-TERM NSAIDS USE

Long-term use of NSAIDs may be indicated for the treatment of several chronic pain conditions in cats, particularly when inflammation is a contributing factor.

Common causes of chronic pain

- Chemotherapy-induced neuropathy and radiation-induced skin burns
- Neoplasia
- DJD (Osteoarthritis/ Spondylosis deformans)
- Dental and oral disease
- Dermatological conditions
- Neuropathic pain
- Gastrointestinal conditions
- Ocular conditions
- Persistent postsurgical pain
- Previous trauma
- Urogenital conditions such as Feline Lower Urinary Tract Disease (FLUTD)
- CKD (e.g., pyelonephritis, urolithiasis)

ASSESSING CHRONIC PAIN

Before prescribing long-term NSAID therapy, cats should be assessed for suitability and to identify any contraindications or factors to be considered in dosage and monitoring.

Behavioral signs continue to be the best indicator of chronic pain states in cats. These assessments rely on caregiver observation of behavioral changes. These vary by condition, but changes often relate to the cat's routine activities, mobility, social interactions, mood or temperament.

Physical examinations are essential. Veterinary assessments include comprehensive physical examinations as indicated (orthopedic, neurological, dental/oral, ophthalmic). Sedation should be considered when needed to thoroughly examine painful areas or in patients with maladaptive pain. Imaging may also be indicated based on the exam.

A comprehensive history is critical, including discussion about chronic illness and current medications as these could increase the risk of adverse effects.

Laboratory testing is helpful, including a hematocrit (ideally complete blood count), serum chemistry panel, urine specific gravity (ideally full urinalysis and urine protein:creatinine ratio), and systolic blood pressure.

Trial analgesic therapy with an NSAID can be useful when chronic pain is suspected, but hard to detect. The response to these trials is best assessed using validated pain scales, if available.

RECOMMENDED DOSING

Dosing recommendations may vary on a case-by-case basis, with the aim of reaching an ideal balance between treatment compliance, maximum efficacy, and minimum risk of adverse effects.

Recommended dosages of commonly used NSAIDs for long-term pain management in cats:

NSAID	Dosage recommendations*	Comments
Meloxicam	¤ 0.1 mg/kg PO once ¤ 0.01-0.05 mg/kg PO q24h	First dose to be administered when starting long-term treatment Normally start at 0.05 mg/kg, following first dose (see above) Lowest effective dosage may be used long-term
Robenacoxib	¤ 1 mg/kg (range 1-2.4) PO q24h	Formulation available in 6 mg tablets; number of tablets depends on body weight Lowest effective dosage may be used long-term

*Veterinarians are advised to consult medication data sheets for more information. NSAID = non-steroidal anti-inflammatory drug; PO = orally

PRACTICAL NSAID THERAPY

- Perform diagnostic tests and use validated pain scales for chronic pain, where possible
- Start with the full dose of NSAID on day one
- For overweight or obese cats, calculate NSAID dosage based on lean body weight
- For underweight cats, investigate for underlying illness and establish appropriate nutrition before treating with NSAIDs
- Weigh cats and perform body condition scoring regularly to allow dosage adjustments
- Maintain the cat on the recommended long-term dose for the specific NSAID for a few weeks
- Gradually decrease the dose while monitoring treatment response to achieve the lowest effective dosage
- Consider decreasing the frequency of administration while monitoring efficacy
- If switching NSAIDs, implement a 7- day washout period. If switching NSAIDs because of adverse effects, the washout period should be long enough to allow the adverse effects and any pathology to resolve

MONITORING THE CLINICAL RESPONSE TO NSAIDS

Cats requiring long-term analgesic support commonly have pre-existing medical conditions. History-taking and appropriate screening prior to institution of NSAID therapy are important, as is consideration of the potential for interactions with concurrent medications. Cats with stable CKD may be treated with NSAIDs dependent on individual cat assessment and appropriate caregiver education.

- Monitor for behavioral signs
- Use benchmarks to ensure real response and not caregiver placebo effect
- Regular reassessment is needed
- Use validated pain scales when available
- Regular wellness checks are needed to aid in early identification of comorbidities
- Clinical pathology testing at a minimum of q6 months is recommended to identify potential adverse effects

ADVERSE EFFECTS

Adverse drug effects may occur after correct use of an NSAID (ie, idiosyncratic drug reactions), but many are related to incorrect drug use. Potential adverse effects of NSAIDs relate to the consequences of PG inhibition and include:

- Gastrointestinal irritation – vomiting, hematemesis, gastric ulceration, perforation
- Renal insufficiency – azotemia, elevated SDMA, dilute urine, elevated UPC, and non-specific clinical signs such as hyporexia, vomiting, and depression
- Hepatic damage – elevated liver enzymes, liver failure
- Prolonged bleeding time

CONCLUSION AND FURTHER RESOURCES

- Pain is both a sensory and an emotional experience. Management of chronic pain in cats should be multimodal, involving both pharmacological interventions and environmental modifications.
- Establish a safe environment for the patient with the goal of minimizing fear-anxiety and frustration, and maintain the five pillars of a healthy feline environment.
- NSAIDs can benefit cats with chronic pain as an element of this multimodal approach, provided they are prescribed after appropriate screening and with the caregiver embraced as part of the team, being both informed and supported by veterinary professionals.

2024 ISFM/AAFP Consensus Guidelines on the Long-term Use of NSAIDs in Cats | **catvets.com/nsaids**
2024 AAFP Chronic Pain Educational Toolkit | **catvets.com/chronic-pain-toolkit**
2022 ISFM/AAFP Cat Friendly Veterinary Environment Guidelines | **catvets.com/environment**
2022 AAFP/ISFM Cat Friendly Veterinary Interaction Guidelines: Approach and Handling Techniques | **catvets.com/interactions**
2021 AAFP Senior Care Guidelines | **catvets.com/senior-care**

Access the Consensus Guidelines at **catvets.com/nsaids** and cat caregiver resources at **catfriendly.com/nsaids**.