

# The Creaky Old Cat

Sandy, a 16-year-old neutered male domestic shorthair cat, was presented for routine vaccination. The owner mentioned that the cat was showing signs of aging.

**History.** Sandy's behavior at home had changed—he was less active (no hunting outside or jumping on counters) and sleeping more, less sociable with his owners, and had periods where he was urinating indoors.

**Physical Examination.** Sandy was thin (his weight had decreased from 6.1 kg to 5 kg since last year's examination), with poor coat condition and some matted hair. He was reluctant to jump on or off the examination table. At rest his elbows were adducted slightly, and he resented flexion and extension of these joints. Clinical examination was otherwise unremarkable; hematology, serum biochemistry, and urinalysis values were within the reference ranges.



**ASK YOURSELF...**

What is Sandy's diagnosis and how would you manage the condition?

- A. Normal changes with old age—no treatment
- B. Osteoarthritis—no treatment necessary
- C. Osteoarthritis—manage with nonsteroidal antiinflammatory drugs
- D. Osteoarthritis—no treatment possible in cats

CONTINUES

**CORRECT ANSWER: C  
OSTEOARTHRITIS—MANAGE WITH NONSTEROIDAL ANTIINFLAMMATORY DRUGS**



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Osteoarthritis (with osteophytes) in a feline elbow  
Courtesy Dr. Martin Owen, University of Bristol

A high percentage of the aging cat population has radiographic or clinical signs of osteoarthritis.<sup>1</sup> The elbow and hip appear to be the most affected joints.<sup>2</sup> The cat may be stiff and reluctant to move or jump, but lameness is rare. Signs of pain may be difficult to appreciate in cats,<sup>3</sup> and signs of chronic pain, such as reduced mobility, reduced activity, difficulty with grooming, and changes in temperament, may often be misinterpreted as signs of aging. Diagnosis is primarily established by history and clinical examination, with or without radiography (**Figure 1**). (See **Box** for other articles in *Clinician's Brief* on feline osteoarthritis and related topics.)

**Treatment.** Nonsteroidal antiinflammatory drugs (NSAIDs) are the mainstay of osteoarthritis treatment in both humans and dogs. These agents act by inhibiting the cyclooxygenase isoenzymes (COX-1 and COX-2). Older NSAIDs, such as aspirin, are more COX-1 specific and cause more side effects than the more COX-2-specific, newer NSAIDs. The main side effects are gastrointestinal ulceration and renal tubular damage. Because

cats have decreased hepatic metabolism, they have a greater risk for toxicity; nonetheless, NSAIDs can be used in cats if appropriate protocols for dosing and monitoring are followed.<sup>4,5</sup>

No oral NSAID is licensed for long-term use in cats in the United States; therefore, the owner's informed consent must be obtained before these drugs can be used. In the United Kingdom, meloxicam is licensed for long-term feline use and is the only NSAID licensed for use longer than 5 days.<sup>6</sup> The guide dose is 0.1 mg/kg for the first day, with a maximum of 0.05 mg/kg Q 24 H thereafter. However, doses of 0.01 mg/kg or lower given every second or third day may provide good pain relief. Aiming for the lowest effective dose helps avoid adverse side effects.

COX = cyclooxygenase; NSAID = nonsteroidal antiinflammatory drug

**ARTICLES IN CLINICIAN'S BRIEF ON ...**

**Feline Nutrition & Weight Loss**

Providing Exercise for Fat Cats • November 04

Safe Weight Reduction in an Obese Diabetic Cat • July 06

Complications of Overnutrition in Companion Animals • March 08

Weight Loss As a Rehabilitative Challenge • March 08

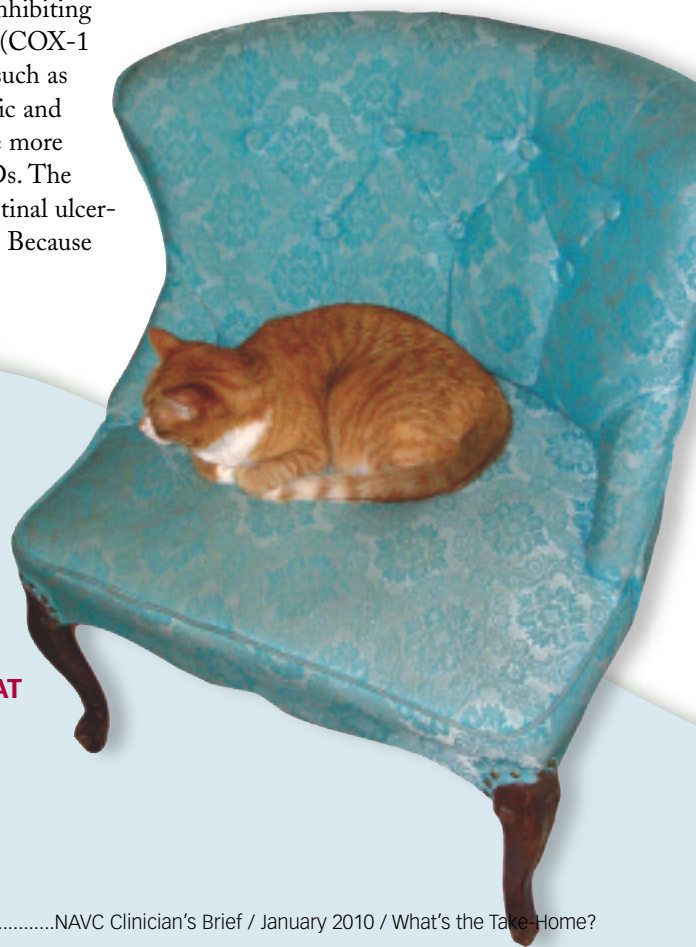
**Feline Osteoarthritis**

Feline Degenerative Joint Disease—Part 1: Diagnosis • April 09

Feline Degenerative Joint Disease—Part 2: Treatment • Coming Soon

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Tepoxalin and carprofen have also been used in cats for acute pain management, but a recent review advises against their use for chronic pain management in cats until further safety and toxicity data become available.<sup>4</sup>

**Monitoring.** Before initial administration of an NSAID, assess hepatic and renal status and presence of gastrointestinal disease with history, clinical examination, serum biochemical profile, hematology, and urinalysis, plus other tests if indicated (eg, endoscopy of gastric mucosa, examination of feces for blood). Determine concurrent medications, including those owners may administer without prescription (eg, herbal remedies)—some may have adverse interactions with NSAIDs.<sup>7</sup>

During treatment, monitor for adverse events every 3 to 6 months, using a minimum database of body weight, fasting serum urea level, creatinine level, and urine specific gravity. Side effects are most common in geriatric animals and those with underlying renal or hepatic abnormality. A reduced dose given for extended intervals may be required; however, if major hepatic or renal disease is present, NSAIDs should be avoided.

It is important that owners recognize signs indicating possible toxicity (inappetence, vomiting, diarrhea, lethargy) and understand that they should not increase the dose without consulting their veterinarian.

**Other Medications.** Opioids (eg, morphine, codeine, buprenorphine, tramadol) are less effective than NSAIDs for chronic inflammatory pain. In severe cases, however, they may be helpful when

## TAKE-HOME MESSAGES

- Osteoarthritis in cats is a chronic, progressive, and potentially debilitating process that primarily affects older animals.
- Treatment is necessary to ensure good quality of life.
- NSAIDs are the mainstay of drug management, although none is licensed for long-term feline use in the United States.
- Lifestyle management may be beneficial.
- The effectiveness of treatment with other drugs, nutraceuticals, functional foods, or complementary therapies are currently unproven in cats but may be of benefit.

given in addition to NSAIDs. They may also be beneficial when NSAIDs are contraindicated.

The safety and efficacy of nonopioid drugs used for chronic pain management, such as amantadine and amitriptyline, are unproven for use in feline osteoarthritis; however, they may be useful. In addition, glucosamine hydrochloride, chondroitin sulfate, manganese ascorbate, fatty acids, and acupuncture may also be helpful.

Acetaminophen is highly toxic in cats.

**Lifestyle Changes.** Lifestyle management, especially weight loss in overweight animals, is important. See the **Box** for articles on feline nutrition and weight loss.

See Aids & Resources, back page, for references, suggested reading, and resources.

Article archived on [cliniciansbrief.com](http://cliniciansbrief.com)

## FDA APPROVES PROZINC

Boehringer Ingelheim Vetmedica, Inc ([bi-vetmedica.com](http://bi-vetmedica.com)) received FDA approval for veterinary use of ProZinc, an aqueous protamine zinc suspension of recombinant human insulin. The manufacturer states, "Extensive research has demonstrated that ProZinc is safe and effective for controlling hyperglycemia in newly diagnosed cats and diabetic cats that have not responded well to previous treatment therapies." —*Press release, 11/2009*

## ZYMOX EFFECTIVE AGAINST MRSA

Recent tests confirm that the enzyme system in Zymox Otic and Zymox Topical Spray (PKB Animal Health; [petkingbrands.com](http://petkingbrands.com)) for dermatologic application demonstrates antibacterial activity against methicillin-resistant *Staphylococcus aureus*. According to PKB, "Zymox adds another level of confidence in the ability to treat stubborn infections of the ears and skin." —*Press release, 12/2009*

## NEW HOME DENTAL CARE PROGRAM

Virbac Animal Health ([virbacvet.com](http://virbacvet.com)) announces Clean Every Tooth, a home dental health program to educate owners on the importance of pets' dental health. Denise Skurdalsvold, senior marketing manager, says the program "allows veterinarians to recommend the most appropriate home dental care program based on each patient's stage of disease and the owner's ability to comply with recommendations." Visit [virbacvet.com/cet](http://virbacvet.com/cet) for more information and client education materials. —*Press release 12/2009*

