

A Veterinary First: Treatment for Arthritis Pain

It's estimated that 14 million dogs and 90% of cats over age 12 in the US suffer from osteoarthritis, which can affect their quality of life. This recent FDA approval of a treatment for osteoarthritis pain may be a game changer for many pets in distress.

Analysis by [Dr. Karen Shaw Becker](#)

STORY AT-A-GLANCE

- The FDA has recently approved the first-ever monoclonal antibody (mAB) treatments for arthritis pain in cats and dogs; the mAB for cats is also the first ever treatment of any kind for arthritis pain control
- The mAB treatments are in the form of subcutaneous (under the skin) injections that must be prescribed and given by a licensed veterinarian; pets who receive these treatments must also be monitored for side effects
- Estimates are that approximately 14 million dogs in the U.S. and 90% of cats over age 12 have osteoarthritis (OA); OA can be a primary or secondary disorder and is more often seen in senior pets, however, research suggests OA isn't necessarily a normal part of aging, since not every older pet develops the condition
- Even with the availability of monoclonal antibody treatments, cats and dogs with arthritis will benefit from a multimodal treatment approach that includes lifestyle modifications, nontoxic pain control, and a customized oral protocol that includes chondroprotective agents
- It's important for both you and your veterinarian to continuously monitor your arthritic pet and make adjustments as necessary to treatment protocols

In January 2022, with no obvious fanfare, the U.S. Food and Drug Administration (FDA) approved the first monoclonal antibody (mAb) for the treatment of osteoarthritis pain in cats.¹ The treatment was also the first ever of any kind for control of **arthritis pain in cats**, as well as the first mAb approved by the FDA for use in any animal species.

The new mAb is called Solensia (produced by Zoetis Inc.) and its active ingredient, frunevetmab, is a feline-specific monoclonal antibody (a type of protein) designed to recognize and attach to a protein called nerve growth factor (NGF) that is involved in the regulation of pain. When frunevetmab binds to NGF, it prevents the pain signal from reaching the brain. Per the FDA's news release:

"Treatment options for cats with osteoarthritis are very limited. Advancements in modern veterinary medicine have been instrumental in extending the lives of many animals, including cats. But with longer lives come chronic diseases, such as osteoarthritis," said Steven M. Solomon, M.P.H., D.V.M., director of the FDA's Center for Veterinary Medicine.

"Today's approval marks the first treatment option to help provide relief to cats that are suffering from this condition and may significantly improve their quality of life. We also hope that today's approval of the first monoclonal antibody by the FDA for any animal species will expand research and development of other monoclonal antibody products to treat animal diseases."²

Two months ago, in May 2023, the FDA approved the first mAB for pain control in dogs with osteoarthritis. The new canine monoclonal antibody treatment is called Librela (also by Zoetis Inc.) and contains the active ingredient bedinvetmab.³ I'll talk more about these treatments further down in this article.

Primary and Secondary Arthritis in Pets

Osteoarthritis (OA) is primarily seen in older animals, but it occurs in younger pets as well. Approximately 14 million adult dogs in the U.S. have the condition, and 90% of cats over 12 have it as well based on x-ray evidence.⁴

Osteoarthritis, also known as degenerative joint disease (DJD), is a progressive disease of the joints characterized by chronic inflammation. OA can be a primary or secondary disease. Symptoms of primary osteoarthritis typically occur as part of the aging process.

Secondary OA, on the other hand, can have a wide range of causes, including trauma, abnormal wear and tear on the joints and cartilage or an inherited defect present at birth such as **hip dysplasia** in dogs. Additional causes of secondary OA include:

- Abnormal wear and tear on joints and cartilage
- Dislocation of the kneecap or subluxation of the kneecap or shoulder
- Trauma
- Osteochondrosis dissecans
- Genetic defect (e.g., hip dysplasia)
- Obesity
- Excessive laxity of the joints
- Certain drugs⁵
- Abnormal development of the hip or elbow
- Prolonged steroid therapy

In many cases of arthritis in pets, it's not entirely clear what triggers the process of inflammation.

OA Isn't Necessarily a 'Normal' Part of Aging

Many people assume osteoarthritis is a disease of the bone, but it's actually a disease of cartilage. According to the Morris Animal Foundation:

"Research shows that cartilage is in a constant flux of remodeling, with factors favoring degradation of cartilage in balance with cartilage re-building activities. The process continues throughout our pets' lifetimes.

For reasons that aren't clear, this balance can be disrupted and, in osteoarthritis patients, the forces that result in cartilage deterioration far outpace the repair forces, ultimately leading to cartilage loss which gives rise to the clinical signs and pain associated with the disease."⁶

In addition, there's evidence that OA isn't a "normal" feature of aging:

“When researchers compare cartilage from individuals suffering from osteoarthritis to cartilage from older individuals without OA, some similarities are evident, but in other aspects the tissues are very different. This indicates that OA is a disease and not an inevitable outcome for our elder pets.”

7 Common Signs of Arthritis in Dogs and Cats

Symptoms of arthritis vary and include the following seven. If one or more of these signs is present in your pet, it's time to make an appointment with your veterinarian.⁷

1. **Limping** — Limping is the number one sign of arthritis in pets. If your dog or cat is favoring one or more limbs, especially when he stands up from a lying or seated position, there's a good possibility he's dealing with arthritic joints. Often the limp will be less pronounced after he's been moving around for a while.
2. **Difficulty moving** — Pets with arthritis often display reluctance or an inability to do certain things they once did with ease. For example, your dog may be hesitant to jump into or out of your car because he's achy, or your kitty may try to jump up on a table or bed and not quite make it because painful joints have compromised her leaping ability.
3. **Spinal issues** — Arthritic joints also occur in certain areas of the spine, which can cause your pet to hold his head lower than normal due to a sore neck, or adopt sort of a hunchback posture. Lameness in one or both back legs can also be a sign of arthritis in the spine.
4. **Fatigue** — Pets with arthritis tend to tire more easily than animals with healthy joints, because pain and movement issues drain energy. You may notice your dog or cat is spending less time moving around and more time resting or sleeping.
5. **Irritability** — The discomfort of arthritic joints can make even the most easygoing, friendly pet a bit snappish, especially if he's being petted or handled in a way that increases his pain.
6. **Muscle atrophy** — Left untreated, a dog or cat with arthritis will suffer muscle atrophy, which is the dying off of muscle tissue from lack of use. If one or more of your pet's legs appears thinner than the others, it means the muscles of that leg are wasting away.
7. **Licking, chewing, and biting at specific areas of the body** — Some pets with arthritis lick, chew or bite at the skin overlying a painful joint, in an attempt to get some relief from discomfort. If this behavior becomes obsessive, your dog or cat can develop inflamed skin, hair loss, and **hot spots** over affected areas.

Detecting OA Can Be More Challenging in Cats

Since cats are masterful at hiding pain, what you want to look for instead of obvious limping, for example, or difficulty standing up from a lying position, are behavioral changes. Some of these might include:

- Reluctance to jump up on things, or difficulty gaining the height needed
- Decreased interest in other family members, both people and pets
- **Eliminating outside the litterbox**, especially if the box has high sides, is upstairs, or is located in a hard-to-reach spot
- Becoming less active; sleeping more
- No longer covering urine or feces with litter
- Lack of appetite

If you notice one or more of these signs in your cat, you should suspect OA and make an appointment with your veterinarian. The sooner you find out the underlying cause of your cat's behavior change, the sooner you can get her on the road to feeling better.

To make things a bit easier for cat guardians, Margaret Gruen, assistant professor of behavioral medicine at North Carolina State University College of Veterinary Medicine and two colleagues at NC State have proposed a simple six-question yes-or-no checklist to detect degenerative joint disease in cats:⁸

1. Does your cat jump up normally?
2. Does your cat jump down normally?
3. Does your cat climb up stairs or steps normally?
4. Does your cat climb downstairs or steps normally?
5. Does your cat run normally?
6. Does your cat chase moving objects (toys, prey, etc.)?

Monoclonal Antibody Treatments and Side Effects

Solensia for cats is available only by veterinary prescription. The drug is administered by injection, and potential adverse reactions must be monitored by a veterinarian. The mAb is given monthly through subcutaneous (under the skin) injection based on weight.

The most common side effects of Solensia in cats include vomiting, diarrhea, injection site pain, scabbing on the head and neck, dermatitis, and pruritus (itchy skin). Per the FDA news release, "These effects were relatively mild and did not require cessation of treatment."

Librela for dogs is also available only by prescription, is administered the same way, and is dosed by weight range to target a minimum dose of 0.5 mg/kg. Common side effects include increased blood urea nitrogen (an indicator of kidney function), urinary tract infection, bacterial skin infection, skin irritation (dermatitis), rash (erythema) or pain at injection site, vomiting (emesis), and weight loss (anorexia).

If you're interested, you can read short summaries of the clinical trials for each drug in the FDA news releases for **Solensia** and **Librela**. These new drugs have not been on the market long enough to have a large body of clinical data, and most integrative veterinarians I know are wondering about the possible downsides of long-term interference with nerve growth factor (NGF).

Alternative Pain Control Options for Arthritic Pets

Pain can sometimes be managed by offering a variety of rehabilitative therapies, including cold laser therapy, pulsed electromagnetic field therapy (PEMF), cold and heat therapy, and acupuncture (or aquapuncture). As arthritic dogs and cats age, anti-inflammatory and pain medications are often prescribed to manage day-to-day discomfort; however, there are many wonderful natural treatments and remedies for arthritis that can reduce the need for painkillers long term.

In many cases, pets may need a short course of drugs to relieve pain quickly, but most owners are concerned about the long-term side effects of these medications. The good news is that if natural non-steroidal anti-inflammatories (NSAIDs) are started at the same time as the drugs, often the drugs can be tapered down, or given intermittently, and the patient can be supported with an improved quality of life on a blended protocol of supplements including:

- A high-quality **omega-3 supplement**
- **CBD oil**
- S-adenosylmethionine (SAMe)
- Palmitoylethanolamide (PEA)
- Turmeric or curcumin
- Homeopathic remedies & traditional Chinese herbs
- Natural anti-inflammatory formulas (devil's claw, boswellia, proteolytic enzymes, TCM formulas)
- Esterified Fatty Acid Complex (EFAC) complex

Lifestyle Recommendations

In my experience, physical therapy (called "rehabilitation" in the animal world) is an absolute must for arthritic cats and dogs and should be designed to maintain and increase joint strength, muscle tone, and range of motion. This can be accomplished with therapeutic exercises and massage. These protocols should be designed by an animal physiotherapist or a rehab veterinarian and can dramatically improve an animal's quality of life.

Keeping your pet at a lean, healthy weight is absolutely crucial in preventing or alleviating arthritis symptoms. An overweight cat or dog with arthritis can have noticeable improvement in symptoms after losing just a small amount of body weight.

Pets need to move their bodies more, not less, as they age. This can be a challenge, especially for cats, but can be done with diligence and creativity. Although the intensity, duration and type of exercise will change, daily activity is still crucial to prevent profound musculoskeletal weakness with age. Muscles maintain your furry friend's frame, so preserving muscle tone will also slow the amount of joint laxity (which causes arthritis) as well.

Other crucial factors in maintaining the health of an arthritic pet include feeding a nutritionally optimal, species-specific diet, and avoiding unnecessary re-vaccinations (titer test instead).

In addition to therapies such as laser treatments and the **Assisi loop**, I've found that incorporating maintenance chiropractic, acupuncture, daily stretching, and mild exercise along with an oral protocol to manage pain and inflammation will yield the best results possible for my arthritis patients. The sooner you begin these steps, the better results your pet will have.

Oral Joint Support Recommendations

Chondroprotective agents (CPAs) that protect your pet's remaining cartilage, including glucosamine sulfate, MSM, eggshell membrane, perna mussel (green-lipped clam), Adequan, and cetyl myristoleate. CPAs slow the rate of cartilage degeneration, which is a critical step in long-term arthritis management.

The form, dose, and type of CPA your veterinarian prescribes should be based on a careful assessment of your pet's individual needs. CPAs should be blended with pain control options (listed above) as necessary; one of the biggest mistakes I see are pet parents make is only managing pain and not providing any support to the remaining cartilage in their pets' bodies, which is a recipe for further and unbridled degeneration.

In the vast majority of mild to moderate joint pain cases, if CPAs AND natural pain control options are simultaneously initiated early in the disease process, the need for intermittent NSAID therapy can be minimized to those occasional "bad days" when the weather or the day's activities temporarily exacerbate your pet's discomfort.

Moderate to severe joint pain cases (requiring consistent NSAID drug administration to maintain quality of life) can rely on lower drug doses by using an integrative protocol. It's also important to note that many painkillers can become toxic to cats over time and have been linked to microbiome disruption in both cats and dogs, so supporting your pets' gut health when giving NSAIDs is also wise.

I recommend finding a proactive **integrative or functional medicine veterinarian** to work with you to customize a comprehensive protocol for your pet. Practitioners who've gone beyond their traditional veterinary school training to learn and incorporate complimentary therapies into their practice will have many more options to offer your arthritic pet. If your proactive vet doesn't offer rehabilitation services, they should be able to connect you to animal physical therapists in your area.

I also recommend bringing your dog or cat for a wellness checkup with your veterinarian at least twice a year to review the status of her health, and to check the range of motion in her joints, the muscle mass she's either gaining or losing, and to make adjustments to her protocol as necessary to ensure her quality of life is optimal.

Sources and References

^{1,2} [FDA News Release, January 13, 2022](#)

³ [FDA News Release, May 5, 2023](#)

^{4,6} [Morris Animal Foundation, March 4, 2021](#)

⁵ [Veterinary Research Communications. 2008 Mar;32\(3\):243-53](#)

⁷ [PetMD](#)

⁸ [Journal of Feline Medicine and Surgery, March 3, 2020](#)
