Boehringer Ingelheim

Mobility Matters

A Practical Guide to Recognizing and Managing Osteoarthritis in Dogs and Cats

Mobility Matters

A Practical Guide to Recognizing and Managing Osteoarthritis (OA) in Dogs and Cats

Dear Colleague,

Today, pets in the US are living longer than ever—in fact, nearly 15% of dogs and 20% of cats are more than 11 years old. As pets age, many owners assume certain conditions—particularly pain from osteoarthritis (OA) and degenerative joint disease (DJD)—are a normal part of the process. As practitioners, however, we know this is not the case.

Mobility is key to a healthy quality of life for pets. Understanding the causes of joint disease and the benefits of early detection can help keep pets feeling younger longer—and give owners more quality years with their pets living comfortably by their sides.

This booklet is designed to help the veterinary healthcare team confidently discuss pain and mobility with clients, recognize and regularly assess pain levels, and treat mobility problems with individualized, multimodal pain management plans that are designed to increase compliance and patient comfort.

Thank you for taking the time to read this educational booklet and make pain management an integral part of your practice.

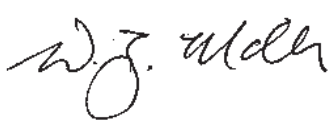
Michael T. Cavanaugh, DVM, DABVP C/F (Emeritus), AAHA Chief Executive Officer

A Note from Boehringer Ingelheim

Boehringer Ingelheim is extremely pleased to introduce a new Osteoarthritis and Pain Management booklet for you and your clients. This is an exciting time in veterinary medicine, and we are pleased to be your collaborator in practice.

It has been estimated that one in five dogs is diagnosed with osteoarthritis (OA) in their lifetime.[1] As a veterinary practitioner you are familiar with this statistic. The question that remains is, how many dogs are suffering from undiagnosed pain from osteoarthritis, and are not being appropriately managed because clients don't understand the signs of pain in their pets? Pets in the US are now living longer. Recently published (2012) pet demographic trends reported approximately 15% of dogs and 20% of cats are now 11 years of age or older.[2] While older pets are more commonly diagnosed with osteoarthritis, restricting the focus to only older patients can leave an important segment of patients untreated. Veterinary teams know that controlling pain associated with OA earlier can allow pets to live longer and happier lives. Helping clients understand the prevalence of OA and the causes of joint disease can lead to earlier identification of OA and its management in the practice.

Boehringer Ingelheim is committed to serving the profession with continuing education that empowers veterinary teams to elevate awareness of osteoarthritis and joint health in the practice and among clients. This booklet, developed through a collaboration between Boehringer Ingelheim and the American Animal Hospital Association (AAHA), is designed to serve as a practical guide and convenient reference to equip the entire veterinary team with best practices for recognition and management of joint pain across all stages of osteoarthritis. Working together, we can help more clients spend quality years with their pets. We thank AAHA for their collaboration in the development and publication of this booklet in pursuit of this goal.



Zach Mills, DVM, Boehringer Ingelheim Head of Pet Professional Services, U.S. Pet Vet Business Unit

1. Johnston, S.A. Osteoarthritis. Joint anatomy, physiology, and pathobiology. *Veterinary Clinic North America Small Animal Practice.* 1997; 27(4):699-723.
2. American Veterinary Medical Association. (2012). *U.S. Pet Ownership and Demographics Sourcebook* (2012 Edition). Schaumburg, IL: American Veterinary Medical Association.

Why
Mobility Matters

According to some estimates, one in five dogs (20%) experience joint issues in their lifetimes, resulting in pain and possible mobility challenges.[3] The numbers go even higher in dog breeds prone to specific joint problems. Imagine the number of untested and potentially unknown cases of osteoarthritis (OA) in the pet population.

In cats, some estimates place prevalence of degenerative joint disease (DJD) as high as 40–92%.[4] Consider the comparatively low rate of cat veterinary visits, and it adds up to a lot of feline friends hurting at home.

While it's a mistake to think of OA and other forms of DJD as an issue only in senior and geriatric patients, pets in the United States live longer than in the past, with 14.7% of dogs and 20% of cats living beyond 11 years.[5] This increasing longevity compounds the common misperception among pet owners that OA is an age-related disease and likely contributes to a disproportionate presentation of late-stage disease in practice versus earlier stages when pain and disease progression can be more easily managed. Alternatively, one might consider longevity as the ultimate goal for diagnosis and management rather than a cause. Understanding the prevalence and causes of joint disease as well as the benefits of early identification and management can give owners more quality years with their pets living comfortably by their side.

Mobility Matters: A Practical Guide to Recognizing and Managing Joint Pain in Dogs and Cats is a straightforward, easy-to-digest reference for the entire veterinary team.

Inside you'll find real-world strategies that prepare the veterinary team to:

- Be attentive to pain and mobility issues in dogs and cats.
- Be confident in talking about it with clients across all touch points.
- Be effective at treating pain and mobility measures like a vital sign that requires routine assessments in pets of all ages, breeds, and sizes (not only in senior or geriatric patients).
- Be creative with individualized multimodal pain management plans for pets with different needs.
- Be persistent in follow-ups aimed at increasing compliance and patient comfort.

Often, the only signs of trouble appear as subtle behavioral changes that clients need to recognize and bring to veterinary attention. Left unrecognized and untreated in early stages and forms, DJD pain and mobility challenges can progress to more severe signs, which can result in euthanasia in some cases.

Taking a strong stance on recognizing pain and mobility issues in pets improves the lives of patients. Over time and through persistent client education, including effective myth-busting, the time and energy you spend now also helps future patients because veterinary clients will be more aware of what pain looks like and be more motivated to seek veterinary help sooner.

3. Johnston, S.A. Osteoarthritis. *Joint anatomy, physiology, and pathobiology.* Veterinary Clinics of North America: Small Animal Practice. 1997. 27(4): 699–723.
4. *2015 AAHA/AAFP Pain Management Guidelines for Dogs and Cats*
5. American Veterinary Medical Association Sourcebook 2012

Prevalence
and Causes of OA

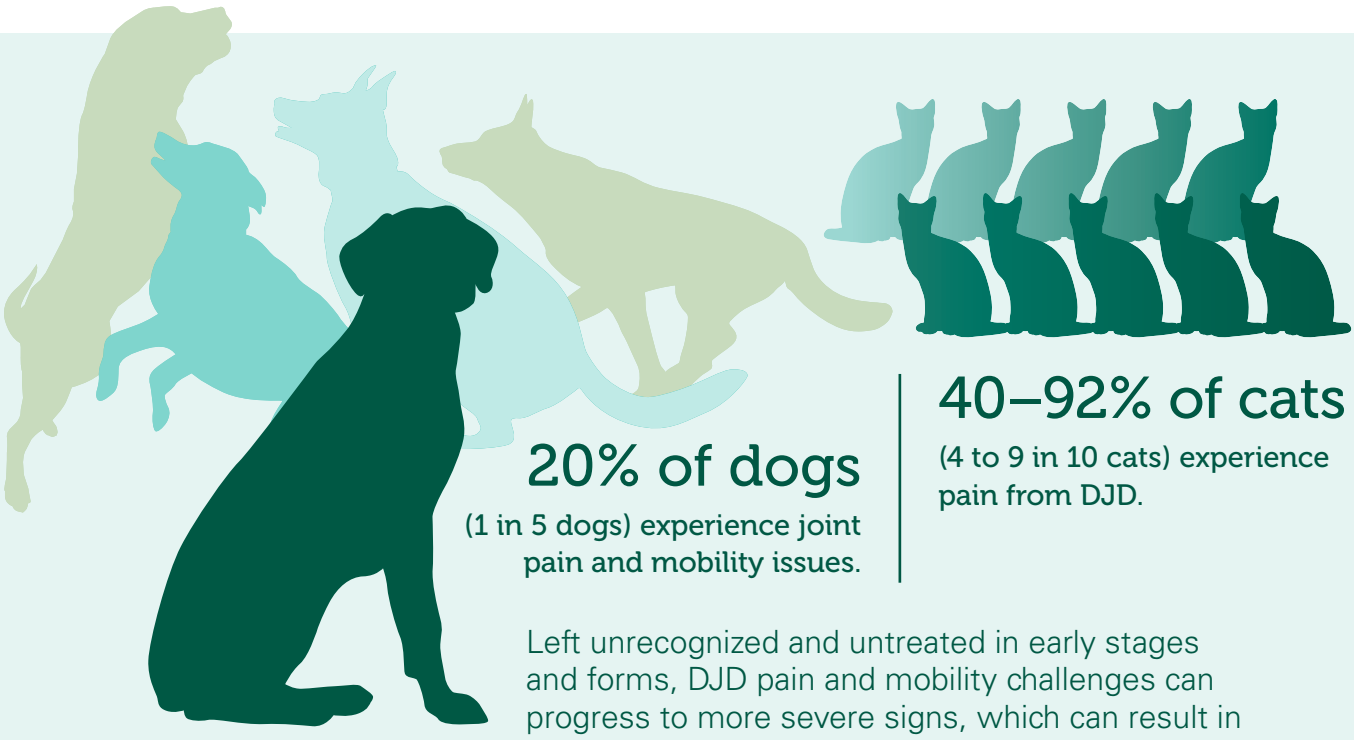
Old age is not a disease. Dogs and cats don't slow down, seem stiff, or face mobility challenges merely because they get old. Our companion animals move and behave differently because of an underlying cause or medical condition, such as OA. Pet owners can see a number of changes in their pets caused by OA pain.

You know that, but clients typically don't.

The foundations for the disease begin when pets are young—even just a few months old and into young adulthood. The earliest signs of trouble, however, often go unnoticed or dismissed in younger pets. Families assume the pet simply played too hard or twisted something when they see intermittent or short-lived limping.

The more that veterinary teams can educate clients about recognizing pain for what it really means, the more comfortable dogs and cats can be throughout their lives.

Developmental orthopedic diseases. The vast majority of dogs who develop OA do so because of developmental orthopedic diseases (DODs). With certain breeds being more prone to malformed joints than others, the website of the Orthopedic Foundation for Animals (OFA) includes information about commonly affected breeds with hip dysplasia and elbow dysplasia. Because OFA most commonly screens dogs in advance of breeding (or sometimes prior to dog sports careers), these results represent only a segment of the total canine pet population.



20% of dogs
(1 in 5 dogs) experience joint pain and mobility issues.

40–92% of cats
(4 to 9 in 10 cats) experience pain from DJD.

Left unrecognized and untreated in early stages and forms, DJD pain and mobility challenges can progress to more severe signs, which can result in euthanasia in some cases.

SOURCES

- Johnston, S.A. Osteoarthritis. Joint anatomy, physiology, and pathobiology. Veterinary Clinics of North America: Small Animal Practice. 1997. 27(4): 699–723.
- *2015 AAHA/AAFP Pain Management Guidelines for Dogs and Cats*

Some purebred cats develop hip dysplasia, patellar luxation, and even CCL tears. However, in many feline patients, the causes of DJD and OA aren't as well understood as they are in dogs. In some cases it may be an issue of wear and tear.

Environmental factors. Environmental factors can also contribute to the development of joint issues. In particular, early nutrition practices and growth rates as well as levels of exercise can put young dogs or cats on the path toward a mismatch between body weight and skeletal growth. Typically, when we talk about OA and nutrition, the focus falls primarily on getting overweight pets down to size to lessen the strain on their joints, but nutrition problems in young pets matter too.

Acute Injuries. In some cases, acute injuries in dogs can also lead to changes that result in OA, pain, and mobility issues later in life. Cranial cruciate ligament (CCL) tears remain a common example. Even with quick intervention, the injury triggers inflammation, pain, and impaired function and increased stress on the joint, setting the stage for possible OA.

With best estimates placing prevalence of DJD or OA in dogs at 20%[6]—at least—and as high as 40–92% in cats,[7] pain and possible mobility challenges loom large as an issue in veterinary medicine. Age itself isn't a disease, but with 14.7% of dogs and 20% of cats topping 11 years of age,[8] and others living as long as 15 or even 20 years, the need for early diagnosis of pain and effective, individualized treatment plans grows.

Breeds at Risk for Developmental Orthopedic Diseases (DODs)

DISEASE	COMMON BREEDS AT RISK
Hip dysplasia[9]	Bulldog, Pug, St. Bernard, Basset Hound, Golden Retriever, Rottweiler, Chow, Pit Bull, Old English Sheepdog, German Shepherd
Patellar luxation[10]	Boston Terrier, Chihuahua, Miniature and Toy Poodles, Pomeranian, Yorkshire Terrier
Osteochondritis dissecans of the shoulder[11]	Bernese Mountain Dog, English Setter, German Shorthaired Pointer, Golden Retriever, Great Dane, Labrador Retriever, Old English Sheepdog, Rottweiler
Elbow dysplasia[12]	Alaskan Malamute, Australian Shepherd, Bichon Frise, Border Collie, Bernese Mountain Dog, Chow, Doberman, Great Dane, Golden Retriever, German Shepherd

6. Johnston, S.A. Osteoarthritis. *Joint anatomy, physiology, and pathobiology.* Veterinary Clinics of North America: Small Animal Practice. 1997. 27(4): 699–723.
7. *2015 AAHA/AAFP Pain Management Guidelines for Dogs and Cats*
8. American Veterinary Medical Association Sourcebook 2012
9. OFA website. Available at: http://www.offa.org/hdstats.html
10. OFA website. Available at: http://www.offa.org/ofapatlx.html
11. Fox, S.M. and Walker, A.M. *OCD of the humeral head: Its diagnosis and treatment.* Veterinary Medicine. 1993. 123–131.
12. OFA website. Available at: http://www.offa.org/ofaed.html

Osteoarthritis Mechanics and Outcomes

OA Defined: degenerative and progressive disease affecting synovial joints

OA Characteristics:

- Chondrocyte death
- Loss of articular cartilage
- Bony remodeling
- Pain
- Disability

OA Cascade of Events:

- Cartilage damage and loss
- Release of inflammatory mediators and degradative enzymes
- Synovial membrane inflammation
- Subchondral bone remodeling
- Osteophyte production
- Disability

OA Outcomes:

- Decrease in joint space
- Thickening of the joint capsule
- Loss of normal range of motion
- Pain

OA Cautions:

Biochemical and ultrastructural changes (during cartilage degeneration) happen long before anything shows up on:

- Clinical radiographs
- Histological testing

SOURCES

- Veterinary Exchange. Medical therapy of osteoarthritis in dogs. Compendium, 1995.
- McLaughlin, R. Management of chronic osteoarthritic pain. Veterinary Clinics of North America: Small Animal Practice. 2000. 30(4):933–949.
- Romich, J.A. Degenerative joint disease in small animals. Topics in Veterinary Medicine. 1994. 5(2):16–23.
- Budsberg, S.C. and Fox, S.M. The science of articular cartilage and its deterioration during osteoarthritis. Pfizer monograph number 2, 1997.
- Clark, D.M. The biochemistry of degenerative joint disease and its treatment. Compendium on Continuing Education. 1991. 3(2):275–284.

Diagnosis
of Osteoarthritis

Diagnosis of OA starts with everyone—clients and veterinary team members—recognizing what pain looks like both from pets' reported behavior at home and in the veterinary practice. Unless clients know how to monitor pets' movement and behavior for signs of pain, they won't bring dogs and cats into the veterinary practice for possible pain issues. When you don't get to see aching pets, your team does not get the chance to diagnose anything or to catch onset of OA early.

Diagnosis, therefore, comes in two parts.
PART 1: Clients' recognition of pain
PART 2: OA assessment in veterinary practice

PART 1: Clients' recognition of pain. Educate clients about subtle changes in behavior at home as well as in body positions—both when the pet is lying down and standing. These subtle but common warning signs in dogs include:

- Restlessness and anxiety, including pacing or trouble settling
- Frequent body position changes while resting
- Abnormal body positions while resting
- Shifts in weight while standing (front to back, side to side, up and down)
- Little hitches in normal movement

In addition to talking directly to clients about these signs of pain, veterinary team members can probe for insights while asking questions or having clients complete an OA medical history form or questionnaire.

Unless clients know how to monitor pets' movement and behavior for signs of pain, they won't bring dogs and cats into the veterinary practice for possible pain issues.

Sample Client Pain Questionnaire

	YES	NO
Have your pet's greetings lost some enthusiasm?	☐	☐
Does your pet need help jumping into the car or climbing the stairs?	☐	☐
Does your pet have muscle twitches and/or seem stiff/uncomfortable when he/she is at rest?	☐	☐
Does your pet tire when going for walks?	☐	☐
Has your pet's posture and/or expression changed? Check all that apply: ☐ Tail between the legs ☐ Drooped head ☐ Arched or hunched back or ears are down ☐ Trouble getting comfortable ☐ Unusual limb positions when resting or sleeping	☐	☐
Has your dog had a change in temperament? Check all that apply: ☐ More irritable ☐ Sleeping more ☐ Lost interest in toys/playing ☐ Reluctance to sit or lie down on cue	☐	☐
Does your dog walk differently than he/she once did? Check all that apply: ☐ Slow to rise ☐ Reluctant to walk ☐ Limping ☐ Favoring one side	☐	☐
Do you notice any other behavioral changes that may indicate your dog feels different or is in pain? If yes, please describe: _____ _____ _____ _____	☐	☐

Particularly with clients who have younger dogs and cats, be sure to listen for or educate clients about the common myths or excuses used to dismiss any signs of pain. It's easy to brush off pain when it's short-lived or intermittent.

People fool themselves that pain is temporary and mostly meaningless by believing:

- He is having growing pains.
- He must have tripped and twisted something.
- He must have pulled a muscle.
- He must have crashed into something.
- He must have played too hard.
- It's nothing. It'll get better.
- We'll just wait and see.

The truth is that these little moments in a younger pet's life could be the very early stages of OA that can go ignored until middle age or a pet's elderly years when the pain and joint dysfunction hits a critical level. Make sure clients understand that a little limp in a pet just a few months or a few years old is still important and worthy of recognition and veterinary attention—especially in breeds prone to joint trouble.

PART 2: OA assessment in veterinary practice. Looking for signs of pain in all patients at every visit is an important first step in proactively addressing OA and mobility issues in pets. Even when pets arrive for a typical wellness visit, put protocols in place to screen each one for possible pain—as if checking a vital sign.

In the best possible scenario, every single veterinary team member looks at arriving and departing patients for any hints of trouble. This may include the opportunity to watch pets get out of the car, perhaps from the front desk. It can include paying attention to how easily pets lie down or stand up in the lobby or how they move into the exam room. If your practice features video cameras outside and throughout the facility, team members might even catch a glimpse of pain-related movements on video monitors.

If time to convey pain information between veterinary team members feels too tight, consider developing

some sort of visual shorthand to indicate to the attending veterinarian that someone on the team noticed possible pain. Examples might include marking a "P" or putting a certain colored sticky note on the chart.

In addition to general pain awareness, add OA exam checklists or protocols based on the pet's species, age, and possible stage of OA to patients' charts. For example, in dogs the four stages of OA look like this:

- **Stage 1:** Growing dogs or young adult dogs show intermittent signs (lasting a few seconds or a few minutes).
- **Stage 2:** Young adult dogs have intermittent signs lasting a few hours.
- **Stage 3:** Adult dogs become exercise intolerant and show difficulties performing activities of daily living.
- **Stage 4:** Older dogs lose the ability to walk.[13]

While there is no known way to prevent OA at this time, intervention during the earliest stages can delay progression into later and more debilitating stages. We do know, however, that certain factors accelerate the progression of OA, so keeping tabs on these indicators in pets' earliest exams can lead to earlier diagnosis and intervention:

- Excess weight
- Joint trauma
- Joint instability (hip)
- Joint subluxation (elbow)
- Joint immobilization[14]

For simplicity's sake, you can think of OA as either early stage or late stage because the clinical signs and the treatment plans typically fall into those two categories.

Clinical observation begins with observations of resting and standing positions. Watch for gait while walking or trotting. Take the pet out into the hallway if necessary to fully assess straight-line movement and tight turns.

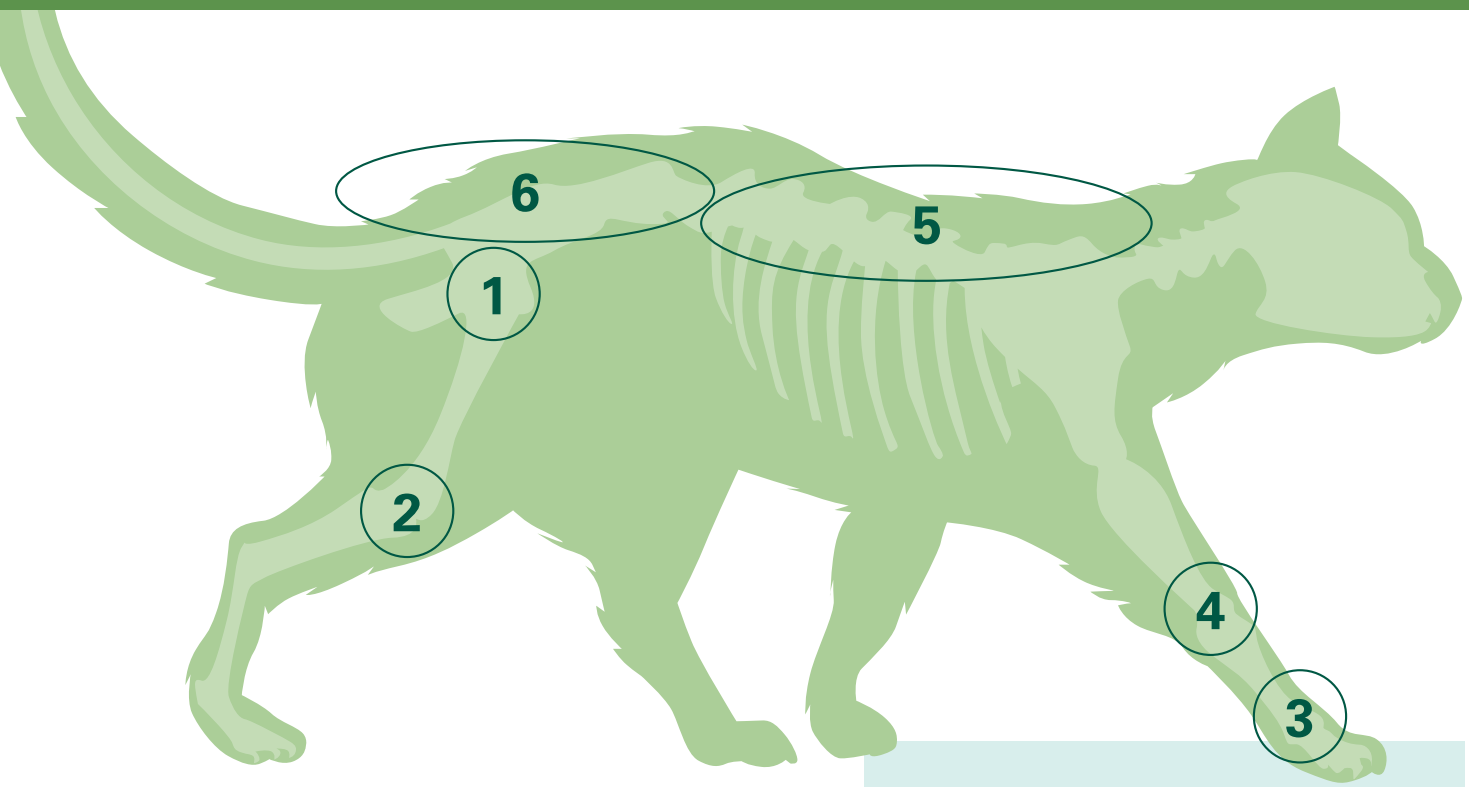
Make notes based upon general palpation about muscle mass, tone, and sensitivity across the body.

Radiographic assessments also play an important role in some diagnostic scenarios, but keep in mind that biochemical and ultrastructural changes of OA (during cartilage degeneration) happen long before anything shows up on such diagnostic tests.

When assessing OA through the palpation of joints, look for patterns of changes in:

- Crepitus
- Range of motion
- Effusion
- Pain response to palpation
- Instability[15]

13. Marcellin-Little, D. "Managing OA Over a Lifetime."
14. Lascelles, B.D. and Marcellin-Little, D. "Pain Workbook: Assessing and Managing Patient-Specific OA Pain."
15. Lascelles, B Duncan, Marcellin-Little, Denis, "Pain Workbook: Assessing and Managing Patient-Specific OA Pain"



Osteoarthritis in Cats

Frequently affected joints in cats:

1. **Hip**
2. **Stifle**
3. **Tarsus**
4. **Elbow**
5. **Thoracolumbar**
6. **Lumbosacral area**

OA in cats is usually bilateral. Cats rarely limp. Instead, cats show these signs of pain:

- Appear stiff
- Have a less fluid gait
- Become less active (especially at night)
- Jump less
- Don't jump as high

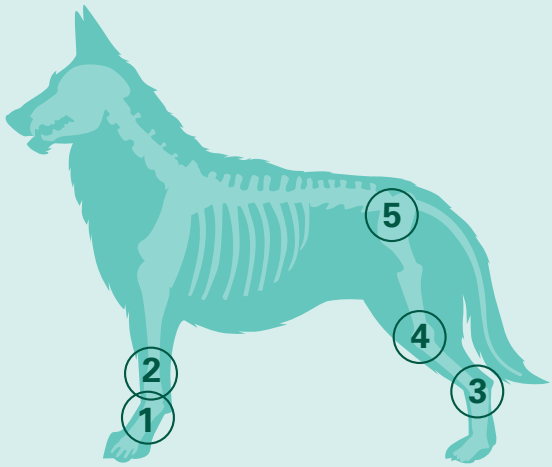
OA-related behavior changes = resistance to:

- Handling or being picked up
- Petting
- Stroking back or limbs

SOURCE
2015 AAHA/AAFP Pain Management Guidelines for Dogs and Cats

Signs of Osteoarthritis in Dogs by Joint

1. **Carpus**—loss of flexion, laxity in extension
2. **Elbow**—loss of flexion but not extension
3. **Tarsus**—loss of flexion leading to loss of tarsal flexion; several types of joint instability
4. **Stifle**—even without drawer movement, effusion, and fibrosis
5. **Hip**—extension, instability (in young dogs), crepitus



SOURCE
Lascelles, B. D. and Marcellin-Little, D. "Pain Workbook: Assessing and Managing Patient-Specific OA Pain."

Multimodal Considerations
for Pain Management and Mobility

The sooner clients recognize pets' pain and bring it to veterinary attention, the sooner you can create patient-specific treatment plans. Everyone is thrilled that pets now live longer. Veterinary professionals simply need to work together to help all those years—the early ones and the late ones—remain as comfortable as possible since even intermittent or small nagging aches affect quality of life. In many cases, pain also affects mobility and activity level, which only get worse as activity levels fall over time.

Rather than be staunchly prescriptive in saying there is only one way to treat OA pain in pets based on species or stage, look for ways to integrate foundational strategies with other multimodal options that make the most sense for each individual pet and that pet's lifestyle.

In all cases where you've diagnosed OA-related pain in companion animals, a few strategies provide the foundation for slowing down the progression of the disease, minimizing compounding factors, and improving the quality of life. In almost all cases, that means starting with diet and exercise considerations.

Diet is an environmental factor that affects growth rate in young dogs and weight management in all pets. Proper nutrition plays an important role in how developmental diseases impact breeds prone to issues. An excess intake of calories and protein, for example, along with too much dietary calcium through supplementation, may cause puppies to grow too much and too fast. This rapid skeletal growth can result in a mismatch between the puppy's developing body weight and skeletal growth, which then overloads the skeletal structures.[16] That's a bad combination for puppies prone to developmental joint diseases.

More pets continue to get fat, too. That's not helping incidence rates of OA at all. In the five years leading up to 2012, there was a 37% increase in overweight dogs and a 90% increase in overweight cats.[17] In addition, the Association for Pet Obesity Prevention found that 22% of dog owners and 15% of cat owners considered their pets to be normal weight when the pet was really overweight or obese. The association calls this phenomenon the "fat pet gap."

That makes diet an important place to start with OA cases.

Proper nutrition plays an important role in how developmental diseases impact breeds prone to issues.

16. Richardson, D.C. Skeletal diseases of the growing dog: Nutritional influences and the role of diet. Notes from Western Veterinary Conference 1995.
17. Association for Pet Obesity Prevention. February 6, 2012. Big Pets Get Bigger: Latest Survey Shows Dog and Cat Obesity Epidemic Expanding.

Controlled exercise is an essential component to successfully manage OA pain and mobility in both early and later stage OA. Veterinary teams need to instruct and coach clients about the importance of routine, appropriate exercise for maintaining mobility and other health measures, but without causing undo joint stress or additional injury.

Exercise concerns likely come up in two different ways with clients:

1. Super active families who want young pets, dogs specifically, to start doing everything right away. This might include runners who want puppies to run with them. At the right age and with the right training, that might be a good idea, but you can help clients understand that a six-month-old Lab shouldn't be banging out three miles a day on pavement while he is still growing.

2. Less active families who might accidentally set up pets for "weekend warrior" injuries. You can help clients understand that suddenly letting a somewhat sedentary two-year-old dog leap off the dock again and again during a long weekend getaway might result in an injury that sets the dog up for OA down the road.

In addition to exercise injury prevention, pets diagnosed with OA need routine stage-appropriate exercise:

- Early OA stages: moderate exercise daily, with perhaps specific fitness plans for more active pets
- Later OA stages: short sessions of moderate exercise a few times each day, perhaps additional low-impact conditioning (swimming, underwater treadmill, or specific rehabilitation exercises) under the direction of a qualified professional

Many tend to think multimodal means only using more than one type of pain-relieving medication. It's so much more than that, however. Other intervention options can be combined based on OA stage and severity of signs so that your recommendations remain proportional to each case and each situation. In addition to setting expectations and plans for diet and exercise, look for multimodal strategies that make sense for the pet and the client from the many options.

By matching increasingly complex therapeutic strategies as the disease progresses, you help set clients up for success because the earlier and simpler strategies are easier to sustain before resorting to more demanding treatment options. In other words,

Veterinary teams need to instruct and coach clients about how regular, appropriate exercise is good for maintaining mobility and other health measures.

the level of necessary intervention increases as OA progresses from stage one through stage four.

The individuality of the decisions you'll make for each case and each patient likely also include details such as the form and dosing of any meds or supplements:

- Pills
- Chewables
- Liquids
- Palatability
- Number of doses per day

NSAIDs. NSAIDs remain the most commonly used classes of drugs for canine OA pain cases because they are the only prescription products with labeled claims for efficacy. There are now NSAIDs approved for OA in cats. However, they are indicated only for short-term use.

With canine patients, veterinarians have the option to use NSAIDs both in short-term and long-term scenarios because of their rapid and predictable effectiveness for pain associated with OA.

Other pain meds. These include:

- Adjunctive analgesics (such as tramadol, amantadine, gabapentin, tricyclic antidepressants)
- Postulated disease-modifying drugs (systemic or local delivery)
- Chemical desensitization (local injection of drugs)
- New therapeutic drug categories[18]

For detailed information on how these pain medication classes work individually and together, consult the *AAHA/AAFP Pain Management Guidelines* (updated 2015).

Supplements. Increasingly, clients show interest in using nutraceuticals, and a majority of veterinarians are recommending supplements to support joint health in dogs and cats. Because supplements are not regulated in the same ways as foods and drugs, use due caution in making sure that the specific supplements suggested to clients meet your individual standards for quality control, research, cost, palatability, and convenience of dosing.

Glucosamine/chondroitin as well as Omega-3 fatty acids are the most common supplements used in OA cases. There are veterinary-specific supplements, including an Omega-3 supplement for cats, on the market. If you're going to recommend supplements like these, consider the method of action as well as ingredient quality in your recommendation, as functional ingredients.

Other modalities. Depending upon the malleability of the patient and the commitment of the clients, including their ability to bring the pet in for additional treatment appointments, veterinary teams can also add other pain-relieving modalities into the treatment mix:

- Acupuncture
- Physical therapy/rehabilitation exercises and treatments
- Nerve stimulation
- Cryotherapy
- Laser therapy[19]

Again, the *AAHA/AAFP Pain Management Guidelines* (updated 2015) is a good source for information on these additional modalities.

18. Lascelles, B. D. "NSAIDs in OA Management: Risk-Benefit Evaluation."
19. *2015 AAHA/AAFP Pain Management Guidelines for Dogs and Cats*

Critical Success Factors
for the Pain Management Plan

Once a pet is diagnosed with OA at any stage, veterinarians can create a detailed pain management plan with these goals:

- Create an individualized strategy based on patient's OA stage, signs, quirks, and family lifestyle
- Alleviate pain
- Slow down disease progression
- Increase stage-based exercise to improve mobility in the long term, which can fend off loss of muscle mass that often comes with later OA stages
- Mitigate any compounding factors (weight, diet)
- Set up clients' roles and expectations for better compliance and success

Elements of a good pain management plan include foundational recommendations about diet, weight management, and stage-appropriate exercise. Those are your staples. Every pain management plan will address them in some way. For example, in the early stages of OA, pets typically remain fit with good mobility and muscle mass. This gives you many more options for exercise recommendations than a pet with a later stage of OA, who is already showing loss of muscle mass and mobility challenges.

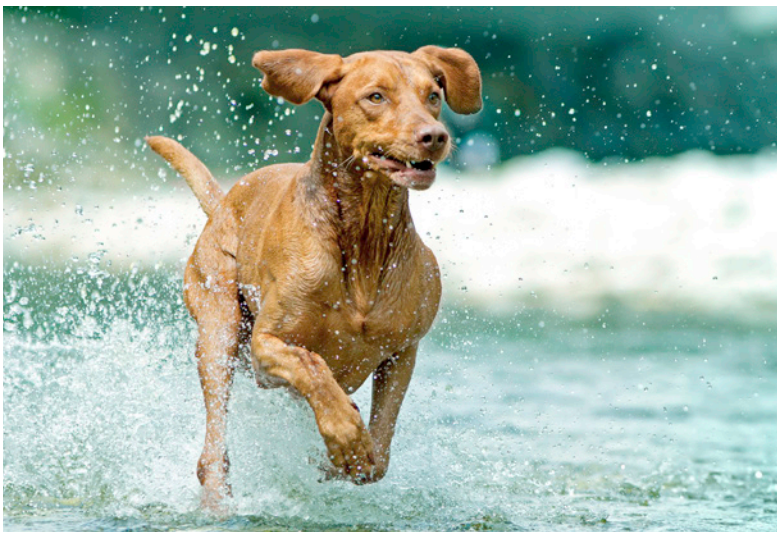
Questions to Ask. Once you've determined those baseline strategies, consider several factors about the patient and client. Ask yourself these questions.

- Is an NSAID appropriate at this time? (Hint: The answer is often "yes," at least in the short term.)
- Which NSAID is best suited to this case and this pet, if NSAIDs become one of your pain management plan recommendations?
- What other pain management modalities are appropriate, accessible, and doable for this case and client?
- What personality quirks or other practical details limit options? These might include that the pet is a terrible pill-taker or that the only underwater treadmill is 75 miles away.

Specific Recommendations. Pain management plans require discipline and specifics. Don't toss out platitudes like, "Your pet should get more exercise." Instead, be almost too specific. Phrase recommendations like this: "Take your dog on two 15-minute walks per day, every day."

Follow-up Plans. Make sure clients understand that pain management isn't a one-time visit, one-time fix. Explain and set expectations for the kinds of ongoing information you need them to share with you and how often and how many recheck visits will be needed to monitor and evaluate the plan's success. These visits may include blood work, depending upon the pain medications prescribed.

Set expectations, as well, for when and why clients should contact you in between planned recheck visits, if they notice any changes in the pet, such as more signs of pain, increased limping or mobility issues, any physical or behavioral changes that may indicate a side effect, and any problems that come up with implementing the pain management plan at home.



In the early stages of OA, pets typically remain fit with good mobility and muscle mass.

5 Advantages of NSAIDS

+	1	**Well-researched and proven modalities**
+	2	**Control pain and inflammation, which facilitates ongoing exercise and mobility**
+	3	**Work effectively, rapidly, and predictably against pain associated with OA**
+	4	**Provide predictable pain relief that helps control early deterioration of the musculoskeletal system**
+	5	**Useful at all stages of OA** By alleviating pain (at all OA stages), they can: • Help reduce loss of joint motion (stage 2) • Help reduce loss of muscular and cardiovascular fitness (stage 2) • Help reduce the onset of demeanor changes associated with chronic pain (stage 2) • Help reduce the onset of exercise intolerance (stage 2) • Help reduce the loss of mobility (stages 3 and 4) • Help recover mobility (stage 4)

SOURCES:

- Lascelles, B Duncan, "NSAIDs in OA Management: Risk-Benefit Evaluation."
- Marcellin-Little, Denis, "Managing OA Over a Lifetime."

5 Factors to Consider in Selecting an NSAID

These considerations may affect the NSAID you recommend:

1. **Form and convenience.** Match the NSAIDs form to the patient based upon:
   - What the pet will tolerate receiving
   - The family's lifestyle and how that might dictate dosing times and routes
2. **Palatability.** NSAIDs can work only if the pet will take them. Pay attention as well to whether the NSAID requires it to be taken with or without food. This may affect your choice if the pet isn't a good pill-taker and the pill needs to be taken without food.
3. **Weight restrictions.** These factors can affect dosing accuracy, which is important both to efficacy and safety.
4. **Value (beyond cost alone).** Pay attention to the level of information and support available from the companies that market NSAIDs, including research, staff training, technical support, and satisfaction guarantees.

Pain Management Plan Worksheet

Date: ____/_____/_____

Pain Management Plan for _____.

DIAGNOSIS

Dr. _____ has diagnosed your pet with:

- ☐ Stage 1 Osteoarthritis
- ☐ Stage 2 Osteoarthritis
- ☐ Stage 3 Osteoarthritis
- ☐ Stage 4 Osteoarthritis

TREATMENT

Based on your pet's individual needs, lifestyle, and personality, we recommend the following strategies with these goals:

- Easing pain
- Slowing down disease progression
- Addressing diet, weight or growth management, along with regular exercise, which can help with pain control and mobility over time

- ☐ Dietary or feeding instructions _____
- ☐ Weight goals _____
- ☐ Exercise _____
- ☐ Recommended supplements/nutraceuticals _____
- ☐ Prescribed pain medication(s) _____
- ☐ Additional pain relief treatments, including outside referrals, if needed
  - ☐ Acupuncture
  - ☐ Physical therapy/rehabilitation exercises and treatments
  - ☐ Nerve stimulation
  - ☐ Cryotherapy
  - ☐ Laser therapy
- ☐ Corrective surgery, if needed.

We'll be in touch in the coming days to see how this treatment plan is working. Please call us with any questions or concerns, including if you see additional changes in your pet's behavior or pain level.

Your first recheck appointment is scheduled for: _____

Thank you for being our partner in this pain management plan.

Client
Education

For clients to be true partners in your recommended pain management plans, you'll need to take some key steps to educate them and raise their awareness of pain in pets so that they know the signs and will actively participate in proactive treatment.

CLIENT EDUCATION STEP 1:

Raise awareness of pain in pets.

Help clients recognize joint pain by raising awareness of how:

- Common OA is in both dogs and cats
- Early it can start in young pets
- Early treatment can slow progression

Encourage all clients—especially those with breeds prone to joint trouble—to schedule an exam if they notice a change in their pet's behavior that may indicate pain.

You get bonus points for showing clients how to regularly handle and palpate pets' joints at a young age so that the pets are more relaxed and cooperative patients if joint trouble does crop up.

Roles and Responsibilities

The entire veterinary team has responsibility for promoting pain awareness to clients.

DVM—Veterinarians take the lead in discussions with pet owners about DJD and OA, especially in breeds prone to trouble.

TECH—It's important for veterinary technicians to be confident talking about OA and signs of pain with the veterinary team and clients alike. Veterinary technicians play a lead role in client education to help clients understand what signals of pain they should be attentive to in their pets and the importance of early intervention.

CLIENT—Unless clients learn to recognize and act upon signs of pain in pets, the veterinary team won't have the opportunity to get involved. Ultimately, it's the veterinary team's responsibility to help make pet owners aware of their pets' behaviors and possible signs of pain.

CLIENT EDUCATION STEP 2:

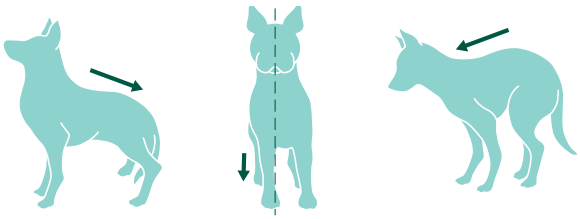
Teach clients to watch for signs of pain at home.

Dogs with OA place their limbs in unusual positions:

- Forelimbs are flexed, like cats resting with their front legs tucked under their chest
- Back legs are crossed or held in an excessively flexed or extended position

Dogs with OA also sleep in awkward positions:

- Back legs pointed outward from the body to prevent hip joint displacement
- Contorted back or neck positions



While standing, dogs with OA often:

- Shift weight from side to side, away from a single painful limb
- Shift weight from front to back, away from two painful forelimbs
- Shift weight back to front, away from two painful hindlimbs
- Move their head up and down to decrease the weight placed on an affected forelimb
- Move their pelvis up and down to decrease the weight placed on an affected hindlimb
- Move their pelvis side to side to decrease the hip motion required in walking

SOURCE:
Lascelles, B. D. and Marcellin-Little, D. "Pain Workbook: Assessing and Managing Patient-Specific OA Pain."

Roles and Responsibilities

The entire veterinary team is responsible for observing all patients and reporting any signs of possible pain.

RECEPTION—Watch pets' movements upon arrival and while in the lobby; report any odd gaits or pain behavior to the veterinarian or veterinary technician. Also reinforce veterinarian's recommendations at the end of the visit.

TECH—Look for and report to the veterinarian any potential signs of pain observed while checking vitals. Also reinforce veterinarian's recommendations.

DVM—Perform exam and palpations, including any diagnoses, prescriptions, and discussions with owners about OA and pain findings.

CLIENT—Stay vigilant of pet's pain status and movement during treatment and continue to monitor the pet for changes in behavior, mobility, or signs of pain after and between visits.

CLIENT EDUCATION STEP 3:

Help clients understand the benefits of proactive treatment (diet, exercise, pain management) and compliance with your treatment plans:

- Set realistic exercise goals based on the pet's OA stage and signs.
- Explain how any prescribed pain meds work and why regular dosing matters, including instructions on what to do if a dose is accidentally missed. Also discuss any potential side effects of any pain medications and note that the pet owner should contact the clinic with any concerns.
- Specifically ask if clients feel they'll be able to do what you ask and encourage them to alert you right away if they hit any snags at home, such as the pet not taking the meds or a change in the client's work schedule that makes getting the pet out daily for moderate exercise suddenly harder.

Roles and Responsibilities

The entire veterinary practice team is responsible for communicating and supporting recommended pain management strategies.

DVM—Be clear and concise about pain management recommendations and about potential side effects of the recommended treatment.

TECH—Ask and answer questions to confirm that clients understand the pain management recommendations. Take the lead role in scheduling and implementing follow-up visits and phone calls.

RECEPTION—Make sure clients go home with any recommended pain management meds. If clients decline the meds at checkout, alert the veterinarian.

CLIENT—Monitor the pet's response to pain management plans and meds and report any changes in the pet's response, health, or behavior that might indicate adjustments or changes are needed.

CLIENT EDUCATION STEP 4:

Provide support and case management during follow-ups.

When doing follow-up calls and recheck appointments with clients, be sure to praise them for being involved with at-home care, including dietary management, exercise routines, and giving meds.

Here's the ideal outline for following up on OA and pain management cases:

- **A day or two after starting a new pain management plan**, call the client to ask how the pet is doing, ask if the client has any questions, etc. Probe for any trouble spots, including possible side effects.
- **A week later,** schedule a follow-up visit to check on what results (if any) the client is seeing or you can observe upon exam. Ask how the

pain management plan is going, including diet, exercise, and meds dosing.

- **3–4 weeks later**, do an additional re-evaluation visit to check on progress toward pain management goals.
- **Regularly, as needed**, plan and schedule screenings for blood work (if the patient is on an NSAID) as well as to re-evaluate weight, muscle mass, and mobility.

Roles and Responsibilities

Once a pain management plan goes into action, the entire veterinary team can play a role in supporting its success.

DVM—Be specific about pain management plan details. Example: "Walk your dog 10 minutes twice a day," versus something generic like, "Walk your dog daily" or "Walk your dog more frequently."

TECH—Take the lead on making follow-up calls, answering client questions, providing encouragement and support, and scheduling all follow-up visits.

RECEPTION—Help with any meds or dietary refill orders, as necessary.

CLIENT—Be open and continuous with communication and pain management plan execution. Take the lead on monitoring and keeping written notes, if necessary, on how the treatment plan is working, how the pet is progressing, and what challenges (if any) come up.

The entire veterinary practice team is responsible for communicating and supporting recommended pain management strategies.

Key Takeaways

Share *Mobility Matters: A Practical Guide to Recognizing and Managing Joint Pain in Dogs and Cats* with your teammates to spur conversations about how you'll implement joint pain screening and pain management plans for your patients.

Successful pain management comes from the confident use of these strategies:

- Educate clients to recognize pain and to take it seriously because early intervention matters.
- Involve every member of the veterinary team in pain recognition and client education.
- Take full advantage of multimodal opportunities for managing pain.
- Create individualized patient pain management plans based on stage, lifestyle, and pet's specific needs.
- Provide strong and supportive follow-up.
- Encourage ongoing and open communication with clients on what's working and what's not with the pain management plan.

Finding and Treating Pain in Dogs and Cats

Who's Responsible?	Client	DVM	Technician	Receptionist
Recognition	✓	✓	✓	✓
Diagnosis		✓		
Management	✓	✓	✓	
Follow-up	✓	✓	✓	

Boehringer Ingelheim

As the second largest animal health business in the world, Boehringer Ingelheim is committed to improving animal health. Innovative medicines for animals are what the research-driven, pharmaceutical company Boehringer Ingelheim Animal Health stands for. With more than 10,000 employees worldwide, Boehringer Ingelheim Animal Health has products available in more than 150 markets and a global presence in 99 countries.

AAHA®
The Standard of Veterinary Excellence

Established in 1933 by leaders in the veterinary profession, AAHA is best known for its accreditation of companion animal veterinary practices. To become accredited, companion animal hospitals undergo regular comprehensive evaluations by AAHA veterinary experts who evaluate the practice on approximately 900 standards of veterinary care. AAHA also develops publications and educational programs and resources designed to help companion animal hospitals thrive. Today, more than 3,700 practice teams (15% of all veterinary practices in the United States and Canada) are AAHA accredited. For more information about AAHA, visit aaha.org.