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Nutritional Management of Osteoarthritis in Pets

Osteoarthritis (OA) is a lifelong, progressive, and painful joint disease that affects $\approx 20\%$ of all dogs >1 year of age and $\approx 60\%$ of cats >6 years of age.^{1,2} In its advanced stages, OA can lead to debilitating chronic pain and lameness, sometimes severe enough to lead to euthanasia.¹ However, early detection and a comprehensive management plan can make a significant impact on patient quality of life and disease progression.

“OA is often thought of as a disease of old age but can actually start in pets as young as 1 year of age.”^{1,3}

Recognizing Early Signs of Osteoarthritis

OA often develops gradually and, in its early stages, can be subtle. Owners may think their pet is just “slowing down,” but changes like the following may actually indicate joint pain: lagging on walks, less interest in play, hesitating on stairs, and avoiding jumping on counters (cats) or in the car (dogs).

When clients mention these concerns, it is important to evaluate their pet's joint health. Providing screening questionnaires before every wellness visit can give owners time to reflect on changes at home and keep OA top of mind before signs become severe.^{3,4}

Why Good Pets Get Bad Joints

OA is often thought of as a disease of old age but can actually start in pets as young as 1 year of age.^{1,3} Developmental joint conditions (eg, hip dysplasia) create abnormal pressure on the malformed joint, leading to greater wear from an early age.^{1,3} In addition, excess weight leads to excess stress on joints and cartilage, making obesity a significant risk factor for OA.^{1,3-5} Joint injury, genetics, and diet can also predispose pets to developing OA sooner.^{1,3} Detecting OA in its early stages can maximize the benefits of treatments and interventions.

Developing a Multimodal Strategy to Support Pets with Osteoarthritis

Although OA has no cure, there are many interventions that can help. Treatment is aimed at managing clinical signs and slowing disease progression. Management strategies typically

involve a combination of weight optimization and management, exercise, therapeutic foods, supplements, physical therapy, and medications (eg, NSAIDs, opioids, monoclonal antibody therapy).^{1,3}

Achieving & Maintaining a Healthy Weight

A weight management plan should be tailored to each individual patient and formulated to help them achieve or maintain a healthy weight. A lifetime study of Labrador retrievers has shown that a 25% calorie restriction can delay the onset and decrease the severity of OA as compared with non-calorie-restricted dogs. The non-calorie-restricted dogs also required pain medications 3 years sooner as compared with calorie-restricted dogs.⁵ Portion control and feeding on a consistent schedule are essential components of a successful weight management plan.

Using Targeted Nutrition for Joint Health

Evaluating a food, including its impact on body condition and its nutrient profile, is critical to developing a multimodal management strategy. The right nutrient profile can aid in a patient's natural ability to burn more fat while helping them feel full with an ideal balance of protein, carbohydrates, and fiber.

The right nutritional strategy should not only include a weight management plan but should also incorporate key nutrients that promote joint health, such as:

- **Omega-3 fatty acids:** Reduce inflammation throughout the body, including the joints, improving weight bearing and reducing pain in patients suffering from OA¹
- **Glucosamine/chondroitin:** Cartilage building blocks that provide material to help maintain cartilage structure¹
- **L-carnitine:** Essential nutrient that helps the body turn fat into energy and maintain lean body mass¹
- **Antioxidants (eg, vitamin E):** Help combat oxidative stress that can lead to increased inflammation in the body⁶

All the Benefits in One Bag

Foods formulated specifically for joint health often include these key ingredients to support joint health while avoiding the cost and hassle associated with dosing individual supplements. Based on a patient's individual needs, a range of therapeutic foods may be considered. Hill's Pet Nutrition has created a

portfolio of foods that provide nutritional support for pets with OA along with a range of other common conditions:

- **Hill's Prescription Diet j/d Chicken Flavor (dogs):** Clinically proven nutrition enriched with glucosamine, chondroitin sulfate, and omega-3 fatty acids to improve mobility in as few as 21 days.^{7,8} This food is also available in another formulation offering smaller kibble bites.
- **Hill's Prescription Diet Metabolic Weight + j/d Chicken Flavor (dogs):** Clinically proven nutrition to help dogs naturally lose weight by activating their metabolism and improve mobility in as few as 21 days.^{7,8}
- **Hill's Prescription Diet k/d + j/d Chicken Flavor (dogs and cats):** Nutrition to help protect vital kidney function and increase ability to run, walk, and jump.^{7,8}
- **Hill's Prescription Diet Brain Care + j/d (dogs and cats):** Clinical nutrition to support cognitive dysfunction and compromised mobility in dogs and cats.^{7,8}

Conclusion

Early intervention for patients with OA should include a carefully balanced diet tailored to their needs. The right nutrition plays a crucial role in helping patients reach and maintain an ideal weight and provides key nutrients that support joint health, with the goal of slowing the progression of disease, reducing joint pain, and improving quality of life.

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