



Overview

Osteoarthritis, degenerative joint disease, and arthritis are all general terms that refer to damage inside a joint. A normal healthy joint has perfectly smooth cartilage surfaces and a very small amount of fluid, which helps lubricate the joint to allow smooth movement. When a joint is damaged and osteoarthritis results, the cartilage becomes soft or rough, and the fluid loses viscosity. These changes can result from any kind of damage to a joint, including developmental problems like elbow or hip dysplasia and osteochondritis dissecans (OCD), infection, injury like a cruciate ligament injury or an articular bone fracture, and occasionally systemic or immune-mediated disease. Osteoarthritis can be very mild, with only subtle signs visible on x-ray and no associated symptoms, or severe with debilitating discomfort and weakness. In general, osteoarthritis occurs as a self-perpetuating cycle, and treatment is intended to slow this progression of ongoing cartilage damage and joint inflammation.

General recommendations

Dogs and cats who have arthritis benefit from being lean or a little bit thin and should definitely never be allowed to become overweight. Excess weight puts much more stress on joints that are already compromised, perpetuating the cycle of worsening inflammation and discomfort.

Maintaining an active lifestyle is important for pets with arthritis. Swimming is very beneficial, as are daily walks and hiking.

Chondroprotectives

Glucosamine-chondroitin supplements are important for nearly all patients with joint problems or osteoarthritis. Many brands are available, and it is very reasonable to use over-the-counter glucosamine chondroitin supplements. Different products vary widely, though, in both the accuracy of their content and how well they are absorbed after being swallowed. In addition, there is evidence that chondroitin should be low molecular weight and that Manganese should be present. One of the few products that meets these criteria is Cosequin DS, which is a veterinary product that is available over-the-counter. The same company also makes Dasuquin, which is a newer generation glucosamine-chondroitin and is available only through veterinarians. The chondroitin in Dasuquin is still low molecular weight, but Dasuquin does not contain Manganese. Instead, soybean/avocado unsaponifiables are used, which may actually be an improvement, but this has not been validated.



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Osteoarthritis

Gabapentin: this prescription medication can be given longterm, in order to keep patients comfortable without relying on non-steroidal medications. There is no ceiling to the dose, although changes should be made gradually. Its mechanism of action isn't understood, but it seems to act at NMDA receptors in the central nervous system, decreasing "wind-up pain" to control longterm arthritis discomfort.

Omega 3 fatty acids: fish oils have recently been shown to help decrease inflammation, which is part of the cycle that drives the ongoing process of arthritis. Product quality varies widely between brands, and it's important to know that dogs and cats should be given omega 3 products rather than omega 6 or other forms. Hills prescription j/d diet is a reasonable source, but this food is very high calories and has to be fed in much smaller amounts than other foods, especially since maintaining a thin body condition is crucial for joint comfort. *Nordic Naturals is a very good source for omega 3 fatty acid supplements.*

www.nordicnaturals.com

Hyaluronic acid: this molecule is part of the fluid that is present in joints and around tendons as a lubricant. Arthritic joints have less and inferior quality HA. If you are interested in trying this supplement, please only look for the HyaFlex brand, because other brands with low or medium molecular weight HA may actually be detrimental.

www.hyaflex.com

Amantadine: this is a prescription medication that is given once daily. It acts inside the nervous system to decrease pain sensitivity. It has a measurable impact in some dogs, especially those who are relying on NSAIDs for comfort, and has minimal side effects.

Microlactin: although very little is known about this supplement, there may be a demonstrated benefit in the future. It's intended to decrease inflammation (which drives joint destruction in arthritis) by triggering the immune system directly. There is only one research paper about this product, but it evaluated function in arthritic dogs using force plates to measure weightbearing, and the conclusion was that approximately 2/3 did better with Microlactin.

www.patenthealth.com for FluidJoint

CanEVA: elk velvet antler is suggested to improve weightbearing and muscle strength, which of course are compromised by arthritis and lameness.

www.elkcountrry.ca



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Osteoarthritis

Adjunctive Treatment

Physical therapy: laser treatment isn't well-researched in veterinary patients, but seems to improve arthritis comfort in people. Similarly, targeted pulsed electromagnetic field (tPEMF) treatment changes microcurrents in tissue in order to decrease pain perception. In people, there is a well-established decrease in pain and reliance on pain medication. In addition, acupuncture and low impact aerobic exercise like underwater treadmill can be valuable.

Stem cell therapy: stem cell treatment has been advocated recently for treating severe osteoarthritis, especially of the elbows, but published data is still scarce. We work with Vet Stem, and their website has detailed information about the process: www.vet-stem.com. Stem cell treatment is a relatively simple procedure requiring brief general anesthesia; the typical cost may be \$2,000 and reflects the expertise and equipment required for stem cell cultivation.

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Please call Dr. Arthur with any questions or concerns as they arise.