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Arthritis: Medications for Degenerative Arthritis

Degenerative joint disease is the number one cause of chronic pain in dogs and cats. The condition is the result of long-term stresses on a joint, either resulting from an old injury or from natural development of a poorly conformed joint. While surgery may be able to help in some situations, most of the time the degeneration of the joint cannot be reversed and treatment focuses on preventing progression of damage. Numerous products are available; some are best combined with others and some cannot be combined. What we do know is that arthritis pain is best addressed by what is called a multi-modal approach, meaning that several approaches combined yield better results than any single therapy.

WEIGHT LOSS IS THE MOST IMPORTANT PART OF MANAGING ARTHRITIS!!!

Slow-Acting Medications

Slow-acting drugs for arthritis ultimately improve joint function and help with pain relief, but they require a time frame of weeks to months to exert their effect. These products are typically what are called nutraceuticals, meaning that they are nutritional supplements that have medicinal properties. Most arthritis patients can benefit from their use and they are considered a basic starting level for joint care.

- These products are not likely to be helpful for spinal arthritis as the joint composition of an intervertebral disc (the joint of the spine) is totally different from those of other bones.
- These products often complement treatment with anti-inflammatory medications.

Glucosamine and Chondroitin Sulfate

These products are cartilage components harvested chiefly from sea mollusks. By taking these components orally, the patient is able to have plenty of the necessary building blocks needed to repair damaged cartilage. It is also felt that these products may have some anti-inflammatory properties separate from their structural uses. Unlike the anti-inflammatory medications described later on, these products do not produce rapid results; one to two months are needed for them to build up to adequate amounts.

Omega Three Fatty Acids

Certain dietary fats, typically cold water fish oils, have been found to have anti-inflammatory properties. While this finding has primarily been used in the treatment of itchy skin, many arthritic dogs and cats have also benefited from supplementation. These products require at least one month to build up to adequate amounts. Effects are not usually dramatic but can be helpful. It should be noted that the flax seed oil is readily converted to omega three fatty acids in the human body. This conversion is not so easy in the canine or feline body; only about 10% of the oil is converted. It is a waste to add flax seed oil to pet food; fish oils are needed. The appropriate dose is still somewhat controversial but the ratio of EPA (eicosapentenoic acid) to DHA (docosahexenoic acid) should be 3:2. The amount of Omega 3's should be 180mg/10#.

Joint Diet (J/D)

This diet is clinically proven to reduce pain in dogs with arthritis (about 80%). The diet contains very high levels of fatty acids, glucosamine chondroitin, and carnitine (to burn fat while maintaining lean muscle mass). We highly recommend this diet for all arthritic dogs!

MSM

MSM stands for methyl sulfonyl methane and represents another nutraceutical anti-inflammatory agent. The glycosaminoglycans that enable cartilage to soak up water and thus act as a cushion for articulating bones are all sulfates. The idea is to provide nutritional building blocks for cartilage repair. Beyond this, MSM seems to have anti-inflammatory properties and may act as an anti-oxidant.

Anti-oxidants and Free Radical Scavengers

Free radicals are harmful biochemicals that can attack us from external sources (such as pollution, sunlight, etc.) or we make them ourselves as by-products of oxygen use. These harmful little molecules are highly reactive and attack our structural proteins as well as cause production of assorted inflammatory proteins. One prominent theory of aging centers on free radicals with the idea that the damage free radicals cause to our brains, skin, joints etc. is the foundation of age-related debilitation. Anti-oxidants that are readily available include Vitamin C, Vitamin E, SAME, Superoxide Dismutase (S.O.D.) and others.

Fast-Acting Drugs

Non-Steroidal Anti-Inflammatory Drugs

The next mode of therapy is the NSAIDs, or non-steroidal anti-inflammatory drugs.

These medications act quickly by suppressing the inflammatory biochemicals that ultimately lead not only to the pain of arthritis but also to cartilage damage. None of these medications can safely be combined with one another. Furthermore, human NSAIDs tend to be toxic to pets, especially cats. While aspirin has some potential use in relieving joint pain, safer medications developed specifically for pet use have become the standard for joint pain management.

Older drugs, such as aspirin, inhibited both inflammatory prostaglandins as well as the “good” prostaglandins that help promote kidney circulation and intestinal health. Developing drugs that can distinguish between these enzymes has made it possible to develop safe anti-inflammatories for pets. Still, it is important to realize that classifying prostaglandins as “good” and “bad” is an oversimplification. Pre-treatment screening blood tests are still important before using an NSAID as a pre-existing kidney or liver condition may preclude their use. Monitoring tests typically are recommended every six months.

Corticosteroids

The corticosteroid hormones (prednisone) inhibit all production not only of prostaglandins but of leukotrienes as well. The result is relief from just about any type of inflammation: arthritis, itchy skin, immune-mediated disease and more, but in the long run side effects are problematic:

- immune suppression
- poor wound healing
- poor ability to grow hair
- excessive thirst
- muscle weakness
- predisposition towards the development of diabetes mellitus and cushings disease.

Using these medications to control arthritis pain is not desirable in the long term and one of the other medications mentioned would be a better idea.

Analgesics that are not Anti-Inflammatory

Sometimes the combination of a cartilage-protecting agent and an anti-inflammatory drug is not adequate

for pain control. There are several appropriate pain relievers that can be used in pets. These medications are strictly analgesics and do not modify the inflammation in the joint.

- Tramadol is a narcotic pain reliever similar in many ways to codeine.
- Gabapentin, originally an anti-seizure drug, has been found to have effects on chronic pain especially pain from pinched or inflamed nerves.

The medications can be used in cats and dogs alike and are compatible with all other the other medications listed.

Adequan Injections

This treatment does not fit readily into the classification system proposed above. Adequan is an injectable cartilage component called polysulfated glycosaminoglycan (mostly chondroitin sulfate. Adequan has numerous beneficial effects for the arthritis patient including the inhibition of harmful enzymes involving joint cartilage destruction, stimulation of cartilage repair, and increasing joint lubrication. These effects go far beyond simply providing plenty of chondroitin sulfate as a building block for damaged cartilage.

- Adequan is given as an injection and so is able to reach all joints but it seems to have a special affinity for damaged joints.
- Adequan is best given as a series of injections, twice a week for eight injections. After an effect is seen, Adequan injections are given on an as needed basis.

In conclusion, the arthritic pet has a large menu of medications to select from and while proper medication is an important part of therapy, weight control and proper exercise should not be forgotten.

Proper exercise is excellent physical therapy for the arthritic pet, as it is crucial to maintain as much muscle mass as possible to support the abnormal joint. Massage and gentle flexion/extension of the joint may also help. Remember, treatment for joint disease is likely to involve a combination of medications in addition to physical activity.