**Non-pharmacological modalities for arthritis management**

Arthritis is a common disease in dogs that involves inflammation of the joints. It involves the break down of the shock-absorbing cartilage found within joints, leaving the bones to rub against each other. Similarly to people, osteoarthritis in dogs and cats can be very painful and severely limit your pet's quality of life. There is no cure for osteoarthritis and reversing the disease process is not possible. There are numerous prevention, treatment and management options available, and they are often used together.

Effective management hinges on a careful balance of activity, nutrition, muscle development, weight management, medications and joint supplements. In many cases, various treatment modifications are necessary. Regular follow-up is necessary to gauge the success of therapy and to re-evaluate and add in other therapies as indicated by the specific needs of your pet.

**Weight:** Ensuring your pet is at an ideal weight is very important for managing many health conditions, including arthritis. Excess weight increases stress on the joints and muscles and increases the general inflammatory state of the body. Your veterinarian can help if you want your pet to lose weight.

- Attaining and maintaining a lean body conformation through proper nutrition and feeding practices is the most important cornerstone of effective arthritis management and prevention.

**Diet:** Normalizing body condition is critical, and feeding a joint support diet can help accomplish this. There is now a nutrient profile that can support the joints while helping to normalize body weight and condition.




**Exercise and rehabilitation therapy**

- Exercise is important in arthritic joints because it helps maintain a healthy body weight, promotes strong muscles, improves joint function/mobility and may reduce pain. A lifestyle of regular activity that includes activities that the pet is conditioned to is essential. The exercise should be low-impact so as to not put excess stress on the joints. Low-impact exercise includes swimming, short walks on a leash (ideally on varying terrain), nosework/scent detection, and underwater treatmills
- Therapeutic exercise: with a certified small animal physical rehabilitation practitioner can be very helpful. Traditional rehabilitation in pets has included activities such as passive stretching and

range of motion exercises, controlled walking through or around obstacles, swimming and underwater treadmills. There are a few different options for this type of physical therapy in the Lower Mainland, and your vet can help facilitate a referral if needed.

**Heat and Cold therapy**

- Cold: Applying an ice pack to your dog's joints might reduce the inflammation and numb the pain associated with arthritis. It is usually recommended after exercise or during a flare of increased inflammation or pain. Always wrap the ice pack in a towel before applying and never leave your dog alone with the ice pack.
- Heat: Applying heat to arthritic joints may decrease pain, relax muscles and increase the flexibility of the joint tissues. Heat is often recommended before exercise. Warm towels or heat packs can be used for this purpose

**Environmental modification:**

- Flooring: Ensure the flooring provides traction for the dog to stand up. For areas with smooth flooring, carpet runners or yoga mats can be helpful. This is especially important on stairs, but ensure that any rug/mat is secured to prevent slipping.
- Raised food bowls: Providing raised bowls allows your dog to maintain a standing position and be able to reach the food and water more comfortably
- Orthopedic dog beds: Look for supportive, orthopedic foam beds rather than fluff-filled beds.
- Pet ramps and stairs: may be helpful for getting your dog in and out of a vehicle, or on/off furniture

**Acupuncture**: Involves placing very small needles into specific locations that have been found to reduce pain and inflammation and improve circulation and nerve function. Acupuncture is very safe alternative to pharmaceuticals for the management of arthritis and often very well tolerated by our pets. Our acupuncture vets will usually start with a consult to discuss your needs, and then set a plan for ongoing acupuncture treatment (usually once weekly).

**Laser therapy:** Laser or photobiomodulation (PBM) therapy uses light energy to help decrease inflammation, decrease pain and accelerate healing. It can be used to treat various painful conditions, including arthritis pain. It is a non-invasive, very safe option for helping to manage arthritis pain. For most animals with arthritis, we usually start with treatments multiple times per week but then decrease to once weekly treatment.

**Additional devices:**

- Shoes or toe nail grips

- Harnesses, handles and special leashes: Many dogs need help getting up or some stability when walking down the stairs, etc. We have had many dogs use the “Help’em up Harness” company and highly recommend them (found at www.helpmeup.com).
- Grooming: keep toenails and fur between pads of feet trimmed short

## Medications for arthritis

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.

Pain medications are commonly used to treat arthritis. However, it is important to realize that none of these are without side effects that can potentially be very serious. It is important to use pain medications only at the recommended dose.

**Supplements:**

- Omega 3 fatty acids: Certain dietary fats, typically from cold-water fish oils, have been found to decrease inflammation present within arthritic joints. Salmon oil and commercially available joint diets all have therapeutic levels of omega 3 fatty acids that can be helpful for arthritic dogs. Plant-based omega 3 fatty acids are not as effective in dogs as fish-based ones.
- Joint supports: These products aim to provide some of the raw materials that the body uses to rebuild damaged cartilage and improve muscle mass. These products require weeks to build up in the body, so it takes a while to see effects. There are numerous supplements available.
    - Look for supplements containing glucosamine, chondroitin, MS


**Cartrophen:** Cartrophen is a medication given by injection that helps slow the progression of arthritis and promotes joint health. It slows the breakdown of cartilage in joints, stimulates the body's production of cartilage and stimulates the body's production of joint lubricant. It is very safe and there are very few potential side effects to this medication. The injections can be given at the vet clinic or by clients at home. Up to 80% of animals with arthritis will show a positive response to Cartrophen, but it can take up to two months to see full effects.

**Librela/Solensia :** Librela and Solensia are innovative, monoclonal antibody therapies. They target and neutralize nerve growth factor (NGF), a protein that stimulates pain in dogs and cats with arthritis. They are given by subcutaneous injection (like a vaccination) once monthly and have the potential to alleviate the pain associated with arthritis for a whole month, with very minimal potential side effects. These treatments can be used in animals with almost every other health issue, including kidney/liver disease, gastrointestinal issues, and cancer. They can also be used in conjunction with all other medications.

**Non-steroidal anti-inflammatories (NSAIDs) :**

- These medications not only relieve pain but they do so by actually altering the disease process. They work by suppressing the effects of prostaglandins. Prostaglandins are important mediators of inflammation and pain in joints. There are “good” prostaglandins that one needs to maintain kidney and stomach circulation, and “bad” prostaglandins that are involved in joint inflammation. Different NSAIDs impact the two types of prostaglandins differently. Bloodwork to monitor kidney and liver values on a regular basis (every 6 months) is recommended for patients on these medications to limit potential side effects. Effects of these medications are usually seen almost immediately after starting the medication. NSAIDs are usually given as once daily oral medications (or decreased to the lowest effective dose).
- As with any medication, adverse side effects can occur, specifically in the gastrointestinal, liver and kidney systems. Often, we will advise blood tests be performed prior to NSAID therapy and periodically throughout treatment.
- Meloxicam (Meloxadin, Metacam), Deramaxx, Onsior: The most commonly used NSAIDs, Impact both “good” and “bad” prostaglandins to some degree.
- Galliprant: A newer anti-inflammatory drug that targets the prostaglandins produced in damaged joints, and does not impact the “good” prostaglandins, meaning that the potential adverse effects that can be seen on kidneys, liver and gastrointestinal tract with other traditional NSAIDs are not seen with Galliprant. Galliprant is safe for animals who have liver or kidney disease.




**Pain relievers:** Straight pain relievers do little to alter the underlying disease process but they do help with the pain. They can be combined with each other and are often used in conjunction with NSAIDs. Some of these medications have some potential for drowsiness, so it is important to find the dose that relieves pain and improves mobility without making the pet too sleepy.

- Gabapentin: This medication is particularly beneficial for neurological/spinal pain as it alters how pain is transmitted in the spinal cord. It also has anti-anxiety effects. This medication is very safe, with a wide possible dosing range.
- Acetaminophen (Tylenol): This is another pain-relief medication that is generally well tolerated by dogs. It is very toxic to cats. Ask your vet for dosing instructions before giving this medication.
- Tramadol: Frequently used in addition to NSAIDs because it has very little severe side effects. Recent evidence shows that dogs do not effectively break this medication down, and in many cases this medication does not provide a strong level of pain relief in dogs.
- Amantadine: This medication helps reduce wind-up pain, in which chronic pain has sensitized nerves to a point where experiences that should not be painful become painful. This sensitization phenomenon happens after pain has gone unrelieved for a long time. There is some potential for sedation with this medication.
- Low-dose ketamine: Ketamine is a unique type of pain-relieving medication that in addition to being used to manage acute pain (short-term relief), it impacts the nervous system in a way that helps stifle the increased volume of pain signals seen in chronic pain, and can help control wind-up pain. When we use ketamine to control chronic pain (like arthritis) it is given by subcutaneous injection every 1-4 weeks at a very low dose, and is very safe.
- Percocet/opioids: This class of drugs is very effective in controlling pain from various causes (including arthritis). While these drugs are safe at prescribed doses, they can cause sedation and tolerance can develop with chronic use.