

## Canine Osteoarthritis

Osteoarthritis is very common in dogs and cats, it is estimated that around 30-50% of dogs and cats will be affected by osteoarthritis at some point in their lives.

What is osteoarthritis?

Canine osteoarthritis (also known as degenerative joint disease) is defined as progressive and permanent deterioration of the cartilage surrounding the joints. This causes inflammation, stiffness and pain. Degeneration of the joints involves multiple tissues, the cartilage, bone, joint capsule and fluid in the joint. When the cartilage deteriorates, it becomes thin and ineffective at absorbing shock, and spikes of crumbly new bone develop within the joint. Dogs are reluctant to move the painful joints which consequently become stiff and less mobile.

What causes osteoarthritis?

In humans, osteoarthritis is usually related to ageing and 'wear and tear' of joints and whilst this does happen in dogs, osteoarthritis usually has a specific underlying cause and is therefore often seen earlier in life. Underlying causes can include developmental conditions where the joints do not develop properly such as elbow or hip dysplasia which lead to unstable joint movement and susceptibility to joint damage, ligament rupture and traumatic problems such as broken bones involving a joint e.g. elbow fractures. Regardless of the cause, once arthritis has started it tends to become worse with time.

What are the signs of arthritis?

To detect arthritis you must carefully observe your pet for signs of stiffness and pain. In some cases these signs can be quite subtle. It is also quite common for owners to think that if their pet is limping but not crying they are not in pain, this is unfortunately not the case, they are just better at hiding their pain!

Any of the following may indicate arthritis in your dog:

- Difficulty standing after a long period of rest
- Difficulty climbing stairs or getting into the car
- Reduced enthusiasm for toys, games or walks
- Temperament changes
- Reduced activity and weight gain
- Limping or generalised stiffness
- Accidents in toilet training
- Alterations in sleeping behaviour and location

Dogs vary in which of these signs they show. Some dogs are very stoical and will not show obvious signs of discomfort until their arthritis is very severe. The degree of signs shown by an arthritic dog may change from day to day depending on the factors such as weather, and how much exercise the dog has done.

How is osteoarthritis diagnosed?

The vet will take a thorough history and if you have identified any of the signs listed above this could indicate arthritis.

The vet will watch your dog walking around the consult room to try and detect any lameness or stiffness.

They will carry out a full clinical examination in order to check for other causes of reduced exercise tolerance or reduced energy levels e.g. heart disease or neurological problems. In this exam they will feel and manipulate the joints to check for joint swelling or thickening, they will test the range of movement that each joint can complete, check for any pain or crepitus (grating of joint surfaces) when joints are manipulated, and any muscle wastage.

In some cases a diagnosis of osteoarthritis can be made on the basis of this examination. However, in other cases it will be necessary to take X-rays to confirm the diagnosis. If more detail is needed, for example for elbow dysplasia a CT scan is more effective at picking up changes than an x-ray, your vet will discuss this.

Your pet may be referred for an arthroscopy, this involves inspection of the inside of the joint with a camera and is carried out under general anaesthetic. This enables joint fluid to be collected for analysis and can be used to detect torn ligaments and remove any damaged fragments of bone.

How is osteoarthritis treated?

It is not possible to cure arthritis but it is possible to have a pain-free and active life with careful management and medication.

Treatment is considered in five categories, described below:

### 1. **Analgesia**

The term “analgesia” describes pain relief. Arthritis is a painful condition and can cause considerable suffering to the patient if left untreated. Pain relief will make your pet much more comfortable which will lead to improved joint mobility which helps to slow progression of arthritis.

The most traditionally prescribed analgesic drugs used for arthritis belong to the class of medicines known as non-steroidal anti-inflammatory drugs (NSAIDs). There are tablet and liquid preparations available. In some cases your pet may respond better to one NSAID than another so switching between them if they are not responding well may be beneficial.

In many cases daily dosing is recommended as this prevents a ‘wind-up’ situation in which the patient becomes more sensitive to existing pain. In less severe, intermittent situations, medication may be prescribed to be used as and when your pet seems stiff or sore.

NSAIDs are not suitable for dogs with kidney, liver or gastrointestinal problems. The most common side effects are vomiting or diarrhoea and the medication should be stopped if these problems occur. We recommend a blood test to check for liver or kidney problems prior to starting on long term medication, and also regular blood tests (every 12 months) once your dog has started on treatment.

Stronger pain relief may be obtained, if necessary, by using different classes of analgesic drugs, such as steroids or opiates. Drugs that may be used in addition to or instead of NSAIDs include amantadine, Pardale-V, amitriptyline, Tramadol and gabapentin.

In March 2021, a new type of pain relief (Librela) became available for the management of arthritic pain. This works in an entirely different way to the analgesics described above. It is a copy of an antibody that blocks pain receptors. It binds to the pain receptors in the arthritic joints and spinal cord so that they do not pass on inappropriate pain messages to the brain. Trials have shown that this is no less effective than NSAIDs for controlling pain, but it does not have the side effects that

concern us with NSAID use. For example, it would not be expected to cause any vomiting or diarrhoea, there is no increased risk of stomach ulceration, and it should not matter if dogs have any kidney or liver problems because this is a natural antibody rather than a drug that needs to be broken down by the body. The injections can be given instead of NSAIDs, or in addition to NSAIDs for severe cases where neither the Librela nor the NSAIDs provide sufficient pain relief on their own. Librela is given as an injection in the scruff of the neck once a month (so also has advantages for dogs that are difficult to give oral medications to). It takes 7 days after the first injection for Librela to take full effect, so vets may suggest the use of NSAIDs for the first week or so after injection.

## 2. **Bodyweight**

All arthritic animals should have their bodyweight assessed and a programme of weight reduction implemented if they are overweight. The benefits of weight loss on arthritis cannot be overemphasised. This is as important as any other measure in the arthritis management plan. In some cases weight reduction alone is enough to resolve the signs of arthritis and analgesic medication can be stopped once your pet reaches his or her target weight. Our nurses run free weight clinics to help you diet your dog. Please ask any member of staff if you would like to attend. We can offer advice on weight loss using your usual diet, or guide you through the process of weight loss using a specific prescription weight reducing diet.

## 3. **Comfort and common sense**

It is useful to evaluate your home situation to see if there are any improvements that you can make to your pet's comfort now that he or she has been diagnosed with arthritis. Detailed information is available at [www.caninearthritis.co.uk](http://www.caninearthritis.co.uk). The following may be helpful:

- A well-cushioned supportive bed which he or she can get into without difficulty.
- Slippery wooden or laminate floors can be very difficult to negotiate and mats or rugs arranged to provide a route through these rooms are often much appreciated!
- Steps and stairs often place the most stress on arthritic joints, so consider ramps to help with steps into or out of the house and car.
- Move food bowls and bedding to the room that is most easily accessible to your pet.
- If your dog pulls excessively on the lead this can place excessive stress on the shoulder and elbow joints, worsening the progression of osteoarthritis. Consider if switching to a Halti if this is the case.

## 4. **Disease**

The other steps described in this management plan are aimed at improving comfort and mobility and slowing the progression of the arthritis. In some situations it may be possible to address the underlying disease directly, for example:

If the arthritis is only present in one joint there may be surgical possibilities for eliminating the problem, e.g. hip replacement to replace the arthritic joint with an artificial, smooth surface. For some painful arthritic joints it may be an option to fuse the joint in one position (arthrodesis), thus halting painful movement of the two joint surfaces against each other. In a few instances in which just one leg is severely

affected, amputation may be considered. Your vet will be happy to discuss these options with you in further detail.

There is evidence to show that the inflammatory processes that occur in arthritic joints can be “switched off” by optimising the ratio of Omega-3 to Omega-6 fatty acids in the diet. We stock and recommend the J/D prescription diet made by Hills which is developed specifically for this purpose. The diet also contains glucosamine and chondroitin sulphate. Hills are so confident that you will see an improvement in your dog after three weeks of feeding the diet they will give you your money back if you are not satisfied after this period! A reduced calorie version of J/D is also available for pets that need to lose weight.

It has long been suspected that supplements containing glucosamine, chondroitin sulphate and green-lipped mussel extract may help to slow down joint inflammation or assist in repair of damaged joints. Many human patients take these supplements and feel that they experience an improvement in their symptoms. Large scale studies in people and dogs have failed to produce scientific evidence to back up these reports but we continue to have clients reporting beneficial effects in their pets. Our position is that these supplements will not do any harm, and it is certainly reasonable to give them a try if you would like! We stock several varieties directed at the canine market including “Seraquin” and “Nutraquin+”. The Nutraquin+ contains Boswellia extract in addition to glucosamine and chondroitin – Boswellia has been shown to have independent anti-inflammatory properties so Nutraquin+ is our preferred preparation.

## 5. **Exercise**

In dogs controlled gentle exercise is very important to maintain joint mobility and muscle support. It is important to try and reduce muscle wastage as muscles are needed to help support the joint. However, over activity may lead to additional damage of the diseased cartilage and must be avoided. It is usual to restrict exercise until medications kick in and your pet is more comfortable. After this we advise a daily routine with 2 to 3 short walks a day and avoiding long walks at weekends which may place extra strain on the joints.

Your pet will be regularly examined to make sure that they are not having side effects from the medication and to ensure a good response to the medication.

Physiotherapy and hydrotherapy can be useful in some pets to help maintain fitness and muscle mass.

The above suggestions are very generalised, and your vet will adapt each section of the management plan to fit your dog’s individual situation. Regular reassessment by yourself and your vet will allow for adjustments to be made as necessary to provide the best possible outcome for your dog. The management of osteoarthritis is not a quick and easy process- it requires patience and persistence by the owner and the vet. However, the results can be extremely rewarding for all concerned.

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