



# OSTEOCHONDROSIS

## FACT SHEET 39

### Introduction

Osteochondrosis is a condition affecting the actively growing areas of cartilage at the ends of the bones in young, predominantly male dogs. Certain breeds are affected more than others, specifically some of the larger breeds of dogs such as the St Bernard, German Shepherd, Retriever, Bernese Mountain Dog and Great Dane. The main symptom is varying lameness in one or more legs.

In young dogs, cartilage makes up the actively growing areas of bone referred to as growth plates. It also covers the ends of the bones, forming the areas that compose the joint or articular surfaces. During normal development, the cartilage turns to bone by a process known as ossification. A number of factors are known to affect this process and can result in a failure of the cartilage to become ossified and turned to bone.

### Causes

One of the main causes is thought to be diet, which has been the focus of many investigations. High-energy diets are often implicated especially if fed on an ad lib basis. High levels of vitamin D, phosphorus, calcium and protein are less critical factors, but thought to play a part in a number of cases. Some studies have suggested that the level of calcium is more critical than previously thought and that dietary excess may be involved in the development of the condition. Over exercise is also a precipitating factor in some dogs. This places undue stresses on the developing joints and causes microscopic damage the surface of the cartilage especially to those areas that are not developing correctly.

The result of any of these influencing factors, either singly or in combination, will be to lead to areas of cartilage damage causing some of the cells to die. Affected areas can become thickened and fail to develop a good blood supply. As a result the affected regions do not develop into bone properly. Unfortunately one of the long-term consequences of OCD is the development of arthritis in affected joints.

### Symptoms

The most obvious sign is of varying lameness appearing in one or more joints, around the ages of between 4 and 10 months. Certain joints are specifically affected:

#### The Shoulder

The shoulder is the most commonly affected joint, where the cartilage covering the head of the humerus is affected. In some cases, a flap of cartilage may lift up and become detached from the joint surface. These fragments of cartilage known as joint mice, can float free in the joint, absorb nutrients and grow in size. As the joint mouse moves around the joint it can cause symptoms of varying, intermittent lameness. This condition, which is more correctly referred to as osteochondritis dissecans or OCD, is more prevalent in giant breeds.

## **The Elbow**

Osteochondrosis can occur in three different forms in the elbow joint:

- Ununited anconeal process seen particularly in German Shepherds
- Fragmentation of the medial coronoid process seen in Labradors, Bernese Mountain Dogs and Rottweillers
- Osteochondritis dissecans (OCD) of the medial condyle of the humerus seen in Labradors and Golden Retrievers.

## **The Knee or Stifle Joint**

Seen usually between the ages of 4 and 6 months onwards, the condition can affect both knees.

## **The Hock Joint**

The development of the disease can be affected by the conformation and is more likely in dogs with an upright stifle or hock. Symptoms include intermittent lameness, which at times can be severe enough to make the dog carry the leg off the ground completely.

## **Diagnosis**

Your vet will be able to diagnose the condition based on the age and breed of dog along with clinical signs backed up by X rays and arthroscopy.

## **Treatment**

There are a number of different approaches to dealing with this condition ranging from surgery to more conservative and less expensive treatment.

## **How Denes can help**

Treating the problem conservatively involves resting the dog and restricting exercise by lead walking only for several months. In most breeds this will involve restricting the animal's exercise until the dog is fully grown when all bone growth activity has ceased. At the same time during this period, treating with **Denes Greenleaf Tablets** and supplementing with **Denes Green Lipped Mussel with Glucosamine** can be of benefit.

Greenleaf is based on stinging nettle. It has a mild anti-inflammatory effect and will help remove damaging toxins from affected joints. Denes Green Lipped Mussel contains compounds known as glycosaminoglycans, which are the building blocks of cartilage and which can help speed repair of the damaged area. Glucosamine, which contains similar compounds, is also included in this product to ensure the proper formation, resilience and strength of cartilage.

## **Prevention**

The easiest way to prevent OCD is to be aware of the factors likely to precipitate the condition. These include breed predisposition, level of exercise, age and one of the most important factors – diet. This needs to be nutritionally balanced

particularly in relation to energy level and calcium content to ensure proper growth and development.

**Denes Puppy With Chicken** recipe is the most suitable canned food from our range ideal for most puppies between weaning and maturity.

**Denes Puppy Growth Rich in Chicken & Rice** is the most ideal dry food for puppies of this age.

If you have any queries concerning your pet's health or feeding problems, you can contact us for free pet care advice by:

- Visiting our website [www.denes.com](http://www.denes.com)
- Emailing us at [info@denes.com](mailto:info@denes.com)
- Calling us on **01273 325364** Mon-Fri, 9am – 12Noon
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