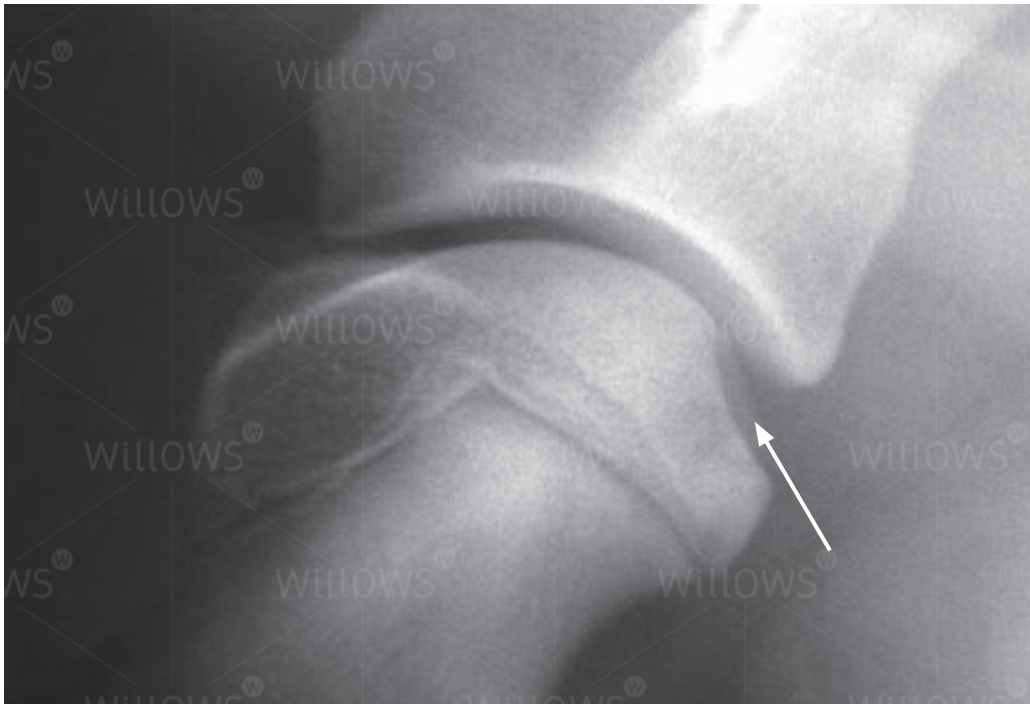


Specialist Referral Service
Willows Information Sheets

Osteochondrosis





Flattening at the back of the shoulder due to osteochondrosis

Osteochondrosis

What is osteochondrosis?

Osteochondrosis is a common condition that affects the joints of young, rapidly growing dogs. The surface of the joint (the articular cartilage) fails to convert into bone in specific locations. This results in areas of thickened cartilage. These areas are weak and cause the thickened cartilage to detach from the surrounding normal cartilage and form a flap. This process is called osteochondritis dissecans (or OCD). The flap of abnormal cartilage may detach from the surface of the joint and form what is termed a 'joint mouse'. Osteochondrosis causes the development of secondary osteoarthritis.

Osteochondrosis primarily affects the shoulder, elbow, knee (stifle) and ankle (hock) joints. The condition frequently affects both left and right joints (termed 'bilateral'). When it involves the elbow, the term 'elbow dysplasia' is used. (see also [Elbow dysplasia information sheet](#))

What is the cause of osteochondrosis?

Genetics and to a lesser extent nutrition are considered to be the main causes of osteochondrosis. Most research has been done on elbow dysplasia/osteochondrosis where genetics plays a major role. The exact way in which the genes from the parents (dam and sire) cause the condition is poorly understood. With elbow dysplasia abnormal development of the joint with an uneven fit (or incongruity) is suspected. This results in abnormal distribution of weight within the joint. Points of increased pressure may prevent cartilage converting into bone.

What types of dogs are most commonly affected with osteochondrosis?

Osteochondrosis primarily affects large and giant breed dogs such as Labradors, Rottweilers and Great Danes. Since it is a condition that develops during growth of the skeleton, signs usually develop when less than a year of age (typically five to eight months). Occasionally the condition is only apparent when signs of secondary osteoarthritis develop, perhaps when the dog is middle-aged or older.

What are the signs of osteochondrosis?

Since osteochondrosis affects joints, the key signs are lameness and stiffness. The latter is generally most evident after rest following exercise. Shoulder and elbow osteochondrosis cause front leg (fore limb) lameness and stifle and hock osteochondrosis cause back leg (hind limb) lameness. Occasionally a dog can have osteochondrosis affecting a number of joints and may thus be lame or stiff in more than one limb.

Dogs that are severely affected may appear lethargic and reluctant to exercise. They may prefer to lie rather than stand or sit.

How is osteochondrosis diagnosed?

Examination may reveal muscle wastage (atrophy). Manipulation of the affected joint(s) may cause pain. Swelling and restriction in range of movement may be evident.

X-rays (radiographs) are the most common method of diagnosing osteochondrosis. They enable the presence and severity of secondary osteoarthritis to be assessed. In some dogs with elbow dysplasia no abnormalities are evident. A more sensitive way of diagnosing the condition in this joint is by placing a small camera in the joint – this is called arthroscopic examination.

How can osteochondrosis be treated?

Shoulder osteochondrosis



Fragment of cartilage being removed from a shoulder arthroscopically

Surgery is generally indicated to remove the fragment of loose cartilage. This can be done arthroscopically or via a direct surgical approach. Following removal of the flap of cartilage the defect heals with an inferior type of cartilage called fibrocartilage.

Conservative management of shoulder osteochondrosis is generally not recommended as

pain and lameness may persist as long as the cartilage flap remains attached. The results of this approach are uncontrollable and unpredictable.

Elbow osteochondrosis

Some dogs with elbow dysplasia can be managed satisfactorily without the need for surgery. Exercise often needs to be controlled to some degree. Dogs that are overweight benefit from being placed on a diet. Pain killers (anti-inflammatory drugs) may be recommended to make the dog more comfortable.

Dogs with elbow dysplasia that fail to respond satisfactorily to conservative treatment may need surgery. There are three key types of surgery: (1) **fragment removal** (2) **incongruency surgery** and (3) **salvage surgery**.

1 Fragment removal surgery

This is the most common type of elbow dysplasia surgery. It involves removing any loose fragments of cartilage and bone from the inside of the elbow joint. This can be done arthroscopically or via a direct surgical approach.

2 Incongruency surgery

Attempts may be made to improve the shape of the elbow joint and make it a better fit (or more congruent). This can be done by either removing the key pressure point within the joint or cutting the bones around the elbow to change the shape of the joint.

3 Salvage surgery

Salvage surgery for elbow dysplasia is rarely necessary. However, occasionally the combined elbow dysplasia, osteochondrosis and osteoarthritis cause persistent elbow pain that cannot be controlled by other more conservative means. In these few cases there are two surgical options. Firstly total elbow replacement (TER) and secondly elbow joint fusion (termed arthrodesis). Function with TER is generally better than with fusion of the joint, however, there are potential complications with TER surgery that need to be carefully considered prior to making a decision. (See also [Total elbow replacement information sheet](#))

Stifle osteochondrosis

Surgery is generally advised to remove the fragment of loose cartilage. Following removal of the flap of cartilage the defect heals with an inferior type of cartilage called fibrocartilage. Conservative management is occasionally indicated, especially in older dogs.

Hock osteochondrosis

When the condition is diagnosed at a young age, for example six months, surgery is generally recommended to remove the fragment of loose cartilage. Following removal the defect heals with an inferior type of cartilage called fibrocartilage. In selected cases reattachment of loose areas of bone and cartilage can be attempted. If successful this can give a good outcome, although complications can be seen.

Conservative management may be appropriate in older dogs that have established osteoarthritis.

Some dogs with hock osteochondrosis develop severe secondary osteoarthritis that results in permanent pain and lameness. If the response to conservative management (weight regulation, exercise restriction, painkillers) is unsatisfactory, salvage surgery may be required. This involves fusing the joint (arthrodesis). A bone graft is packed into the joint following removal of cartilage and the joint is stabilised with a plate and screws.

What is the outlook with osteochondrosis?

The outlook or prognosis with osteochondrosis is quite variable depending on which joint is affected.

Shoulder osteochondrosis

The majority of dogs with shoulder osteochondrosis recover very well following surgery. Lameness usually resolves despite the development of osteoarthritis. Occasionally stiffness or lameness after vigorous exercise will be evident.

Elbow osteochondrosis

Some dogs can be managed successfully with conservative treatment involving modification of exercise and weight, with or without the need for anti-inflammatory pain killer drugs. Others benefit from removal of cartilage and bone fragments or surgery to improve joint congruency. The majority of dogs lead satisfactory lives although their exercise and weight may need to be closely monitored. A degree of stiffness and lameness, especially after exercise, is not uncommon.

Stifle osteochondrosis

Some dogs do quite well following stifle osteochondrosis surgery and others remain lame. It is not possible to predict the outcome in individual cases.

Hock osteochondrosis

The outlook with hock osteochondrosis is quite guarded, with many dogs having some degree of persistent stiffness and lameness.

If you have any queries or concerns, please do not hesitate to [contact us](#).

Specialist Referral Service
www.willows.uk.net



The information contained is proprietary to Willows Veterinary Centre & Referral Service and may not be modified, reproduced, distributed or utilised in any manner in whole or in part, without the express prior written permission of Willows Veterinary Centre & Referral Service.