

Osteochondrodysplasia

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What is Osteochondrodysplasia?

Also known as skeletal dwarfism, Osteochondrodysplasia is a general term describing a number of different growth abnormalities affecting the cartilage and bones. It occurs very early in a puppy's life, when bone should begin to replace the cartilage that the skeleton is initially made of. This process of bone development in affected dogs is delayed, causing skeletal deformities, most commonly characterised by shortened limbs. Symptoms may become apparent in the first few weeks of a puppy's life.



What are the Signs or Symptoms?

Some dogs will present with only mild symptoms such as shortened limbs, that will cause very little problem for them throughout their lives. Others however, will be severely debilitated and suffer joint pain and arthritis. The shortened limbs may be bowed or develop at an abnormal angle and major joints may be enlarged, deformed or loose. Occasionally there may be spinal problems, and the upper jaw may be shortened. Dogs may present with lameness, and have difficulty exercising.

How is it Diagnosed?

Apart from the obvious signs of retarded growth and skeletal deformity, further confirmation may be gained by X-ray.

How is it Treated?

Unfortunately, the only treatment for this disease rests largely with supportive therapy aimed at reducing pain and inflammation. Surgery may occasionally be an option to correct a deformity, such as to realign a limb, however it is usually of limited benefit.

How can you Avoid Buying a Dog with Osteochondrodysplasia?

In breeds such as Bassets and Dachshunds, dwarfism has been bred for specifically, however in other breeds, it is a genetically transmitted trait that must be removed from ancestral lines. Apart from dwarfism, this disease is also linked to the eye abnormality, Retinal Dysplasia in Labradors and Samoyeds, another very good reason to prevent breeding in affected animals.

Studies on the mode of inheritance for Osteochondrodysplasia indicate that at least in some breeds, it is be passed on via a recessive gene, which means the disease will only manifest itself when a dog has two copies of the defective gene. In this way, both parents may be carriers (one copy each), and never exhibit any symptoms, but together it is possible for them to produce a puppy which has the disease.

For this reason, you should also ask the breeder about the grandparents of a puppy you are considering purchasing to try and ascertain whether there is any Osteochondrodysplasia in its ancestral lines. Breeding is not recommended for any dogs either exhibiting or carrying the defective gene for Osteochondrodysplasia. There is also a good possibility that symptoms may already be obvious in a puppy at the time of purchase, so examine the puppy carefully, comparing it to others in the litter, and if you have any doubts about its bone structure, have it checked out by a vet.