

## Hip Dysplasia

### What is hip dysplasia?

Dysplasia means an abnormality of development. So if a part of the body does not form as it should during growth it is referred to as a dysplasia. The hip joint is a 'ball and socket' joint where the ball is the femoral head and the socket is the acetabulum of the pelvis. The two should be held together tightly by the ligaments and other soft tissue structures around the hip but in hip dysplasia this is not the case and the joint is loose or lax. The laxity present means that rather than the femoral head sitting snugly in the acetabulum during movement, it may partially dislocate (we say that the hip 'subluxates'). Sometimes this can be felt or heard as a clunking coming from the hip. Hip laxity may not always be identified in the awake dog but can usually be identified with specific tests performed in the sedated or anaesthetised dog and can also be identified with special x-ray views. The x-rays below show well-fitting hips on the left and loose hips on the right.



### Why is hip dysplasia important?

It's important because it can cause pain and lameness. The hip becomes damaged from the femoral head clunking inside the acetabulum. This damage can cause discomfort and will eventually lead to irreversible wearing away of the cartilage of the hip and bony remodelling of the hip (i.e. osteoarthritis or OA, often simply referred to as 'arthritis'). Not every dog with hip dysplasia or subsequent OA will be uncomfortable, but many will be.

### How would I recognise if my dog has hip dysplasia?

You may not. Many dogs will not demonstrate symptoms or the symptoms may be very subtle. Mildly affected dogs may wiggle/shimmy their pelvis when they walk or run. They do this to try and limit how far they need to extend their hips when moving. More affected dogs may have a more noticeable lameness. They may appear stiff on their back legs when they first get up after resting and they may be reluctant to jump or go up stairs. Affected dogs may just seem less active than you would expect. If you notice any of these features in your dog it is worth seeing your first-opinion vet to have them checked out.



## Can it be treated?

The simple answer is yes. But there are many different treatments and not every treatment will be appropriate for every dog. Treatments can be split into a few broad categories:

### 1. Non-surgical management

For the dog showing symptoms, palliative management with a period of rest combined with a non-steroidal anti-inflammatory (NSAID) should always be the first line of treatment since many dogs will get better with this approach. However, if this does not solve the problem then consideration should be given to other forms of treatment. Rest/medication can be combined with physiotherapy and/or hydrotherapy which by strengthening the muscles around the hip can make the joint more comfortable.

If non-surgical strategies do not eliminate the symptoms or if it proves necessary to use long-term medication to keep the symptoms under control, then surgical treatments should be considered.

### 2. Surgical options for the symptomatic patient

The most commonly performed surgeries are femoral head and neck excision (FHNE) and total hip replacement (THR). When the former is performed the femoral head is cut off from the shaft of the femur and discarded. This eliminates the abnormal articulation and much of the pain associated with it, and relies on the muscles and other soft tissues around the joint to provide support and mobility. The procedure can work well especially in cats and smaller dogs but is generally progressively less effective as dogs get bigger. A degree of lameness and discomfort may remain after FHNE surgery but the surgery is attractive because it is relatively straight-forward to perform, has a low complication rate and does not require expensive implants. THR on the other hand is a very technical surgery, with a risk of complications and greater costs involved. THR can however offer a completely pain-free hip and a return to full mobility in most cats and dogs.

### 3. Prophylactic surgeries

Finally, there are two prophylactic surgeries available which may prevent a dysplastic hip from becoming an arthritic hip if performed at an appropriate age:

Juvenile pubic symphysiodesis (JPS) is performed in very young puppies to fuse the pubis. The pubis joins the left and right halves of the pelvis together. If it is fused at an early age then as the pelvis continues to grow each acetabulum tilts outwards more, 'capturing' the femoral heads better and stopping them from clunking around. To be effective though JPS must be performed before 16-20 weeks of age (depending on breed) and it may prove ineffective in the most severely affected puppies. It is however a low-risk, quick and cost-effective surgery.

Double pelvic osteotomy (DPO) is performed in older puppies. The pelvis is cut in two places and rotated outwards to better contain the loose hip joint. A special plate is applied to the pelvis to hold the pelvis in its new rotated position. Triple pelvic osteotomy (TPO) is another way to achieve the same effect but which has largely been superseded by DPO. For DPO to be effective in avoiding/minimising OA it must be performed prior to the onset of appreciable OA on x-rays and this means that suitable patients will typically be around 5-8 months of age. DPO is a major procedure and although it can be performed in the dysplastic dog without major symptoms, the dilemma is that many of such dogs may never go on to develop a significant hip problem. The surgery is easier to justify in the young dog with hip pain and no appreciable OA, since it offers palliation of the pain as well as the prophylactic benefits.

## As an owner, what should I do if I am worried about my puppy?

Hip dysplasia is a genetic disease so firstly do everything you can to minimise the chances of your puppy having hip dysplasia by checking out the parents. Reputable breeders will be able to tell you the hip scores of both the sire and the dam, and these should be less than the published average score for that breed (known as the 'breed mean score', published by the British Veterinary Association and the Kennel Club). Hips are scored out of 106 and a lower number is better. A low score does not mean your puppy will not develop hip dysplasia but it does reduce the chances. Whilst you are quizzing the breeder, ask them for the elbow scores of the parents too; elbow dysplasia is another big issue for dogs but that's another story.



If you have a young Labrador puppy there is a new genetic test (DysGen) which can identify those puppies at risk of hip dysplasia. The test is worth considering if you would consider JPS, in which case you should discuss this with your vet when your puppy has their vaccinations. In Labradors JPS should ideally be performed at around 16 weeks of age and since it can take 3 weeks to get the test result the blood sample needed should be taken at an early age. Currently there is no genetic test for other breeds, meaning that the assessment for JPS would require an examination under sedation and/or special x-rays. Do remember that at the age at which JPS would be performed dysplastic puppies will not be showing symptoms and not every dog with dysplasia will go on to have problems, so some dogs will have a procedure, albeit a low risk one, unnecessarily.

In the older puppy we would not suggest you worry unless your dog is showing symptoms of a hip problem. If this is the case then you should seek the advice of your first-opinion vet who will be able to provide advice and symptomatic treatment. Many young dogs' symptoms will improve as they mature (paradoxically the symptoms can improve as the arthritis gets worse and the joint tightens up). If the symptoms persist though and you would like your puppy to be assessed by a specialist orthopaedic surgeon then you should ask your vet about referral to a specialist clinic such as Anderson Moores.

At Anderson Moores we are happy to assess dogs of all ages with hip dysplasia/arthritis. The advice we give is always tailored to the individual dog and will not always mean surgery. However, we can offer all the surgical options discussed here if appropriate. If your Labrador puppy is less than 16 weeks of age and has a 'moderate risk' or 'high risk' DysGen result we can offer a fixed-price fee for assessment and JPS surgery.



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