



Elbow dysplasia is a common and often debilitating joint disease affecting many larger breed (usually pedigree) dogs. Affected dogs have a genetic tendency to develop the disease but the severity of the disease can be influenced by other factors. The Kennel Club (KC) introduced the elbow dysplasia scoring scheme to identify affected dogs at an early stage so that they could be prevented from breeding and passing the condition to their puppies. The scheme has been widely adopted by several breed societies.

What is the elbow scoring scheme?

X-rays of both elbows are examined by veterinary specialists for signs of disease. Points are awarded for changes seen in the elbows and these points are added together to produce the score.

Four grades are possible for each elbow:

- 0 = unaffected
- 1 = mild changes
- 2 = moderate changes
- 3 = severe changes

The overall grade of the dog is that of the higher graded elbow.

How is the score used?

Ideally only dogs with grades of 0 should be used for breeding, but recognising that this may result in too few animals being available the British Veterinary Association (BVA) and Kennel Club (KC) do not disapprove of the use of dogs with grades of 1. It may be that different dogs have different predispositions for new bone formation and that a reduced tendency towards arthritis may also have a genetic component. Dogs with grades of 2 or 3 should not be used. This should reduce the risk of elbow dysplasia developing in their puppies. However it is still possible for 2 parents with very low elbow scores to produce puppies with elbow dysplasia, which is discouraging for the breeder.

The most helpful way of using the scoring information is in *progeny testing*. This means selecting parents which are known to have previously produced puppies with good elbows as well as having low elbow scores themselves. It is important to investigate the elbow scores of as many offspring of individual dogs as possible before selecting them for further breeding. It is also helpful to breed dogs whose grandparent's scores were low. If it were possible to prevent any dogs who carry the gene for elbow dysplasia from producing puppies then the disease could be eradicated.

How are elbow x-rays taken?

In order to position the dog for x-ray with the minimum of stress to the patient sedation or general anaesthesia is required. Commonly, x-rays for hip and elbow screening are taken at the same time. Three different x-rays of each elbow are required. Each view shows different features and a confident diagnosis in an individual dog cannot be made with a single view. The x-rays must be indelibly labelled with:

- The animal's KC registered number (or other identification, eg microchip or tattoo number, if non-registered).
- The date on which the examination was performed.
- A right or left marker to identify which elbow is which.

What happens to the x-rays?

Diagnostic x-rays are submitted to the BVA together with the scoring fee and a part-completed certificate of grading. The veterinary surgeon submitting the x-ray certifies that the x-ray was taken on the date indicated, and may check and add the dog's microchip or tattoo number where appropriate.

The scrutineers examining the films grade them and sign the form, which is returned to the veterinary surgeon together with the x-rays. The scored x-rays are embossed with a BVA stamp.

Once a certificate has been issued the dog may not be submitted for regrading. The owner may appeal against the grade but this must be lodged with the BVA, in writing, within 45 days of grading. The same x-rays and an appeal certificate must be submitted by the vet to the BVA. The x-rays will be regraded by



the Chief Scrutineer and this decision will be final.

Why weren't my dog's x-rays scored?

A small percentage of x-rays submitted to the Scheme are rejected because they cannot be scored accurately. Accurate positioning is essential to give a correct score. If the elbow is twisted or not fully flexed when the x-ray is taken it may not be possible for the scrutineers to see all the features. Occasionally factors relating to the quality of the x-ray result in rejection. X-rays which are improperly exposed or processed will be too pale or too dark, resulting in loss of contrast and definition. If the features cannot be assessed then a score cannot be given.

Incorrect identification of the patient will also result in return of the x-ray as the certificate that assigns a particular score to a specific individual cannot be signed if the scrutineer cannot guarantee that the x-ray they are looking at belongs to a particular dog.

Rejected x-rays are embossed twice with a BVA stamp to prevent re-submission.

Can any dog be tested?

Elbow x-rays of any breed of dog, including non-registered animals and crossbreeds, may be examined; but the scheme is particularly recommended for those breeds where elbow dysplasia is common.

The current BVA list includes:

- Basset Hound
- Bernese Mountain Dog
- English Mastiff
- German Shepherd Dog
- Great Dane
- Irish Wolfhound
- Newfoundland
- Golden Retriever
- Labrador Retriever
- Rottweiler

In certain other breeds without a current problem elbow screening is being used as a preventive measure to ensure that elbow dysplasia does not creep into the breeding population.

Conclusion

If you are thinking of buying a pedigree puppy find out if elbow dysplasia is likely in your chosen breed and enquire about the elbow score status of the parents before considering purchase. This can reduce the risk of elbow dysplasia developing in your puppy although it is still possible for 2 parents with very low scores to produce puppies with elbow dysplasia.

If you want any other information on health issues concerning your dog please contact Hampden Veterinary Hospital on 01296 423666 and we will be happy to advise you.