



Te Rūnanga Matua, Take Kuri o Aotearoa



INTERPRETATION OF NZVA ELBOW DYSPLASIA SCHEME SCORING SYSTEM

The NZVA Elbow Dysplasia Scheme is based on that developed by the International Elbow Working Group. This is an international group of scientists who are dedicated to reducing the incidence of Elbow Dysplasia in dogs.

Elbow Dysplasia is a condition where the elbow joint of a dog deteriorates (begins to wear prematurely) due to an underlying abnormality in joint development during growth. There are 3 primary lesions that are considered under the term elbow dysplasia. They are; a fragmented coronoid process of the ulna (FCP), osteochondritis dessicans of the medial aspect of the humeral head (OCD) and an un-united anconeal process of the ulna (UAP). In addition, incongruity (a poor fit to the joint) that leads to arthritis even without a primary lesion is accepted as a form of ED.

The grading system is based on identifying a primary lesion (FCP, OCD or UAP) or the presence of osteophytes. Osteophytes are areas of new bone formation. They develop as a result of altered joint dynamics or the presence of cartilage deterioration and joint inflammation (osteoarthritis). A major problem in the diagnosis of elbow dysplasia is that the primary lesion may be unable to be seen on standard radiographs or in very young dogs (before 2 years of age). However the presence of osteophytes can be taken as evidence that a primary lesion (or incongruity) exists although it may not be seen at that time.

If osteophytes can be positively identified then the dog is dysplastic and is NOT accredited.

Whilst all the primary lesions are considered together as causes of Elbow Dysplasia, the genetics of each are likely to be distinct. We typically see some lesions more commonly in certain breeds and studies indicate different levels of heritability of the different primary lesions. In all of these studies a high heritability has been demonstrated indicating a significant genetic component to this disease. Therefore the use of certified non-dysplastic animals in breeding lines will decrease the incidence of this disease within a breed.

Elbow dysplasia is typically more crippling than hip dysplasia and were both are present within a breed consideration should be made to prioritise selection for good elbows over better hips.

Grading of elbows for elbow dysplasia is divided into five grades. The certificates used by the NZVA show the animal's pedigree information and the grade of each elbow. If the animal is completely free of evidence of Elbow Dysplasia it is 'Accredited'.

Elbow Dysplasia Scheme statistics are published on the NZVA Website. They show the number of dogs in each breed that have been scored and the proportion of dogs receiving either accreditation (non-dysplastic) or a grade 1, 2 or 3 (dysplastic). A breeder should use the comparison between the individual dog's score and the breed statistics to guide selection decisions. The ideal is to breed from dogs with "better than average" elbows. It is important to note the percentage of accredited dogs. If there are as many as 40% of dogs in a breed that have been accredited, then using a dysplastic dog worsens the breed (even if it is only a 1). If the proportion of dogs that are accredited is lower than 40% then a dog with a score of 1 is acceptable. A 2 or 3 is never acceptable for breeding as it indicates moderate to severe disease.



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GRADE EXPLANATION

ELBOW DYSPLASIA GRADES – NZVA ELBOW DYSPLASIA SCHEME

Grade 0:

No evidence of elbow dysplasia. This is the optimum grade.

B (borderline):

Subtle changes are seen on the elbow radiographs which are suggestive of elbow dysplasia but are of insufficient severity to be conclusive. A Borderline grade is a good score.

Dogs that are scored either :

0-0, 0-B or B-B in both elbows and are aged **12 months or over are given ACCREDITATION status**

(i.e. accredited free of elbow dysplasia by radiographic examination).

Grade 1:

Obvious osteophytes indicating arthrosis of the joint.

- In the high risks breeds this score currently represents a better than average score.
- In breeds with a low risk of osteochondrosis, a Grade 1 score is less than desirable.

As too many dogs have proved to fall into this category it was decided to split the grade into 1a and 1b. 1a is the more desirable grade.

Grade 2:

More severe arthrosis is present. A grade 2 score is a poor score, and breeding with dogs with this grade is not recommended. This recommendation is especially true in low risk breeds. Breeding from grade 2 dogs can be justified only if the dog has other genetic traits that would be advantageous to the gene pool of that breed as a whole.

Grade 3:

Severe arthrosis and we recommend that in no circumstances should these dogs be used for breeding.

In the case of a grade 2 the certificate will be endorsed with the statement “breeding with dogs with this grade is not recommended” in the comments section.

In the case of a grade 3 the certificate will be endorsed with the statement “severe arthritis due to ED, not suitable for breeding” in the comments section. In addition if a primary lesion is seen this will be noted.