

# Skeletal System Disorders - Elbow Anomaly

## Update: Congenital Elbow Anomaly

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Over the past year there has been a lot of speculation regarding a problem seen in the Newfoundland breed. At first it was suspected to be similar to what has been diagnosed as chondrodysplasia in the Alaskan Malamute breed. In this breed the condition is often linked with anemia and is inherited as an autosomal recessive trait. Similar skeletal problems have been noted in Labrador Retrievers, Norwegian Elkhounds, Great Pyrenees, Samoyeds, English Pointers, and German Shepherds. In each of these breeds the phenotype or physical appearance of the dog is similar.

Chondrodysplasia or "dwarfism" is manifested as structural deformities most often affecting the front legs. What was described and seen in the Newfoundland breed appeared to be similar in outward appearance to what had been described in the literature as chondrodysplasia or "dwarfism." Initial investigation of a group of x-rays submitted to Dr. Mostoky at Michigan State University, College of Veterinary Medicine have shown that the Newfoundland skeletal problem is not the same as what has been diagnosed as chondrodysplasia. The evaluation of nine x-rays showed an asynchronous growth of the radius and ulna coupled with a subluxation of the elbow. It is difficult to tell which came first, whether the elbow luxation caused the uneven growth or whether the growth pattern caused the elbow luxation.



Affected eight-week old puppy, front view.



Affected 16-week-old male, front view.



Affected Landseer male, 6 1/2 months of age (side view).

What do we know about congenital elbow anomaly?

A literature search shows it was documented in 1981 when Jorunn Grondalen of The Veterinary College in Norway wrote an article for the Journal of Small Animal Practice, titled "[A generalized chondropathy of joint cartilage leading to deformity of the elbow joints in a litter of Newfoundland dogs.](#)" Diagnosis is made by lateral and craniocaudal radiographs. Etiology is unknown, however it is suspected to be of genetic origin. Based on preliminary work it is thought not to be a dominant trait nor is it considered to be sex linked since both males and females have been affected. Congenital Elbow Anomaly is probably not a simple recessive. It can be recognized as early as four weeks of age. It has been documented in several major "lines" in the Newfoundland breed.



Affected Landseer male, 6 $\frac{1}{2}$  months of age, front view.

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