

## Glossary of Common Health Problems in Newfoundlands

The goal of this glossary is to educate potential Newfoundland owners about the various health problems that are common in the breed. While this glossary is not all encompassing and provides only general information, we hope it will serve as a starting place for your discussions with breeders. Additional questions regarding a specific condition or individual dog should be directed to your veterinarian. Please note that the health problems listed here are in no way confined to the Newfoundland breed. All dog breeds, as well as mixed breeds, are susceptible to a variety of genetic conditions. No matter what kind of dog you choose, it pays to do your homework on health concerns before you buy.

### ORTHOPEDIC PROBLEMS

**Hip/Elbow Dysplasia** In dogs affected with hip dysplasia, the hip joints and/or elbow joints do not form correctly as the puppy grows. Affected dogs range from mildly to severely affected. Those who are mildly affected often do not need much treatment when young, but will develop arthritis as they age. Usually anti-inflammatory medications and joint support supplements are effective. If young dogs are more severely affected, they may require medications and possibly surgery, including total hip replacement, at a younger age to enable the dog to live pain free.

Dogs must be x-rayed in order to diagnose hip and elbow dysplasia; a positive diagnosis cannot be made simply from watching the dog move. There are three main certifying agencies in North America: the OFA and GDC in the U.S. and the OVC in Canada. The OFA and the OVC require dogs to be two years of age, while the GDC will certify at a year (though they recommend waiting until the dog is older). Dogs free of hip dysplasia receive a rating (excellent, good, fair/acceptable). Dogs free of elbow dysplasia receive a normal certification. The results are available on the Internet ([www.offa.org](http://www.offa.org), [www.ucdavis.edu](http://www.ucdavis.edu)).

**Please note:** The certification rates only the individual dog and DOES NOT guarantee that dog will not produce a dysplastic puppy. The likelihood of producing this disease can be minimized by considering both depth (number of ancestors) and breadth (number of clear litter mates and parents litter mates) in the pedigree, as well as any offspring prior to selecting a mate.

**Elbow anomaly** This is a newly discovered disease in Newfoundlands and has not been written up in any books. The Newfoundland Club of America is supporting research at this time. In this disease the bones in the front legs, the radius and ulna, grow at uneven rates and the elbow joint becomes dislocated. It must be diagnosed by radiographs, and sometimes can be diagnosed as early as four weeks. As the dog grows the front leg(s) bow out in a curve. This condition is considered hereditary although the genetics are not yet understood. To date, there is no reliable surgical treatment and affected puppies are usually euthanized.

**Osteochondrosis, Osteochondritis Dessicans (OCD)** This is a disease of joint cartilage in shoulder, stifle, hock or elbow that occurs usually in young, fast growing dogs. Males seem to be more frequently affected than females. The cartilage surface gets damaged, and in more severe cases, a flap of cartilage is created. Sometimes this flap comes loose and forms a chip within the joint. The chip can be removed surgically with fair to excellent results, depending upon which joint is affected. Dogs with this problem are usually lame in the affected leg at sometime during their youth.

**Panosteitis (Pano)** This is a painful inflammatory bone disease of young, rapidly growing dogs. Pano causes lameness in the affected limb and the lameness may rotate among all four legs. It is usually a self-limiting condition that most dogs outgrow. The dog may require some limitation of activity, i.e. no free play, and anti-inflammatory medication if the condition is very painful. Pano commonly occurs between 6 months and 18 months, but is known to occur in older dogs, and tends to run in families.

**Ruptured Cruciate Ligament** This ligament stabilizes the dogs knee or stifle joint. A sudden rupture of the ligament causes sudden lameness in the rear (i.e. holding up one rear leg or a severe limp) while a partial tear may be subtle, with only mild lameness and muscle wasting apparent on the affected side. This problem may have some genetic basis, frequently occurs in middle-aged dogs, but is also a common twisting injury. Strains and partial tears may respond to rest, medication and rehab while more severe damage will require surgical repair. The newer TPLO or TWO repairs give good to excellent results.

### **EYE PROBLEMS**

There is a registry for eye diseases called the Canine Eye Registration Foundation (CERF). A dog must be checked by a Board Certified Ophthalmologist, who examines the eyes for any signs of disease. The registration is good for only one year as many inherited eye diseases can develop as the dog ages.

**Ectropion/Entropion:** These conditions cause the eyelids to roll out (Ectropion) or to roll in too tightly (Entropion). Some dogs have both problems in the same eyelid. Poorly fitting lids may cause excessive tear production or allow the eye to become too dry, damaged or infected. Depending on severity, the impact on the dog may be controlled with eye-drops and lubricants or corrected surgically. This is considered to be an inherited problem and dogs that have surgical correction of their lids are not allowed to compete in AKC conformation shows.

**Cataracts:** In this disease the lens of the eye becomes cloudy, impairing the dogs vision. Some dogs can be born with this condition (called congenital or juvenile cataracts) and this form is generally considered to be inherited in most breeds of dogs. Other cataracts develop only in old age and are particularly common in dogs with Diabetes Mellitus. They can be surgically removed.

### **HEART PROBLEMS**

***Insist that any puppy you are considering purchasing is checked by a Board Certified Cardiologist BEFORE you take the puppy home.*** Also be certain that its parents have been checked when they were over one year of age. A cardiologist is specially trained to listen for abnormal sounds called murmurs. Murmurs are caused by any turbulence in the blood flow through the heart, can be caused by many problems, and are rated I through VI. Murmurs can go away as the puppy grows, stay throughout life, or actually appear later in life as a puppy grows or a dog ages. If a puppy has a murmur, the cardiologist may recommend rechecking when the puppy is older or performing an ultrasound examination to determine the source of the murmur. The source of the murmur may be indicative of the severity of the heart problem.

Many breeds of dogs have inherited heart problems. The Newfoundland is subject to one inherited problem, though it may have other heart problems. The breed can also develop various forms of old-age heart disease. The OFA registry will certify dogs free of Cardiac disease once they are over one year of age. The OFA will accept certification from Board Certified Cardiologists, from individuals who call themselves specialists and from general

practitioners. If the rating OFCa-C appears, that means the dog has been checked by a Cardiologist.

## **Congenital Heart Diseases**

**Subaortic Stenosis (SAS):** This is an inherited disease in Newfoundlands, although the mode of inheritance appears complicated and is not yet completely understood. A ring of tissue forms below the aortic valve in the heart, restricting the blood flow and increasing the pressure within the heart. The heart tissue overgrows in response to the increased pressure, outgrowing its own blood supply and causing scar tissue to develop that interferes with the electrical impulses in the heart. Puppies can develop a murmur throughout their first year of life, but usually those with significant disease develop murmurs within the first 9 weeks of life. Occasionally, a puppy will have no murmur at a young age, but when checked again at one year, will have developed the disease. This disease can only be positively diagnosed by auscultation (listening to the heart) in combination with cardiac ultrasound. The ultrasound will usually show the physical defect and is also used to measure the velocity and pressure of blood flow and show heart function. The results enable the cardiologist to grade the murmur and the severity of the disease. Murmur sounds do not always correlate with the severity of the disease. Some of the signs of SAS include lethargy, exercise intolerance, fainting, and sudden death. Mildly affected puppies have about a 1% greater chance of sudden death while moderate disease increases this risk by nearly 15%. Affected puppies can have their lifespan extended with medication. If left untreated, severely affected puppies have a life expectancy of less than three years

The following are other heart diseases that are commonly inherited in other breeds, but that may occur in Newfoundlands, sometimes in conjunction with SAS.

**Pulmonic stenosis (PS):** In this disease a ring of tissue forms below the pulmonic valve in the heart. It causes murmurs and may affect the dogs health and lifespan, depending on the severity and if it appears in conjunction with other defects.

**Patent Ductus Arteriosus (PDA):** In this disease the passageway between the two sides of the heart that normally closes at birth fails to close and the dog has a murmur. This can be surgically repaired.

**Tricuspid Valve Dysplasia (TVD):** This is a malformation of the tricuspid valve in the heart allowing blood to leak through the valve in the wrong direction. It causes murmurs. Effect on the dog's health and lifespan depends on the severity of the malformation. This disease is known to be inherited in Labrador Retrievers.

**Non-Congenital Heart Disease Dilated Cardiomyopathy (DCM):** This is a disease that usually develops later in life in many breeds of dogs, including the Newfoundland and other large and giant breeds. A weakening and thinning of the heart muscle occurs, leaving the dog with a large, flabby, and inefficient heart. It eventually causes heart failure. There is research being done in Newfoundlands and other breeds to determine if a lack of certain dietary elements may increase a dogs risk. At this time some forms of the disease respond to diet changes and/or medications that may slow down the heart failure. In many dogs this disease is also accompanied by atrial fibrillation, which is where the heart beats very irregularly and too fast. Medications are sometimes effective at slowing the heart rate.

## OTHER HEALTH ISSUES

**Cystinuria:** Affected dogs have an abnormal absorption of cystine (an amino acid) by the kidney that results in the formation of crystals and/or stones in the urine. This can lead to recurrent or frequent urinary tract infections and causes painful urination especially in males. Males, because of the anatomy of their urinary tracts, are at risk for a blockage by a stone. This is an emergency that often requires surgery to remove the stones. Some cases may be managed by restrictive diet. This is an inherited disease in Newfs and is caused when a puppy inherits two copies of a recessive gene, one from each parent. Dogs that carry only one copy of the defective gene are called carriers and do not have the disease or show any symptoms of the disease. However, if two carrier dogs are bred together, approximately 25% of their offspring will have the disease. DNA testing is available to determine the clear (no copies of the gene) or carrier (one copy of the gene) status of unaffected animals. Additionally, a dog may be determined clear by pedigree since it must be clear if both its parents are clear.

**Allergies:** Newfoundlands, like most other breeds of dogs may have allergies to food, fleas, pollen or other environmental allergens. Typically allergies cause skin problems, recurring ear infections or digestive problems. Medications, proper parasite control, and sometimes diet changes can effectively manage many allergies.

**Hypothyroidism:** A hypothyroid dog does not produce enough thyroid hormone. Some of the more common signs are lethargy, poor coat and weight gain. However, some dogs do not show any distinct signs. It is usually a disease of middle aged or older dogs, but occasionally young dogs are affected. Blood testing is the only method for diagnosis. Daily medication can manage the disease.

**Bloat:** This is an emergency, life threatening condition in which the stomach fills with gas and may twist back on itself cutting off the blood supply. A dog with bloat may act distressed and may try, unsuccessfully, to vomit. This disease requires immediate veterinary attention in order to save the dogs life. Outcome of the surgery is dependent on the dogs general condition and the damage done to the stomach and other internal organs during the bloat.

## HEALTH SUMMARY

As a giant breed, the Newfoundland has various health problems. Potential owners should familiarize themselves with these problems. Progress has been made in identifying some of the genes responsible for these diseases and their mode of inheritance. It is estimated that every dog carries 5 or more bad genes. ***Responsible breeders don't guess, they test!*** They follow their puppies, help new owners learn the ropes and want to know the results of their breeding, good or bad. A responsible breeder needs this information to continue to improve their breeding program. Knowing the hip, elbow, heart and cystinuria status of all breeding stock allows an appropriate mate to be selected and the risk of producing health problems minimized. However, anybody purchasing a Newfoundland should be aware that, even with every precaution taken, an individual puppy still could develop health problems. If your puppy develops a problem, contact your breeder. A responsible breeder can help you understand the problem and assist in any future decisions.