

### APPENDIX TO THE AGREEMENT FOR THE SALE OF A DOG

Name:
Registration number:
Microchip number:
Gender:
Date of birth:

As with all breeds, breeds originating from Lapland (Lapponian Herder, Swedish Lapphund, Finnish Lapponian Dog) have hereditary faults and diseases. For the most part, these are recessively inherited, i.e., it is not possible to recognise a carrier of such a predisposition by appearance.

A responsible breeder only breeds from dogs that have been found healthy. Nevertheless, it is possible that two healthy dogs that carry the same hereditary predisposition are mated resulting in affected offspring.

Often, these recessively inherited diseases only become apparent when the dog is no longer a puppy or young dog. The buyer should note that he or she buys and accepts the puppy "as is" at the moment when it is handed over.

### HEREDITARY DISEASES OCCURRING IN LAPPONIAN DOGS

## **EYE DISEASES**

**Cataract:** The term cataract includes several eyesight-impairing diseases where the transparency of the lens is partially or completely lost. Hereditary cataract has different types, such as posterior polar, cortical, nuclear, congenital, or total cataract. Changes are usually found in both lenses. If the lenses become totally clouded, the dog will go blind. Cataract usually develops at a mature age.

PRA (Progressive Retinal Atrophy): Progressive retinal atrophy is recessively inherited. PRA carriers are normal in phenotype. Eyesight of affected individuals begins to deteriorate gradually as the retinal atrophy progresses. The first symptom is night blindness. Retinal changes in affected dogs can be detected by ERG already before they are visually apparent. There are several different forms of PRA, and there is a gene test available for two types of PRA identified in breeds originating from Lapland: PRCD-PRA (the most common type among all three breeds) and IFT122-PRA (associated with Lapponian Herders in particular).

**RD** (Retinal Dysplasia): Retinal dysplasia is a congenital developmental disorder with different levels of gravity, from mild local folds of the retinal tissue to geographic lesions leading to blindness. The abbreviations used are MRD (mild), GRD (moderate), and TRD (grave or true). These disorders can be found in puppies.

# PHTVL/PHPV (Persistent Hyperplastic Tunica Vasculosa Lentis/Persistent Hyperplastic Primary Vitreous):

PHTVL/PHPV is an eye disease where the atrophy of the foetal blood vessel between the lens and fundus has not occurred normally. The disease has different levels (1-6), from small "beauty spots" to mutations causing blindness. A final diagnosis regarding the disease will be given to an adult dog.



**PPM (Persistent Pupillary Membrane):** Persistent pupillary membrane is a condition of the eye involving remnants of a foetal membrane that persist as strands of tissue on the iris crossing the pupil either towards the lens, cornea or a different part of the iris. Usually, the changes are minor and do not cause symptoms.

**Glaucoma**: Glaucoma is a group of eye diseases that cause high internal pressure in the eye, preventing the optic nerve and retina from functioning normally. Glaucoma occurs when the dog's eye cannot maintain a balance between the amount of intraocular fluid produced and drained. The long-term prognosis of canine glaucoma is poor, and glaucoma is one of the most common causes of blindness in adult dogs. Ophthalmologic testing measures are tonometry and gonioscopy.

Additionally, the dogs of Lapland have occasionally been diagnosed with more rare eye diseases such as keratitis and coloboma of the optic nerve.

## OTHER FAULTS AND DISEASES

**Hip Dysplasia:** According to research, hip dysplasia and other skeletal development disorders are partly hereditary and partly acquired with varying levels of severity. Usually, they do not affect everyday life, except at the very grave level, when they may induce pain. Excess weight makes symptoms worse.

**Elbow Dysplasia:** Elbow dysplasia has several forms that are caused by a mismatch of cartilage growth. Mode of inheritance is not clear. Symptoms usually start at the age of 4 to 7 months. A typical symptom is limping that can be made worse by exercise or be strongest after rest. Elbow joints are rated on a scale from 0 to 3 (0 = no changes and 1-3 various levels of osteoarthritis changes). Elbow dysplasia is mostly treated with medication, weight control, appropriate exercise as well as with supplements supporting the wellbeing of joints. Loose parts of the joint can be removed, and joint surfaces can be smoothed surgically.

**Patellar Luxation:** Patellar luxation is a congenital condition divided into four levels. The mildest levels usually have no symptoms, while the more severe levels require surgery.

**Spondylosis**: Spondylosis is a degenerative disorder of the spinal column. It is characterised by the presence of bony spurs or osteophytes that form along the underside and on the edges of the spinal vertebrae. The spurs and osteophytes can cause varying degrees of symptoms, such as stiffness, lameness, back pain and reluctance to jump.

**Lumbosacral Transitional Vertebra:** Lumbosacral transitional vertebra (LTV) is a common congenital and hereditary vertebral malformation whose mode of inheritance is unknown. LTV predisposes a dog to early degeneration of the lumbar intervertebral disc area, which can result in back pain and, in the worst case, paralytic symptoms of the hind legs.

**Vertebral Anomalies:** Vertebral anomalies (VA) occur in several dog breeds. Pain or neurological problems occur when deformed vertebrae exert pressure on the spinal cord.

**Shoulder Osteochondrosis:** Osteochondrosis (OC) is a developmental disorder where bone formation under the cartilage fails, causing cartilage damage to the affected area. Osteochondrosis is a polygenic hereditary disease whose manifestation is affected not only by genes but also by several other factors (rapid growth, excessive feeding and obesity, physical trauma, circulatory disorder and hormonal factors). These non-genetic factors alone never cause osteochondrosis.



**Epilepsy:** Epileptic seizures are the result of excessive and abnormal nerve cell activity in the brain. The cause of idiopathic epilepsy is not clear. Epileptic seizures can also be caused by other illnesses or factors. Diagnostics is largely based on the exclusion of other possible causes. Recurring seizures are treated with regular medication.

**Hypothyroidism:** Hypothyroidism is a disorder in which the thyroid gland does not produce thyroid hormone or not enough of it. Symptoms can vary. Disorders in metabolism can appear as a poor ability to tolerate cold weather or as weight gain. The coat loses its texture and becomes dry, and the dog will not moult normally. Medication is available for the condition.

Addison's Disease: Hypoadrenocorticism is caused by the destruction or malfunction of the adrenal cortex and is characterised by a deficient production of glucocorticoids and/or mineralocorticoids. The disease is found in young to middle-aged (2 to 4 years) dogs, with female dogs being more likely to suffer from it than males. General symptoms are vomiting, diarrhoea, loss of appetite, stomach ache and weight loss. A dog suffering from Addison's can be tired and listless showing also trembling, loss of muscle strength and muscle pain. There is medication available for the condition. This disease is relatively rare.

**Cushing's Disease:** Excess production of cortisol by the adrenal cortex causes the symptoms of Cushing's. The most common cause of hyperadrenocorticism in dogs is a benign (non-spreading) pituitary tumour or a tumour of the adrenal gland cortex. General symptoms are skin problems, increased thirst and urination, panting, lack of energy, low spirits, infertility, increased hunger and recurrent infections. There is medication available for the condition. This disease is relatively rare.

**Pompe's Disease (GSD II):** Glycogen storage disease in dogs is characterised by slow growth, recurring vomiting of slime, progressive muscle weakness, and continuous panting, as well as cardiac abnormalities and enlarged oesophagus, which lead to regurgitation in the digestive system. The first symptoms of Pompe's disease usually begin at seven months of age. Since the disease is progressive, dogs suffering from it either die or are euthanised before the age of two years. There is no cure for Pompe's disease in dogs. There is, however, a genetic test available.

**Degenerative Myelopathy (DM):** Degenerative myelopathy is a hereditary, progressive disease of the spinal cord that leads to weakness of the dog's hindquarters and later to possible paralysis symptoms, typically at the age of 8 to 14 years. Symptoms begin with a loss of coordination in the hind limbs, which gets worse within 6 to 12 months, leading to paralysis of the hind legs. There is a genetic test available for DM.

Allergies: Allergy means that the dog's inherited ability to form antibodies has weakened. Symptoms of allergies can vary from one individual to another. The symptoms and condition of any individual are not stable, but the dog can develop sensitivity towards new substances, or his body can learn to better tolerate some substances. The strength of symptoms and the dog's need for treatment are individual. In addition to skin problems, allergies can cause symptoms in ears and intestines. The costs of allergy tests and treatment vary from a few tens of euros to hundreds of euros annually. Before you begin to treat a skin problem as an allergy, you should rule out other skin diseases and a possible parasite infection. In breeds originating from Lapland, allergies are quite rare.

**Malocclusions:** Overbite or underbite. Malocclusion usually does not cause harm to the dog. Rare severe malocclusions such as the dog's canines or fangs biting into his gums require medical treatment.

**Kinked Tail:** A kinked tail is usually caused by a defective vertebra and can be detected already at the age when a puppy is ready for its new home (puppies with a kinked tail are usually sold at a lower price.) Usually, a kinked tail is harmless and does not require treatment. A kinked tail should not be confused with the permitted J-formed hook.



**Cryptorchidism:** Cryptorchidism (unilateral or bilateral) can be confirmed at the age of 12 months at the latest. The Finnish Kennel Club recommends that 20% of the puppy's price be refunded (unless this has already been provided for in the sales price, of which there must be a note in the sales agreement).

**Umbilical Hernia:** Often detectable at the time when a puppy is ready for its new home. Generally umbilical hernias consist of fat tissue and are closed, and therefore do not constitute a risk to the dog's health and don't require surgery. If an umbilical hernia develops into a health risk (being an irreducible hernia including abdominal organs), surgical repair of the hernia is recommended.

## Disease risk scores in the Lappalaiskoiratietokanta database

The Lapphund Club of Finland maintains so-called disease risk scores in its Lappalaiskoiratietokanta database (terveys.lappalaiskoiragalleria.org). Breeders can use the scores to plan their litters. The method of calculation is the same as the so-called epilepsy score that was originally developed for the Finnish Spitz. The scores for each dog are influenced by the number of disease cases in its immediate family. The scores do not directly predict whether or not a dog will be affected at some point in its life, i.e., a higher-than-average score does not necessarily mean that the dog will be affected, while a low-risk score does not protect it from being affected.

will be directed, write a low risk score does not protect it from being directed.
<ul> <li>□ The scores below have been taken from the Lappalaiskoiratietokanta database using the virtual mating tool.</li> <li>□ The dog already has a profile in the Lappalaiskoiratietokanta database; the scores below are taken from its own profile. Date:</li> </ul>
Epilepsy score:
Average of age group:
Hypothyroidism score:
Average of age group:
Addison's disease score:
Average of age group:
Allergy score:
Average of age group:
Autoimmune disease score (= Addison's disease, hypothyroidism and allergy combined):
Average of age group:



# THE SELLER DECLARES THAT TO THE BEST OF HIS/HER KNOWLEDGE THE PUPPY IS HEALTHY AT THE TIME OF THE SALE

Date:		
Signatures:		
Seller's signature	Seller's printed name	
Buyer's signature	Buyer's printed name	