NATIONAL ROTTWEILER COUNCIL (AUSTRALIA)

JLPP

(Juvenile Laryngeal Paralysis Polyneuropathy) SCHEME

Brief out line of JLPP:

What is Juvenile Laryngeal Paralysis & Polyneuropathy?

The brain controls muscles via signals that travel through nerves. A disease that affects the nerves is called a polyneuropathy: poly- (many), neuro- (nerves), - pathy (a disease). Due to a quirk in the way an embryo develops, one of the longest nerves in the body supplies the muscles of the voice box (larynx). The vocal folds vibrate as air moves over them allowing a dog to bark. When the dog breathes in, muscles in the larynx pull the vocal folds aside so that air can move easily into their lungs. These nerves also help to close the larynx when the dog swallows so they do not choke on their food.

If nerves are unable to convey messages properly, the muscles become weak or paralysed. The longest nerves are often affected first; hence laryngeal paralysis is the first symptom. The vocal folds cannot be pulled out of the way as the dog breaths in. They vibrate noisily and can obstruct the flow of air into the lungs particularly when the dog is exercised or hot. The dog may also choke on their food or water or regurgitate, which can result in pneumonia.

The next longest nerves in the body go to the back legs, thus they are affected next. The dogs have difficulty getting up and wobble as they walk. Eventually the front legs will also be affected. The symptoms do not occur until after weaning age, and thus the disease is called juvenile laryngeal paralysis/polyneuropathy or JLPP for short

What does JLPP look like?

If your dog shows signs of JLPP, see your veterinarian. They will be able to utilize the results of the DNA test and their findings on examination to determine if your dog is suffering from JLPP and advise you appropriately.

In addition to difficulty breathing and using the rear limbs, dogs with JLPP may have difficulty swallowing and may inhale food. This can result in serious pneumonia. As the disease progresses, dogs with JLPP can become unable to walk at all.

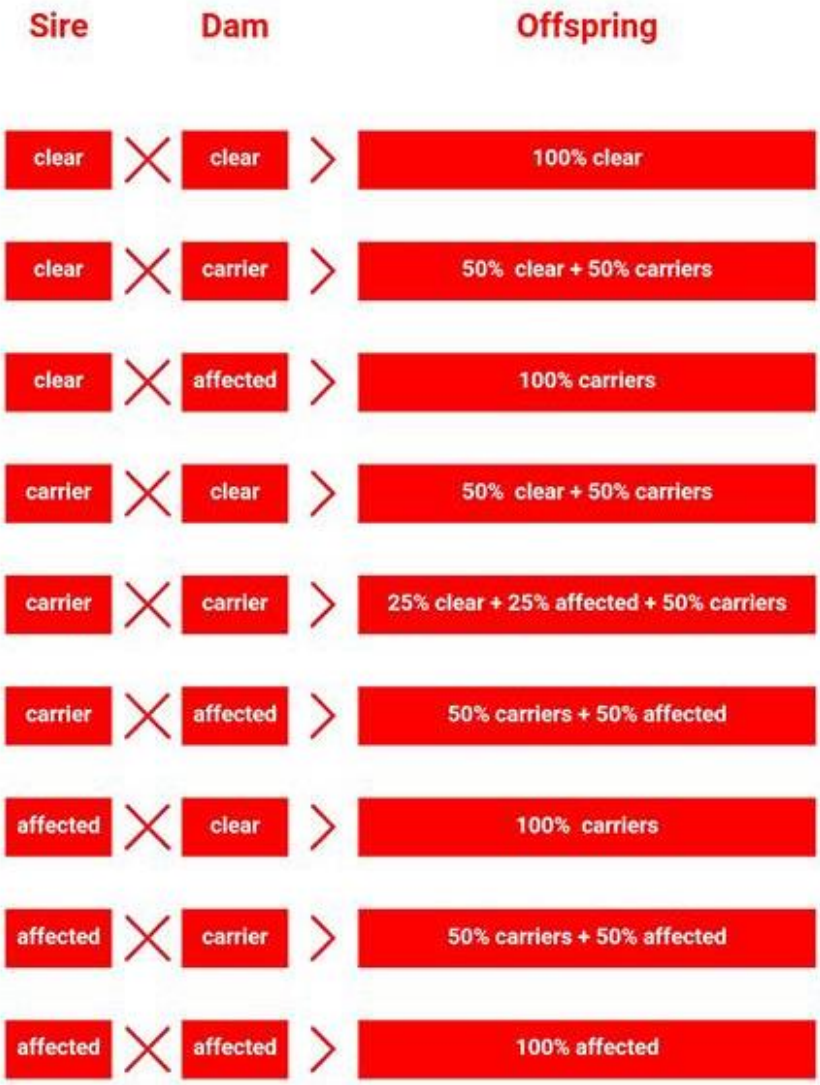
What else can look like JLPP?

There are other, much more common diseases that can affect a pup's ability to breath. The windpipe (trachea) is stiff to keep it open when the dog is breathing hard. In some dogs, particularly toy breeds, the trachea does not have the proper stiffness and it can collapse as the dog breathes producing a honking cough. This condition is called collapsing trachea. An infection of the trachea such as kennel cough can cause irritation to the trachea and a similar sounding cough. The major difference is that dogs with tracheal disease cough when breathing out, while laryngeal paralysis produces noise when the dog breathes in. Infections can cause swelling of the tonsils & lymph nodes around the throat in a young pup (strangles) which can make it difficult for the pup to breathe. Finally, other diseases of the nervous system, such as distemper infections, can affect nerves producing signs of weakness, sometimes with pneumonia. Laryngeal paralysis also occurs in older dogs, but JLPP is different because they develop paralysis at such a young age.

Trait of Inheritance

Juvenile Laryngeal Paralysis & Polyneuropathy (JLPP) is inherited as autosomal recessive trait. The test enables breeders to identify their dogs as Clear (N/N), Carriers (N/JLPP), or Affected (JLPP/JLPP), and this helps breeders to avoid having affected puppies while maintaining the diversity of the gene pool.

Inheritance: AUTOSOMAL RECESSIVE trait;



Clear

Genotype: N / N [Homozygous normal]

The dog is non-carrier of the mutant gene.

The dog will never develop Juvenile Laryngeal Paralysis & Polyneuropathy (JLPP) and therefore it can be bred to any other dog.

Carrier

Genotype: N / JLPP [Heterozygous]

The dog carries one copy of the mutant gene and one copy of the normal gene.

The dog will never develop Juvenile Laryngeal Paralysis & Polyneuropathy (JLPP) but since it carries the mutant gene, it can pass it on to its offspring with the probability of 50%.
Carriers should only be bred to clear dogs.

Avoid breeding carrier to carrier because 25% of their offspring is expected to be affected (see table above)

Affected

Genotype: JLPP / JLPP [Homozygous mutant]

The dog carries two copies of the mutant gene and therefore it will pass the mutant gene to its entire offspring.

The dog will develop Juvenile Laryngeal Paralysis & Polyneuropathy (JLPP) and will pass the mutant gene to its entire offspring.

Sample Requirements

Buccal Swabs or 0.5 - 1 ml blood in EDTA Blood Tube Buccal swabs or 0.5 - 1 ml blood in EDTA Blood Tube.

Turnaround

2 - 3 weeks

Price

Around $90 Aust plus postage, please check price with lab you are dealing with.

That the following JLPP (Juvenile Laryngeal Paralysis Polyneuropathy) Scheme be agreed to as the National Rottweiler Council (Australia) JLPP Scheme;

1. Effective from the ***1st July, 2017*** mandatory testing of all dogs being used at stud and bitch's being used for breeding must be tested for JLPP (Juvenile Laryngeal Paralysis Polyneuropathy) prior to any mating/s occurring.

2. All JLPP samples are to be collected by accredited veterinarians only.

3. Copy of the JLPP test results are to be forward to the NRC(A) Breed Recorder and will be placed onto the NRC(A) Data Base for an open and transparent viewing;
    a) *Where JLPP Testing results have been collected by an accredited veterinarian, these results will be entered onto the NRC(A) Database as being* ***verified.***
    b) *Were JLPP Testing results have been collected by a non-accredited veterinarian or owner of said dog prior to the* ***1st July, 2017*** *these results will be entered onto the NRC(A) Database as being* ***non verified.***
    c) *That JLPP status be deemed suitable and accepted under the NRCA breeding guidelines for those dogs and bitches imported into Australia that hold a JLPP recognized certification prior to importation. That the JLPP certification must be from a recognized DNA Testing scheme for JLPP and that it is compliant rule under the NRC(A) JLPP Scheme and those results to be included in the NRC(A) database.*
    d) *To be determined.*

4. Breeding may only be carried out with animals that have been tested for JLPP and meet the below criteria for breeding.
    a) *Clear to Clear*
    b) *Clear to Carrier*
    c) *Under no circumstance are Carrier to Carrier or any other combination to be breed from, other than* ***NRC(A) JLPP Scheme 4 a)*** *or* ***4 b).***
    d) *Where both Sire and Dam have been tested for JLPP and have been identified as a 'Clear' or 'Carrier' progeny from these litters are still required to be tested for JLPP if being using in a breeding program as per* ***NRC(A) JLPP Scheme Selection 3 & 4****.*

5. In the case of Frozen Semen;
    a) *Where the frozen semen has been tested, the above* ***NRC(A) JLPP Scheme Selection 3 & 4*** *will apply.*
    b) *Where frozen semen has not been tested prior to use, this semen may only be used on bitch's that have been tested and been given a result of* ***'Clear'****.*
    c) *At time of use of frozen semen, a sample is to be collected by accredited veterinarian and conformation of identity of animal and correct forms to be completed and sent off to nominated lab that the owner has required for testing of JLPP.*
    d) *All results to comply with* ***NRC(A) JLPP Scheme Selection 3 & 4.***

6. For genetic tests in dogs, DNA sample can be via either buccal swabs or blood;
    a) ***Buccal Swabs:*** *buccal swabs are to be collect by accredited veterinarian to obtain DNA sample from the mouth, accredited veterinarian will confirm animal's identity via Registered Pedigree name of the Dog, Pedigree Registration Number, Call Name, Microchip number and Owners details;*

        Where using DNA Sample Collection Kit – with Sterile Bush.

        i. *Open Packaging carefully and note 3 (triplicate) bar codes inside,*
        ii. *Stick one barcode to the Lab application form for the animal you are collecting,*
        iii. *Place the second barcode onto the front of the swab packaging, Use the third barcode to seal the swab sleeve (opening),*
        iv. *All Lab documentation to be completed and signed by accredited veterinarian, with Registered Pedigree name of the Dog, Pedigree Registration Number, Call Name, Microchip number, Owners details, all to be check by both owner and accredited veterinarian*
        v. *Have accredited veterinarian seal all completed paper work and swabs or bloods in a pre-address envelope to the selected Lab, accredited veterinarian seals envelope, for owner or accredited veterinarian to send off.*

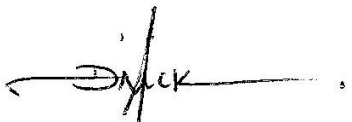
    b) ***Blood:*** *0.5 - 1 ml whole blood in EDTA blood tube. Blood must be collected by an accredited veterinarian who will confirm animal's identity via Registered Pedigree name of the Dog, Pedigree Registration Number, Call Name, Microchip number and Owners details;*

        I. *All Lab documentation to be completed and signed by accredited veterinarian, with Registered Pedigree name of the Dog, Pedigree Registration Number, Call Name, Microchip number, Owners details, all to be check by both owner and accredited veterinarian,*
        II. *Have accredited veterinarian seal all completed paper work and swabs or bloods in a pre-address envelope to the selected Lab, accredited veterinarian seals envelope, for owner or accredited veterinarian to send off.*

7. Labs for DNA testing of JLPP;
    a) *Laboklin in UK*
    b) *Laboklin in Germany OFA*
    c) *Or, any other recognized JLPP Testers in various countries.*
    d) *Members of the ANKC who enclose a copy / scan of their membership maybe entitled to a discount price for JLPP test, please check with the reliant Lab.*

The above is a result of our State Member Clubs vote on the six (6) JLPP Motions on 31st March, 2017 and will be now add to the NRC(A) Standing Orders.

Kind regards



David McKeown
President