

# Good Breeding Decisions and Heritable Diseases



## GOOD BREEDING DECISIONS

Standard 4 of the **GRNZ Greyhound Welfare Standards** sets out the basis by which decisions to breed greyhounds should be made.

Decisions to breed should be based on available evidence of progeny race performance and likely improvement of the breed; and must be conducted with healthy individuals to ensure that the offspring they produce are as physically and behaviourally healthy as possible.

*Greyhound Welfare Standard 4.15*

Good breeding decisions means choosing breeding pairs which consider the health and welfare of the parents, as well as the future puppies, and ensures their welfare best interests are considered, and not only their potential racing performance.

Other important factors to consider when deciding on a breeding female or sire include:

- Temperament:
  - Calm and relaxed, confident, outgoing, friendly
  - Shy, nervous, aloof, anxious
  - Fearful, phobic, aggressive, highly strung, reactive

Temperament is the usual 'personality' of the greyhound which is independent of circumstances/behaviour demonstrated in certain events. Temperament factors are often more highly heritable (more likely to be passed on) than many other traits, so avoid breeding from females or males who are nervous, anxious, fearful or shy. Not only are they harder to handle themselves, but there is a high chance their pups will display a similar temperament. Any greyhound that shows signs of inappropriate aggression should not be used for breeding purposes. The temperament of the puppies is particularly influenced by the temperament and behaviours demonstrated by the female during pregnancy and lactation.

- Previous litter history:
  - Good general health including age, previous injuries, previous surgeries or health concerns
  - Pregnancy complications
  - Birthing complications (caesarean, stillbirths)
  - Litter size
  - Milk production, ability to feed and care for pups
  - Attitude towards pups

- Did previous progeny race? Performance?
- Sires – semen quality, motility, libido
- Racing history:
  - Race habits e.g. early pace, stamina, endurance, hard railer/chaser
  - Race results
  - Race type e.g. sprint vs distance
  - Injuries, marring, failing to pursue

## HERITABLE DEFECTS

Heritable defects are defined as a genetic trait that causes, or has the potential to cause, significant health or welfare concerns in affected greyhounds or their puppies. It is important for their health, and therefore their welfare, that we do not breed from greyhounds with known heritable defects to ensure that we do not pass on genetic diseases or defective genes in the racing greyhound population. The following **Greyhound Welfare Standards** aim to address this.

To prevent in-breeding, LPs must not allow breeding between greyhounds that are closely related to each other, such as father-daughter, mother-son, or brother-sister. Second degree matings (for example, grandfather and granddaughter) are not recommended without obtaining prior veterinary advice.

*Greyhound Welfare Standard 4.14*

A greyhound must not be involved in breeding if it has been diagnosed by a veterinarian as having a heritable disease or defect, or there is a reason to believe that the greyhound has a heritable disease or defect.

*Greyhound Welfare Standard 4.16*

Where a greyhound is suspected of having a heritable disease or defect, LPs must seek veterinary advice to:

- a. diagnose the disease or defect and provide any required treatment;
- b. protect the ongoing welfare of the affected greyhound;
- c. prevent further propagation of the heritable disease or defect in the greyhound population by desexing the affected greyhound.

*Greyhound Welfare Standard 4.17*

- Examples of heritable diseases – these diseases, while less common in greyhounds, may present in individuals who are affected as genetic diseases and are able to be tested for using genetic tests. Speak to your veterinarian about your breeding greyhounds and whether testing is recommended.
  - Greyhound polyneuropathy (GP)
  - Progressive Retinal Atrophy (PRA)
  - von Willebrands Disease (vWD)
  - Haemophilia A
  
- The following disease conditions may have a heritable component – you should seek veterinary advice prior to breeding with greyhounds affected with these diseases.
  - Pannus
  - Osteosarcoma
  - Haemangiosarcoma
  - Hypothyroidism
  - Epilepsy
  - Osteochondritis dissecans (OCD)
  - Oesophageal achalasia
  - Lupoid onchodystrophy
  - Persistent pupillary membrane
  - Lens luxation
  
- Discuss the following common defects with your veterinarian prior to breeding from affected individuals – this can be easily performed during the pre-service veterinary examination.
  - Greyhounds with incorrect ‘bites’ – undershot and overshot jaws (refers to how the teeth align)
  - Heart murmurs
  - Cataracts
  - Conformation faults – such as a slipping patella (kneecaps that pop in and out of the patella groove, causing lameness); or bent (toe-in, toe-out, cow-hocks); or deformed legs that may mean a greyhound will be likely to develop other leg and joint problems due to inappropriate joint wear.