PennHip Certification for Dog Breeders

Recently I passed my Pennhip Certification. This allows me to take a series of hip radiographs under sedation (hip extended, hip compressed and hip distracted views) of breeding dogs and submit this study electronically to Antech Imaging Services in the US, to get a Distraction Index (DI) for that dog. This correlates to "hip laxity" and therefore tells us which dogs are likely to go on and develop osteoarthritis as adult dogs. This procedure does not cause any pain or excessive strain on the hip joint. Loose hips have a high risk of degenerative joint disease (DJD), while tight hips have a low risk of DJD.



The PennHIP technique can be used from four months of age, which means we are able to also use this method to assess puppies hips, and offer corrective procedures in the case of severe laxity to prevent HD.

Canine hip dysplasia (CHD) is a very common heritable orthopaedic disease, causing pain and discomfort in dogs leading to markedly reduced performance and work longevity. No effective cure for the disease exists and the medical or surgical treatments currently practiced are at best palliative. For the pet owner, early PennHIP evaluation provides an estimate of the risk that a dog will develop the hip arthritis of canine hip dysplasia. Hip dysplasia begins in the pup with a looseness between the ball and the socket called "laxity". This looseness leads to changes in the way the cartilage and bone of the joint surfaces develop. Unfortunately, the abnormally developed hip develops painful arthritis, that is irreversible. This can happen early in the dog's life and may not be obvious until the dog is old. Hip arthritis in older dogs is almost always due to hip dysplasia earlier in life. These owners are then saddled with a painful dog, living a reduced quality of life and no doubt on many medications, diets and nutraceuticals to alleviate pain and inflammation. This is a sad situation for the dog and the owner.

This important information from the Pennhip study will help the veterinarian prescribe preventive measures to lower the risk for hip osteoarthritis, and ameliorative measures to slow







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progression and control the associated pain. PennHIP testing is also important to dog breeders. The data compiled in the PennHIP database provides critical information that facilitates science-based selection of dogs to breed. The data also provides a logical stepwise quantitative genetic strategy that over generations will rapidly reduce the incidence and severity of Canine Hip Dysplasia.

For breeders to register their pups in NZL, they must complete testing to comply with the Dogs NZ LRL (litter registration limitation) which applies to their breed. For breeders that are not registered it is still very important that they also test the breeding pair, to give the pups the best chance of a healthy life. Each breed has different requirements based on health issues that are most likely to affect them. One of our most popular



breeds in NZL is the Labrador Retriever. Labradors to be used for breeding should be Hip and Elbow Scored, hold a current Eye Certificate, and complete DNA tests which include EIC (exercise induced collapse) and PRA (progressive renal atrophy). Other breeds may require Cardiac Screening or Patella certification.

Historically, the New Zealand Veterinary
Association (NZVA) assessed hips through its Hip
Dysplasia Scheme. However, a 2011 study by Andrew
Worth of Massey University revealed no significant
improvement in hip scores for Labrador Retrievers,
Golden Retrievers, and Rottweilers from 1990 to
2008, leading the NZVA to discontinue the traditional
scheme in January 2014. They now recommend using
the PennHIP method, which evaluates hip laxity and
the potential for DJD through distraction radiography.

Spy, a two year old Labrador Retriever, has recently visited McMaster & Heap Vet Practice to see if he reaches the standard to make him a potential stud dog. Spy's health testing journey began with an eye examination by Dr Steve Heap. After administering medicated eye drops, Steve waited 20 minutes before checking for inherited eye diseases such as cataracts and retinal dysplasia. Upon completion, he issued

Spy an Ophthalmic Examination Certificate.

Next, DNA samples were collected using a cheek swab, which was dried and sent to a laboratory for testing. While individual tests can be ordered, a Full Breed Profile is the gold standard. Simple DNA tests can prevent numerous diseases in Labradors, with EIC, PRA, dry nose, and skeletal dysplasia being the most common. A dog may be a carrier of these genes without being affected, but breeding two carriers increases the risk of producing affected puppies. Therefore, carrier dogs should only be bred with clear dogs.



Spy then underwent a check-up with the nurses, who recorded his heart rate and temperature to make sure he was in tip top condition. Spy was then sedated and radiographs were taken to assess his hips, using the Pennhip method, and his elbows. The radiographs were electronically sent off for external scoring. Sky's owner received outstanding Pennhip and elbow scores a few weeks later. Sky also has a wonderful temperament which is an essential factor when considering to breed a dog.

McMaster & Heap are now able to complete all these important BREEDING tests in just one visit - Pennhip study of Hips and Elbow Radiographs, DNA testing, Eye Certification and Cardiac screening should that be required.

Dr Michele McMaster BVSC, November 2025







