Breeding Labrador Retrievers is a labor of love for veterinarian Phyllis Giroux of Goldvein, Virginia. She is driven to produce Labradors that can succeed in all venues of competition and service and that are healthy, intelligent members of their families.

Her selection process in choosing sires for dams includes checking their health status on the Canine Health Information Center (CHIC) database. The centralized CHIC canine health database contains health testing information about individual dogs as well as a DNA Bank Repository for future research.

Sponsored by the Orthopedic Foundation for Animals (OFA) and the AKC Canine Health Foundation, CHIC works with parent clubs to identify health screening protocols appropriate for their breeds. The Labrador Retriever was one of eight pilot breeds that were part of the CHIC health database when it began in 2001.

“Although it is impossible to create a perfect dog, health testing via CHIC and OFA will help breeders produce offspring with great health, wonderful temperament and true breed type,” Giroux says.

In determining which health tests should be required, the Labrador Retriever Club looked at the impact of diseases on the breed. Tests for hip and elbow dysplasia and eye diseases were initially required. In 2013, testing for exercise-induced collapse was added. A test for centronuclear myopathy is optional.

“In general, Labrador Retrievers are a very healthy breed,” says Fran Smith, DVM, PhD, DACT, of Smith Veterinary Hospital in Burnsville, Minnesota, and vice president and health chair of the Labrador Retriever Club. “The popularity of this breed over the years has helped create a diverse gene pool due to the number of dogs being bred.”

More than 20,800 Labrador Retrievers are included in the CHIC database, says Eddie Dziuk, chief operating officer for OFA. “We are able to draw conclusions about health trends using the database, but they do not represent the absolute incidence of disease since only a fraction of the population is tested and reported.”

The incidence of hip dysplasia in Labradors has decreased significantly since testing for this disease was included in the CHIC program. Through 2013, 88.3 percent of Labradors had normal tests.

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CHIC Requirements for Labrador Retrievers

The Canine Health Information Center (CHIC) provides health testing information about individual dogs. A CHIC number does not imply normal testing results but indicates that the breed-specific tests were performed and the owner made the results publicly available.

Breeders may research the health status of dogs they are considering breeding as well as their parents, siblings and offspring.

The required health tests for Labrador Retrievers are:

**Hip Dysplasia**
Orthopedic Foundation for Animals (OFA) evaluation — Preliminary testing can be done in dogs as young as 4 months old, but a re-evaluation is required at 24 months to receive certification

**Elbow Dysplasia**
OFA evaluation — A dog must be 24 months old to receive certification

**Eye Examination**
Must be conducted by a veterinarian who is board-certified by the American College of Veterinary Ophthalmology, with results registered with OFA or Canine Eye Registry Foundation (CERF) — Testing must be done annually to maintain certification

**Exercise-Induced Collapse**
DNA test offered through the University of Minnesota

An optional test is offered for:

**Centronuclear Myopathy**
DNA test available through the Alfort School of Veterinary Medicine near Paris, with results registered with OFA

Test results from the OFA and CERF databases automatically are shared with CHIC at no cost to owners. In addition to breed-specific testing requirements, CHIC requires that all dogs must be permanently identified via microchip or tattoo in order to qualify for a CHIC number.

For more information about the CHIC requirements for Labrador Retrievers, 

CLICK HERE TO VISIT OFA
hips. Hip dysplasia is caused by abnormal hip development that worsens from extreme wear to joint cartilage during weight-bearing exercise. Affected dogs have a poor fit between the femoral head and acetabulum that allows for loose movement or laxity of the hip joint. Eventually, a dog develops osteoarthritis or degenerative joint disease, which can be severely painful and cause lameness.

Because the condition worsens over time, many dogs do not show signs until they are older. Abnormal gait, bunny hopping when running, thigh muscle atrophy, pain, low exercise tolerance, reluctance to climb stairs, and an audible click when walking are common signs. Due to the heritability of this degenerative disease, dogs that are dysplastic should not be bred.

Elbow Dysplasia

As with hip dysplasia, since testing for elbow dysplasia was added to the CHIC program, the disease has decreased. Through 2013, 89.5 percent of Labrador Retrievers tested had normal elbows.

Elbow dysplasia describes a group of developmental diseases that individually or in combination can cause lameness in a dog’s front legs. It is an inherited condition that begins when puppies enter their rapid growth stage between 4 and 10 months of age. Early detection during puppyhood provides the best chance for successful treatment, though this can be difficult as the signs often are not apparent until a dog is older.

The disorder is due to abnormal formation of one or more of the three bones that make up the elbow joint, which causes cartilage and bone on the joint surfaces to develop improperly. This leads to fragmentation, detachment, fissuring, and/or wearing away of the cartilage and bone. Eventually, this culminates in osteoarthritis and bone-on-bone grinding in the elbow.

Annual Eye Exams

Eye diseases affecting Labrador Retrievers include a late-onset form of progressive retinal atrophy known as rod-cone degeneration (prcd-PRA), the most common eye disease in the breed, and cataracts.

Eye examinations for CHIC certification must be done by a veterinarian who is board-certified by the American College of Veterinary Ophthalmologists. Annual eye exams, which are required to maintain CHIC certification, are important for dogs that are part of a breeding program.

Before the discovery of the gene mutation for prcd-PRA in 2005, breeders often bred carriers and affected dogs without realizing they were passing the disease on to future generations. The development of the genetic test has helped advance breeders’ ability to test their dogs and make responsible breeding decisions.

Cataracts are a condition in which the clear lens of the eye that is used for focusing develops cloudy spots that gradually inhibit light from reaching the retina. Believed to be an inherited condition, cataracts may develop in one or both eyes quickly or slowly over several years.

Veterinary ophthalmologists classify cataracts according to their position in the eye, age of onset and progression. Although not painful, cataracts can result in blindness and associated trauma. Veterinary ophthalmologists can recognize signs of cataracts in dogs as young as 1 year of age.

Exercise-Induced Collapse

Exercise-induced collapse (EIC) is a genetic condition that puts affected dogs at risk for a life-threatening episode of collapse that typically occurs during hard work or exercise. Although affected dogs cannot continue with strenuous training, they often can live long, healthy lives as companions.

Discovery of the EIC autosomal recessive gene mutation in 2007 by scientists at the University of Minnesota led to the development of a genetic test that enables identification of affected and carrier dogs. Signs of EIC usually appear between 1 and 2 years of age, when dogs that participate in field trials, hunting or high-energy sports begin heavy training. Affected dogs are often in excellent condition and described as having high drive and an excitable nature. The condition begins with looseness or wobbliness in the back legs. Unlike the short stiff strides seen in muscle weakness disorders, dogs with EIC have a rocking horse gait with long wide strides.

Halting exercise as soon as possible is essential as some dogs that continue trying to work after collapsing do not survive. Most dogs recover within 5 to 25 minutes as if nothing happened. Dogs do not appear stiff or sore upon recovery.

Labrador Retrievers generally have a higher incidence of EIC than other breeds. It is estimated that about 10 percent of Labradors registered with CHIC are affected by EIC and about 30 to 40 percent are carriers.

Centronuclear Myopathy

When a genetic test for centronuclear myopathy was first offered in 2005 by the Alfort School of Veterinary Medicine near Paris, France, it provided an opportunity for breeders to reduce the incidence of this debilitating muscle disease. Although it is an optional test, the Labrador Retriever Club encourages breeders to test sires and dams before breeding as well as puppies from new litters. About 2 percent of Labradors that have been tested have been carriers.

Puppies with CNM are almost always indistinguishable from their littersmates at birth. By 4 weeks of age, they lack or show weak tendon reflexes and weigh significantly less. By 3 to 5 months of age, puppies begin to walk with an awkward gait and experience decreased exercise tolerance. Clinical signs are progressive but generally stabilized by around 12 to 18 months of age. There is no recovery of the muscles, and no medications help.

Litters can be tested before they are 7 weeks old, which helps breeders in determining the best homes for individual dogs. Many puppy buyers would be happy to own a carrier that would never show signs of disease.
Artificial insemination (AI) gives breeders an opportunity to breed dogs that otherwise might not be possible due to geographical location, behavior incompatibilities or other factors. A recent study examined whether antibiotics added to commercial semen extenders to increase shelf life inhibit the growth of bacteria in semen samples.

“Breeders are not shipping females for natural breeding as much today and thus are turning more to AI,” says Ginny Altman, vice president of the American German Shepherd Dog Charitable Foundation. “Since semen collection introduces bacteria into the semen sample from normal bacterial flora, we wanted to learn whether the antibiotics used in extenders control the growth of bacteria.”

The study, funded by the AKC Canine Health Foundation with support from the American German Shepherd Dog Charitable Foundation, was led by Carla Barstow, DVM, and Margaret Root Kustritz, DVM, PhD, DACT, professor of small animal reproduction at the University of Minnesota College of Veterinary Medicine. They recruited 14 male dogs from members of all-breed clubs in the Minneapolis area. Included were six Samoyeds, six Malamutes, one English Springer Spaniel, and one Labrador Retriever, ranging from 2 to 9 years of age.

“Our study was intended to mimic what can happen in the real world,” Barstow says. “It is important for the receiving veterinarian who will do the AI procedure and the brood bitch owner to know that the semen product they are using is safe. In reality, manufacturers include antibiotics in extenders to prolong shelf life, not inhibit bacterial growth.”

Commercial semen extenders are used with chilled and frozen semen. Extenders are liquid media that support spermatozoa by providing nutrients and a buffering capacity to offset changes in temperature that occur during storing and shipping.

Chilled semen must be shipped and inseminated in a bitch within 24 hours of collection to retain viability and reduce the risk of disease. In addition to normal bacterial flora from a male dog’s urethra, semen can be infected from urine in the urethra and organisms that are shed from prostatic or testicular fluid caused by systemic infection.

Preventing disease transmission by AI will protect bitches only if an antibiotic is added to the semen. Two commercial canine extenders commonly used by theriogenologists, or reproduction specialists, were tested in the study. One extender contains several antibiotics, and the other has a single antibiotic.

Each semen sample was separated into 11 samples. Three cultures, considered neat samples, had no extender added and were tested for anaerobic, aerobic and Mycoplasma bacteria. The remaining semen was separated into two groups for adding the respective extender products. The individual extender groups were stored at room temperature (20 degrees Celsius) or refrigeration temperature (5 degrees Celsius) and tested for aerobic and Mycoplasma bacteria at collection, 24 hours and 48 hours.

Thirty-five percent of dogs had significant growth of bacteria in their semen, which is in accord with information from the literature, Barstow says. Bacterial growth was controlled in samples that were held at refrigeration temperature, but not in all the samples that were held at room temperature.

“Importantly, there was no significant growth in any refrigerated sample, which is the protocol for shipping chilled semen samples,” she says. “The question was whether extenders work as we thought they did, and yes, we showed they do.”

Upcoming Events

Check out upcoming Purina-sponsored show and sporting events at venues across the country. These events are great opportunities to meet dog enthusiasts, canine experts and Purina representatives who can answer questions about Purina Pro Plan dog food and Purina Pro Club.

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View the Top 10 dogs leading the 2015 Pro Plan Champions Cup competition. The yearlong Pro Plan Champions Cup award is sponsored by Purina Pro Plan brand dog food and is based on points tabulated from Bests in Show and Group placements at more than 200 Purina-sponsored all-breed dog shows. The winner receives a $10,000 cash prize, an original oil painting by dog portrait artist Linda Draper and a keepsake Pro Plan Champions Cup trophy.

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Purina Pro Plan dog food recently launched a new natural line. Purina Pro Plan NATURAL Formulas Plus Essential Vitamins and Minerals offer outstanding nutrition with high-quality natural ingredients. This natural dog food contains no corn, wheat or soy; no added artificial colors, flavors or preservatives; and no poultry by-product meal. Purina Pro Plan NATURAL includes three Adult Grain Free formulas: Chicken & Egg, Lamb & Egg, and Tuna & Egg. There also are two all life-stage formulas, Chicken & Brown Rice and Turkey & Barley, and one adult dog formula, Duck & Rice Formula.

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