

DAISY

Veterinary Report by Embark

embarkvet.com

Test Date: September 2nd, 2024

Customer-supplied information

Owner Name: LC Hunting Labs, LLC.

Dog Name: Daisy

Sex: Female (intact)

Date of birth: 07/12/22

Breed type: purebred

Breed: Labrador Retriever

Breed registration: American Kennel Club (AKC) SS35251909

Microchip: N/A

Genetic summary

Genetic breed identification:

Labrador Retriever

Breed ancestry:

 **Labrador Retriever: 100.0%**

Predicted adult weight: **54 lbs**

Calculated from 17 size genes.

Life stage: **Young adult**

Based on date of birth provided.

Health Report

How to interpret Daisy's genetic health results:

If Daisy inherited any of the variants that we tested, they will be listed at the top of the Health Report section, along with a description of how to interpret this result. We also include all of the variants that we tested Daisy for that we did not detect the risk variant for.

A genetic test is not a diagnosis

This genetic test does not diagnose a disease. Please talk to your vet about your dog's genetic results, or if you think that your pet may have a health condition or disease.

Summary

Of the 274 genetic health risks we analyzed, we found 3 results that you should learn about.

Increased risk results (1)

Copper Toxicosis (Accumulating)

Notable results (2)

Exercise-Induced Collapse, EIC

Stargardt Disease

Clear results



















Breed-relevant (22)

Other (248)

Health Report








BREED-RELEVANT RESULTS

Research studies indicate that these results are more relevant to dogs like Daisy, and may influence her chances of developing certain health conditions.

 Copper Toxicosis (Accumulating) (ATP7B)	Increased risk
 Exercise-Induced Collapse, EIC (DNM1)	Notable
 Stargardt Disease (ABCA4 Exon 28, Labrador Retriever Variant)	Notable
 Alexander Disease (GFAP)	Clear
 Canine Elliptocytosis (SPTB Exon 30)	Clear
 Centronuclear Myopathy, CNM (PTPLA)	Clear
 Congenital Dyserythropoietic Anemia and Polymyopathy (EHPB1L1, Labrador Retriever Variant)	Clear
 Congenital Myasthenic Syndrome, CMS (COLQ, Labrador Retriever Variant)	Clear
 Day Blindness (CNGA3 Exon 7, Labrador Retriever Variant)	Clear
 Degenerative Myelopathy, DM (SOD1A)	Clear
 Ehlers-Danlos Syndrome (EDS) (COL5A1, Labrador Retriever Variant)	Clear
 Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2 (TTC8)	Clear
 Hereditary Nasal Parakeratosis, HNPk (SUV39H2)	Clear
 Laryngeal Paralysis (CNTNAP1, Leonberger, Saint Bernard, and Labrador Retriever variant)	Clear
 Macular Corneal Dystrophy, MCD (CHST6)	Clear
 Muscular Dystrophy-Dystroglycanopathy (LARGE1, Labrador Retriever Variant)	Clear
 Myotonia Congenita (CLCN1 Exon 19, Labrador Retriever Variant)	Clear
 Narcolepsy (HCRTR2 Intron 6, Labrador Retriever Variant)	Clear

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BREED-RELEVANT RESULTS

 Progressive Retinal Atrophy, crd4/cord1 (RPGRIP1)	Clear
 Progressive Retinal Atrophy, prcd (PRCD Exon 1)	Clear
 Pyruvate Kinase Deficiency (PKLR Exon 7, Labrador Retriever Variant)	Clear
 Skeletal Dysplasia 2, SD2 (COL11A2, Labrador Retriever Variant)	Clear
 Ullrich-like Congenital Muscular Dystrophy (COL6A3 Exon 10, Labrador Retriever Variant)	Clear
 Urate Kidney & Bladder Stones (SLC2A9)	Clear
 X-Linked Myotubular Myopathy (MTM1, Labrador Retriever Variant)	Clear

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OTHER RESULTS

Research has not yet linked these conditions to dogs with similar breeds to Daisy. Review any increased risk or notable results to understand her potential risk and recommendations.

 2-DHA Kidney & Bladder Stones (APRT)	Clear
 Acral Mutilation Syndrome (GDNF-AS, Spaniel and Pointer Variant)	Clear
 Alaskan Husky Encephalopathy (SLC19A3)	Clear
 Alaskan Malamute Polyneuropathy, AMPN (NDRG1 SNP)	Clear
 ALT Activity (GPT)	Clear
 Anhidrotic Ectodermal Dysplasia (EDA Intron 8)	Clear
 Autosomal Dominant Progressive Retinal Atrophy (RHO)	Clear
 Bald Thigh Syndrome (IGFBP5)	Clear
 Bernard-Soulier Syndrome, BSS (GP9, Cocker Spaniel Variant)	Clear
 Bully Whippet Syndrome (MSTN)	Clear
 Canine Fucosidosis (FUCA1)	Clear
 Canine Leukocyte Adhesion Deficiency Type I, CLAD I (ITGB2, Setter Variant)	Clear
 Canine Leukocyte Adhesion Deficiency Type III, CLAD III (FERMT3, German Shepherd Variant)	Clear
 Canine Multifocal Retinopathy, cmr1 (BEST1 Exon 2)	Clear
 Canine Multifocal Retinopathy, cmr2 (BEST1 Exon 5, Coton de Tulear Variant)	Clear
 Canine Multifocal Retinopathy, cmr3 (BEST1 Exon 10 Deletion, Finnish and Swedish Lapphund, Lapponian Herder Variant)	Clear
 Canine Multiple System Degeneration (SERAC1 Exon 4, Chinese Crested Variant)	Clear
 Canine Multiple System Degeneration (SERAC1 Exon 15, Kerry Blue Terrier Variant)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Cardiomyopathy and Juvenile Mortality (YARS2)	Clear
<input checked="" type="checkbox"/> Cerebellar Hypoplasia (VLDLR, Eurasier Variant)	Clear
<input checked="" type="checkbox"/> Chondrodystrophy (ITGA10, Norwegian Elkhound and Karelian Bear Dog Variant)	Clear
<input checked="" type="checkbox"/> Cleft Lip and/or Cleft Palate (ADAMTS20, Nova Scotia Duck Tolling Retriever Variant)	Clear
<input checked="" type="checkbox"/> Cleft Palate, CP1 (DLX6 intron 2, Nova Scotia Duck Tolling Retriever Variant)	Clear
<input checked="" type="checkbox"/> Cobalamin Malabsorption (CUBN Exon 8, Beagle Variant)	Clear
<input checked="" type="checkbox"/> Cobalamin Malabsorption (CUBN Exon 53, Border Collie Variant)	Clear
<input checked="" type="checkbox"/> Collie Eye Anomaly (NHEJ1)	Clear
<input checked="" type="checkbox"/> Complement 3 Deficiency, C3 Deficiency (C3)	Clear
<input checked="" type="checkbox"/> Congenital Cornification Disorder (NSDHL, Chihuahua Variant)	Clear
<input checked="" type="checkbox"/> Congenital Hypothyroidism (TPO, Rat, Toy, Hairless Terrier Variant)	Clear
<input checked="" type="checkbox"/> Congenital Hypothyroidism (TPO, Tenterfield Terrier Variant)	Clear
<input checked="" type="checkbox"/> Congenital Hypothyroidism with Goiter (TPO Intron 13, French Bulldog Variant)	Clear
<input checked="" type="checkbox"/> Congenital Hypothyroidism with Goiter (SLC5A5, Shih Tzu Variant)	Clear
<input checked="" type="checkbox"/> Congenital Macrothrombocytopenia (TUBB1 Exon 1, Cairn and Norfolk Terrier Variant)	Clear
<input checked="" type="checkbox"/> Congenital Muscular Dystrophy (LAMA2, Italian Greyhound)	Clear
<input checked="" type="checkbox"/> Congenital Myasthenic Syndrome, CMS (COLQ, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/> Congenital Myasthenic Syndrome, CMS (CHAT, Old Danish Pointing Dog Variant)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Congenital Myasthenic Syndrome, CMS (CHRNE, Jack Russell Terrier Variant)	Clear
<input checked="" type="checkbox"/> Congenital Stationary Night Blindness (LRIT3, Beagle Variant)	Clear
<input checked="" type="checkbox"/> Congenital Stationary Night Blindness (RPE65, Briard Variant)	Clear
<input checked="" type="checkbox"/> Copper Toxicosis (Attenuating) (ATP7A, Labrador Retriever)	Clear
<input checked="" type="checkbox"/> Copper Toxicosis (Attenuating) (RETN, Labrador Retriever)	Clear
<input checked="" type="checkbox"/> Craniomandibular Osteopathy, CMO (SLC37A2)	Clear
<input checked="" type="checkbox"/> Craniomandibular Osteopathy, CMO (SLC37A2 Intron 16, Basset Hound Variant)	Clear
<input checked="" type="checkbox"/> Cystinuria Type I-A (SLC3A1, Newfoundland Variant)	Clear
<input checked="" type="checkbox"/> Cystinuria Type II-A (SLC3A1, Australian Cattle Dog Variant)	Clear
<input checked="" type="checkbox"/> Cystinuria Type II-B (SLC7A9, Miniature Pinscher Variant)	Clear
<input checked="" type="checkbox"/> Darier Disease (ATP2A2, Irish Terrier Variant)	Clear
<input checked="" type="checkbox"/> Day Blindness (CNGB3 Deletion, Alaskan Malamute Variant)	Clear
<input checked="" type="checkbox"/> Day Blindness (CNGA3 Exon 7, German Shepherd Variant)	Clear
<input checked="" type="checkbox"/> Day Blindness (CNGB3 Exon 6, German Shorthaired Pointer Variant)	Clear
<input checked="" type="checkbox"/> Deafness and Vestibular Syndrome of Dobermans, DVDob, DINGS (MYO7A)	Clear
<input checked="" type="checkbox"/> Demyelinating Polyneuropathy (SBF2/MTRM13)	Clear
<input checked="" type="checkbox"/> Dental-Skeletal-Retinal Anomaly (MIA3, Cane Corso Variant)	Clear
<input checked="" type="checkbox"/> Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis (INPP5E Intron 9, Norwich Terrier Variant)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Dilated Cardiomyopathy, DCM (RBM20, Schnauzer Variant)	Clear
<input checked="" type="checkbox"/> Dilated Cardiomyopathy, DCM1 (PDK4, Doberman Pinscher Variant 1)	Clear
<input checked="" type="checkbox"/> Dilated Cardiomyopathy, DCM2 (TTN, Doberman Pinscher Variant 2)	Clear
<input checked="" type="checkbox"/> Disproportionate Dwarfism (PRKG2, Dogo Argentino Variant)	Clear
<input checked="" type="checkbox"/> Dry Eye Curly Coat Syndrome (FAM83H Exon 5)	Clear
<input checked="" type="checkbox"/> Dystrophic Epidermolysis Bullosa (COL7A1, Central Asian Shepherd Dog Variant)	Clear
<input checked="" type="checkbox"/> Dystrophic Epidermolysis Bullosa (COL7A1, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/> Early Bilateral Deafness (LOXHD1 Exon 38, Rottweiler Variant)	Clear
<input checked="" type="checkbox"/> Early Onset Adult Deafness, EOAD (EPS8L2 Deletion, Rhodesian Ridgeback Variant)	Clear
<input checked="" type="checkbox"/> Early Onset Cerebellar Ataxia (SEL1L, Finnish Hound Variant)	Clear
<input checked="" type="checkbox"/> Ehlers Danlos (ADAMTS2, Doberman Pinscher Variant)	Clear
<input checked="" type="checkbox"/> Enamel Hypoplasia (ENAM Deletion, Italian Greyhound Variant)	Clear
<input checked="" type="checkbox"/> Enamel Hypoplasia (ENAM SNP, Parson Russell Terrier Variant)	Clear
<input checked="" type="checkbox"/> Episodic Falling Syndrome (BCAN)	Clear
<input checked="" type="checkbox"/> Factor VII Deficiency (F7 Exon 5)	Clear
<input checked="" type="checkbox"/> Factor XI Deficiency (F11 Exon 7, Kerry Blue Terrier Variant)	Clear
<input checked="" type="checkbox"/> Familial Nephropathy (COL4A4 Exon 3, Cocker Spaniel Variant)	Clear
<input checked="" type="checkbox"/> Familial Nephropathy (COL4A4 Exon 30, English Springer Spaniel Variant)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Fanconi Syndrome (FAN1, Basenji Variant)	Clear
<input checked="" type="checkbox"/> Fetal-Onset Neonatal Neuroaxonal Dystrophy (MFN2, Giant Schnauzer Variant)	Clear
<input checked="" type="checkbox"/> Glanzmann's Thrombasthenia Type I (ITGA2B Exon 13, Great Pyrenees Variant)	Clear
<input checked="" type="checkbox"/> Glanzmann's Thrombasthenia Type I (ITGA2B Exon 12, Otterhound Variant)	Clear
<input checked="" type="checkbox"/> Globoid Cell Leukodystrophy, Krabbe disease (GALC Exon 5, Terrier Variant)	Clear
<input checked="" type="checkbox"/> Glycogen Storage Disease Type IA, Von Gierke Disease, GSD IA (G6PC1, German Pinscher Variant)	Clear
<input checked="" type="checkbox"/> Glycogen Storage Disease Type IA, Von Gierke Disease, GSD IA (G6PC, Maltese Variant)	Clear
<input checked="" type="checkbox"/> Glycogen Storage Disease Type IIIA, GSD IIIA (AGL, Curly Coated Retriever Variant)	Clear
<input checked="" type="checkbox"/> Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Whippet and English Springer Spaniel Variant)	Clear
<input checked="" type="checkbox"/> Glycogen storage disease Type VII, Phosphofructokinase Deficiency, PFK Deficiency (PFKM, Wachtelhund Variant)	Clear
<input checked="" type="checkbox"/> GM1 Gangliosidosis (GLB1 Exon 2, Portuguese Water Dog Variant)	Clear
<input checked="" type="checkbox"/> GM1 Gangliosidosis (GLB1 Exon 15, Shiba Inu Variant)	Clear
<input checked="" type="checkbox"/> GM1 Gangliosidosis (GLB1 Exon 15, Alaskan Husky Variant)	Clear
<input checked="" type="checkbox"/> GM2 Gangliosidosis (HEXA, Japanese Chin Variant)	Clear
<input checked="" type="checkbox"/> GM2 Gangliosidosis (HEXB, Poodle Variant)	Clear
<input checked="" type="checkbox"/> Golden Retriever Progressive Retinal Atrophy 1, GR-PRA1 (SLC4A3)	Clear
<input checked="" type="checkbox"/> Goniodysgenesis and Glaucoma, Pectinate Ligament Dysplasia, PLD (OLFM3)	Clear
<input checked="" type="checkbox"/> Hemophilia A (F8 Exon 11, German Shepherd Variant 1)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Hemophilia A (F8 Exon 1, German Shepherd Variant 2)	Clear
<input checked="" type="checkbox"/> Hemophilia A (F8 Exon 10, Boxer Variant)	Clear
<input checked="" type="checkbox"/> Hemophilia B (F9 Exon 7, Terrier Variant)	Clear
<input checked="" type="checkbox"/> Hemophilia B (F9 Exon 7, Rhodesian Ridgeback Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Ataxia (PNPLA8, Australian Shepherd Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Ataxia, Cerebellar Degeneration (RAB24, Old English Sheepdog and Gordon Setter Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Cataracts (HSF4 Exon 9, Australian Shepherd Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Cataracts (FYCO1, Wirehaired Pointing Griffon Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Cerebellar Ataxia (SELENOP, Belgian Shepherd Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Footpad Hyperkeratosis (FAM83G, Terrier and Kromfohrlander Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Footpad Hyperkeratosis (DSG1, Rottweiler Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Nasal Parakeratosis (SUV39H2 Intron 4, Greyhound Variant)	Clear
<input checked="" type="checkbox"/> Hereditary Vitamin D-Resistant Rickets (VDR)	Clear
<input checked="" type="checkbox"/> Hypocatalasia, Acatlasemia (CAT)	Clear
<input checked="" type="checkbox"/> Hypomyelination and Tremors (FNIP2, Weimaraner Variant)	Clear
<input checked="" type="checkbox"/> Hypophosphatasia (ALPL Exon 9, Karelian Bear Dog Variant)	Clear
<input checked="" type="checkbox"/> Ichthyosis (NIPAL4, American Bulldog Variant)	Clear
<input checked="" type="checkbox"/> Ichthyosis (ASPRV1 Exon 2, German Shepherd Variant)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Ichthyosis (SLC27A4, Great Dane Variant)	Clear
<input checked="" type="checkbox"/> Ichthyosis, Epidermolytic Hyperkeratosis (KRT10, Terrier Variant)	Clear
<input checked="" type="checkbox"/> Ichthyosis, ICH1 (PNPLA1, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/> Ichthyosis, ICH2 (ABHD5, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/> Inflammatory Myopathy (SLC25A12)	Clear
<input checked="" type="checkbox"/> Inherited Myopathy of Great Danes (BIN1)	Clear
<input checked="" type="checkbox"/> Inherited Selected Cobalamin Malabsorption with Proteinuria (CUBN, Komondor Variant)	Clear
<input checked="" type="checkbox"/> Intervertebral Disc Disease (Type I) (FGF4 retrogene - CFA12)	Clear
<input checked="" type="checkbox"/> Intestinal Lipid Malabsorption (ACSL5, Australian Kelpie)	Clear
<input checked="" type="checkbox"/> Junctional Epidermolysis Bullosa (LAMA3 Exon 66, Australian Cattle Dog Variant)	Clear
<input checked="" type="checkbox"/> Junctional Epidermolysis Bullosa (LAMB3 Exon 11, Australian Shepherd Variant)	Clear
<input checked="" type="checkbox"/> Juvenile Epilepsy (LG12)	Clear
<input checked="" type="checkbox"/> Juvenile Laryngeal Paralysis and Polyneuropathy (RAB3GAP1, Rottweiler Variant)	Clear
<input checked="" type="checkbox"/> Juvenile Myoclonic Epilepsy (DIRAS1)	Clear
<input checked="" type="checkbox"/> L-2-Hydroxyglutaricaciduria, L2HGA (L2HGDH, Staffordshire Bull Terrier Variant)	Clear
<input checked="" type="checkbox"/> Lagotto Storage Disease (ATG4D)	Clear
<input checked="" type="checkbox"/> Laryngeal Paralysis (RAPGEF6, Miniature Bull Terrier Variant)	Clear
<input checked="" type="checkbox"/> Late Onset Spinocerebellar Ataxia (CAPN1)	Clear

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OTHER RESULTS

<input checked="" type="checkbox"/> Late-Onset Neuronal Ceroid Lipofuscinosis, NCL 12 (ATP13A2, Australian Cattle Dog Variant)	Clear
<input checked="" type="checkbox"/> Leonberger Polyneuropathy 1 (LPN1, ARHGEF10)	Clear
<input checked="" type="checkbox"/> Leonberger Polyneuropathy 2 (GJA9)	Clear
<input checked="" type="checkbox"/> Lethal Acrodermatitis, LAD (MKLN1)	Clear
<input checked="" type="checkbox"/> Leukodystrophy (TSEN54 Exon 5, Standard Schnauzer Variant)	Clear
<input checked="" type="checkbox"/> Ligneous Membranitis, LM (PLG)	Clear
<input checked="" type="checkbox"/> Limb Girdle Muscular Dystrophy (SGCD, Boston Terrier Variant)	Clear
<input checked="" type="checkbox"/> Limb-Girdle Muscular Dystrophy 2D (SGCA Exon 3, Miniature Dachshund Variant)	Clear
<input checked="" type="checkbox"/> Long QT Syndrome (KCNQ1)	Clear
<input checked="" type="checkbox"/> Lundehund Syndrome (LEPREL1)	Clear
<input checked="" type="checkbox"/> Malignant Hyperthermia (RYR1)	Clear
<input checked="" type="checkbox"/> May-Hegglin Anomaly (MYH9)	Clear
<input checked="" type="checkbox"/> Medium-Chain Acyl-CoA Dehydrogenase Deficiency, MCADD (ACADM, Cavalier King Charles Spaniel Variant)	Clear
<input checked="" type="checkbox"/> Methemoglobinemia (CYB5R3, Pit Bull Terrier Variant)	Clear
<input checked="" type="checkbox"/> Methemoglobinemia (CYB5R3)	Clear
<input checked="" type="checkbox"/> Microphthalmia (RBP4 Exon 2, Soft Coated Wheaten Terrier Variant)	Clear
<input checked="" type="checkbox"/> Mucopolysaccharidosis IIIB, Sanfilippo Syndrome Type B, MPS IIIB (NAGLU, Schipperke Variant)	Clear
<input checked="" type="checkbox"/> Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, Dachshund Variant)	Clear



















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OTHER RESULTS

<input checked="" type="checkbox"/>	Mucopolysaccharidosis Type IIIA, Sanfilippo Syndrome Type A, MPS IIIA (SGSH Exon 6, New Zealand Huntaway Variant)	Clear
<input checked="" type="checkbox"/>	Mucopolysaccharidosis Type VI, Maroteaux-Lamy Syndrome, MPS VI (ARSB Exon 5, Miniature Pinscher Variant)	Clear
<input checked="" type="checkbox"/>	Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII (GUSB Exon 3, German Shepherd Variant)	Clear
<input checked="" type="checkbox"/>	Mucopolysaccharidosis Type VII, Sly Syndrome, MPS VII (GUSB Exon 5, Terrier Brasileiro Variant)	Clear
<input checked="" type="checkbox"/>	Multiple Drug Sensitivity (ABCB1)	Clear
<input checked="" type="checkbox"/>	Muscular Dystrophy (DMD, Cavalier King Charles Spaniel Variant 1)	Clear
<input checked="" type="checkbox"/>	Muscular Dystrophy (DMD, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/>	Musladin-Lueke Syndrome, MLS (ADAMTSL2)	Clear
<input checked="" type="checkbox"/>	Myasthenia Gravis-Like Syndrome (CHRNE, Heideterrier Variant)	Clear
<input checked="" type="checkbox"/>	Myotonia Congenita (CLCN1 Exon 23, Australian Cattle Dog Variant)	Clear
<input checked="" type="checkbox"/>	Myotonia Congenita (CLCN1 Exon 7, Miniature Schnauzer Variant)	Clear
<input checked="" type="checkbox"/>	Narcolepsy (HCRTR2 Exon 1, Dachshund Variant)	Clear
<input checked="" type="checkbox"/>	Narcolepsy (HCRTR2 Intron 4, Doberman Pinscher Variant)	Clear
<input checked="" type="checkbox"/>	Nemaline Myopathy (NEB, American Bulldog Variant)	Clear
<input checked="" type="checkbox"/>	Neonatal Cerebellar Cortical Degeneration (SPTBN2, Beagle Variant)	Clear
<input checked="" type="checkbox"/>	Neonatal Encephalopathy with Seizures, NEWS (ATF2)	Clear
<input checked="" type="checkbox"/>	Neonatal Interstitial Lung Disease (LAMP3)	Clear
<input checked="" type="checkbox"/>	Neuroaxonal Dystrophy, NAD (VPS11, Rottweiler Variant)	Clear

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 Neuroaxonal Dystrophy, NAD (TECPR2, Spanish Water Dog Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 1, NCL 1 (PPT1 Exon 8, Dachshund Variant 1)	Clear
 Neuronal Ceroid Lipofuscinosis 10, NCL 10 (CTSD Exon 5, American Bulldog Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 2, NCL 2 (TPP1 Exon 4, Dachshund Variant 2)	Clear
 Neuronal Ceroid Lipofuscinosis 5, NCL 5 (CLN5 Exon 4 SNP, Border Collie Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 5, NCL 5 (CLN5 Exon 4 Deletion, Golden Retriever Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 6, NCL 6 (CLN6 Exon 7, Australian Shepherd Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 7, NCL 7 (MFSD8, Chihuahua and Chinese Crested Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8, Australian Shepherd Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8 Exon 2, English Setter Variant)	Clear
 Neuronal Ceroid Lipofuscinosis 8, NCL 8 (CLN8 Insertion, Saluki Variant)	Clear
 Neuronal Ceroid Lipofuscinosis, Cerebellar Ataxia, NCL4A (ARSG Exon 2, American Staffordshire Terrier Variant)	Clear
 Oculocutaneous Albinism, OCA (SLC45A2 Exon 6, Bullmastiff Variant)	Clear
 Oculocutaneous Albinism, OCA (SLC45A2, Small Breed Variant)	Clear
 Oculoskeletal Dysplasia 2 (COL9A2, Samoyed Variant)	Clear
 Osteochondrodysplasia (SLC13A1, Poodle Variant)	Clear
 Osteogenesis Imperfecta (COL1A2, Beagle Variant)	Clear
 Osteogenesis Imperfecta (SERPINH1, Dachshund Variant)	Clear

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<input checked="" type="checkbox"/> Osteogenesis Imperfecta (COL1A1, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/> P2Y12 Receptor Platelet Disorder (P2Y12)	Clear
<input checked="" type="checkbox"/> Pachyonychia Congenita (KRT16, Dogue de Bordeaux Variant)	Clear
<input checked="" type="checkbox"/> Paroxysmal Dyskinesia, PxD (PIGN)	Clear
<input checked="" type="checkbox"/> Persistent Mullerian Duct Syndrome, PMDS (AMHR2)	Clear
<input checked="" type="checkbox"/> Pituitary Dwarfism (POU1F1 Intron 4, Karelian Bear Dog Variant)	Clear
<input checked="" type="checkbox"/> Platelet Factor X Receptor Deficiency, Scott Syndrome (TMEM16F)	Clear
<input checked="" type="checkbox"/> Polycystic Kidney Disease, PKD (PKD1)	Clear
<input checked="" type="checkbox"/> Pompe's Disease (GAA, Finnish and Swedish Lapphund, Lapponian Herder Variant)	Clear
<input checked="" type="checkbox"/> Prekallikrein Deficiency (KLKB1 Exon 8)	Clear
<input checked="" type="checkbox"/> Primary Ciliary Dyskinesia, PCD (NME5, Alaskan Malamute Variant)	Clear
<input checked="" type="checkbox"/> Primary Ciliary Dyskinesia, PCD (STK36, Australian Shepherd Variant)	Clear
<input checked="" type="checkbox"/> Primary Ciliary Dyskinesia, PCD (CCDC39 Exon 3, Old English Sheepdog Variant)	Clear
<input checked="" type="checkbox"/> Primary Hyperoxaluria (AGXT)	Clear
<input checked="" type="checkbox"/> Primary Lens Luxation (ADAMTS17)	Clear
<input checked="" type="checkbox"/> Primary Open Angle Glaucoma (ADAMTS17 Exon 11, Basset Fauve de Bretagne Variant)	Clear
<input checked="" type="checkbox"/> Primary Open Angle Glaucoma (ADAMTS10 Exon 17, Beagle Variant)	Clear
<input checked="" type="checkbox"/> Primary Open Angle Glaucoma (ADAMTS10 Exon 9, Norwegian Elkhound Variant)	Clear

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<input checked="" type="checkbox"/> Primary Open Angle Glaucoma and Primary Lens Luxation (ADAMTS17 Exon 2, Chinese Shar-Pei Variant)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy (SAG)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy (IFT122 Exon 26, Lapponian Herder Variant)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy 5, PRA5 (NECAP1 Exon 6, Giant Schnauzer Variant)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, Bardet-Biedl Syndrome (BBS2 Exon 11, Shetland Sheepdog Variant)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, CNGA (CNGA1 Exon 9)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, crd1 (PDE6B, American Staffordshire Terrier Variant)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, PRA1 (CNGB1)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, PRA3 (FAM161A)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, rcd1 (PDE6B Exon 21, Irish Setter Variant)	Clear
<input checked="" type="checkbox"/> Progressive Retinal Atrophy, rcd3 (PDE6A)	Clear
<input checked="" type="checkbox"/> Proportionate Dwarfism (GH1 Exon 5, Chihuahua Variant)	Clear
<input checked="" type="checkbox"/> Protein Losing Nephropathy, PLN (NPHS1)	Clear
<input checked="" type="checkbox"/> Pyruvate Dehydrogenase Deficiency (PDP1, Spaniel Variant)	Clear
<input checked="" type="checkbox"/> Pyruvate Kinase Deficiency (PKLR Exon 5, Basenji Variant)	Clear
<input checked="" type="checkbox"/> Pyruvate Kinase Deficiency (PKLR Exon 7, Beagle Variant)	Clear
<input checked="" type="checkbox"/> Pyruvate Kinase Deficiency (PKLR Exon 10, Terrier Variant)	Clear
<input checked="" type="checkbox"/> Pyruvate Kinase Deficiency (PKLR Exon 7, Pug Variant)	Clear















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<input checked="" type="checkbox"/> Raine Syndrome (FAM20C)	Clear
<input checked="" type="checkbox"/> Recurrent Inflammatory Pulmonary Disease, RIPD (AKNA, Rough Collie Variant)	Clear
<input checked="" type="checkbox"/> Renal Cystadenocarcinoma and Nodular Dermatofibrosis (FLCN Exon 7)	Clear
<input checked="" type="checkbox"/> Retina Dysplasia and/or Optic Nerve Hypoplasia (SIX6 Exon 1, Golden Retriever Variant)	Clear
<input checked="" type="checkbox"/> Sensory Neuropathy (FAM134B, Border Collie Variant)	Clear
<input checked="" type="checkbox"/> Severe Combined Immunodeficiency, SCID (PRKDC, Terrier Variant)	Clear
<input checked="" type="checkbox"/> Severe Combined Immunodeficiency, SCID (RAG1, Wetterhoun Variant)	Clear
<input checked="" type="checkbox"/> Shaking Puppy Syndrome (PLP1, English Springer Spaniel Variant)	Clear
<input checked="" type="checkbox"/> Shar-Pei Autoinflammatory Disease, SPAID, Shar-Pei Fever (MTBP)	Clear
<input checked="" type="checkbox"/> Skin Fragility Syndrome (PKP1, Chesapeake Bay Retriever Variant)	Clear
<input checked="" type="checkbox"/> Spinocerebellar Ataxia (SCN8A, Alpine Dachsbracke Variant)	Clear
<input checked="" type="checkbox"/> Spinocerebellar Ataxia with Myokymia and/or Seizures (KCNJ10)	Clear
<input checked="" type="checkbox"/> Spongy Degeneration with Cerebellar Ataxia 1 (KCNJ10)	Clear
<input checked="" type="checkbox"/> Spongy Degeneration with Cerebellar Ataxia 2 (ATP1B2)	Clear
<input checked="" type="checkbox"/> Succinic Semialdehyde Dehydrogenase Deficiency (ALDH5A1 Exon 7, Saluki Variant)	Clear
<input checked="" type="checkbox"/> Thrombopathia (RASGRP1 Exon 5, American Eskimo Dog Variant)	Clear
<input checked="" type="checkbox"/> Thrombopathia (RASGRP1 Exon 5, Basset Hound Variant)	Clear
<input checked="" type="checkbox"/> Thrombopathia (RASGRP1 Exon 8, Landseer Variant)	Clear

Health Report

OTHER RESULTS

 Trapped Neutrophil Syndrome, TNS (VPS13B)	Clear
 Ullrich-like Congenital Muscular Dystrophy (COL6A1 Exon 3, Landseer Variant)	Clear
 Unilateral Deafness and Vestibular Syndrome (PTPRQ Exon 39, Doberman Pinscher)	Clear
 Von Willebrand Disease Type I, Type I vWD (VWF)	Clear
 Von Willebrand Disease Type II, Type II vWD (VWF, Pointer Variant)	Clear
 Von Willebrand Disease Type III, Type III vWD (VWF Exon 4, Terrier Variant)	Clear
 Von Willebrand Disease Type III, Type III vWD (VWF Intron 16, Nederlandse Kooikerhondje Variant)	Clear
 Von Willebrand Disease Type III, Type III vWD (VWF Exon 7, Shetland Sheepdog Variant)	Clear
 X-Linked Hereditary Nephropathy, XLHN (COL4A5 Exon 35, Samoyed Variant 2)	Clear
 X-Linked Progressive Retinal Atrophy 1, XL-PRA1 (RPGR)	Clear
 X-linked Severe Combined Immunodeficiency, X-SCID (IL2RG Exon 1, Basset Hound Variant)	Clear
 X-linked Severe Combined Immunodeficiency, X-SCID (IL2RG, Corgi Variant)	Clear
 Xanthine Urolithiasis (XDH, Mixed Breed Variant)	Clear
 β -Mannosidosis (MANBA Exon 16, Mixed-Breed Variant)	Clear
Mast Cell Tumor	No result

Health Report

HEALTH REPORT

Increased risk result

Copper Toxicosis (Accumulating)

Daisy inherited one copy of the variant we tested for Copper Toxicosis (Accumulating)

Daisy is at increased risk for Copper Toxicosis (Accumulating)

How to interpret this result

Daisy has a variant at the ATP7B gene and is at increased risk for developing Copper Toxicosis. Please consult your veterinarian to discuss further diagnostics, monitoring, and treatment for Daisy. Mutations in the ATP7A

(<https://my.embarkvet.com/members/results/health/condition/140101?i=1>) and RETN

(<https://my.embarkvet.com/members/results/health/condition/200070?i=1>) genes may help modify this risk.

What is Copper Toxicosis (Accumulating)?

Copper toxicosis is a condition in which affected dogs have difficulty excreting excess copper from their liver. The liver accumulates more copper until it eventually begins failing. Multiple genetic and environmental factors contribute to the development of this condition.

When signs & symptoms develop in affected dogs

Signs typically develop in adults.

Signs & symptoms

Signs are non-specific, including weight loss, inappetence, vomiting, and diarrhea. Jaundice, a fluid-filled abdomen, and neurologic signs can occur in more severely affected dogs.

How vets diagnose this condition

Genetic testing, blood work, abdominal ultrasound, and surgical biopsy are all used to diagnose this condition.

How this condition is treated

Treatment includes a low copper diet and medical management to help bind excess copper. Antioxidant supplements may also be considered.

Actions to take if your dog is affected

- Please consult your veterinarian for dietary advice and follow their recommendations for monitoring.
- Learn more about how the three variants for Copper Toxicosis are inherited and, if applicable, how results can be used in a breeding program here (<https://embarkvet.com/resources/embark-adds-copper-toxicosis-dna-test/>)

Health Report

HEALTH REPORT

Notable result

Exercise-Induced Collapse, EIC

Daisy inherited one copy of the variant we tested for Exercise-Induced Collapse, EIC

What does this result mean?

This variant should not impact Daisy's health. This variant is inherited in an autosomal recessive manner, meaning that a dog needs two copies of the variant to show signs of this condition. Daisy is unlikely to develop this condition due to this variant because she only has one copy of the variant.

Impact on Breeding

Your dog carries this variant and will pass it on to ~50% of her offspring. You can email breeders@embarkvet.com to discuss with a genetic counselor how the genotype results should be applied to a breeding program.

What is Exercise-Induced Collapse, EIC?

EIC has been linked to a mutation in the DNM1 gene, which codes for the protein dynamin. In the neuron, dynamin trucks neurotransmitter-filled vesicles from the cell body, where they are generated, to the dendrites. It is hypothesized in dogs affected with EIC, the mutation in DNM1 disrupts efficient neurotransmitter release, leading to a cessation in signalling and EIC.

When signs & symptoms develop in affected dogs

Signs develop in juvenile dogs, typically before 3 years of age.

How vets diagnose this condition

Genetic testing, clinical signs, and muscle biopsy can be used to diagnose this disorder.

How this condition is treated

Dogs with this condition are otherwise normal and healthy, though some severely affected dogs have died during an episode. The factors determining the severity of an episode on a given day or in a given dog is unknown.

Actions to take if your dog is affected

- Minimizing or eliminating intense exercise is the best way we currently know to prevent complications from this condition.

Health Report

HEALTH REPORT

⊖ Notable result

Stargardt Disease

Daisy inherited one copy of the variant we tested for Stargardt Disease

What does this result mean?

This variant should not impact Daisy's health. This variant is inherited in an autosomal recessive manner, meaning that a dog needs two copies of the variant to show signs of this condition. Daisy is unlikely to develop this condition due to this variant because she only has one copy of the variant.

Impact on Breeding

Your dog carries this variant and will pass it on to ~50% of her offspring. You can email breeders@embarkvet.com to discuss with a genetic counselor how the genotype results should be applied to a breeding program.

What is Stargardt Disease?

Stargardt Disease is a non-painful inherited degenerative disorder of the rod and cone photoreceptor cells of the retina that results in vision loss. Rods affect vision in the dark, or low light, and cones affect vision in light. As the disease progresses, cone function is profoundly abnormal, whereas rod function is better preserved. Vision slowly deteriorates, but some vision seems to remain throughout an affected dog's lifetime.

When signs & symptoms develop in affected dogs

Although subtle changes to vision and the retinas may be noted at 1-2 years of age, dogs may not be diagnosed until middle or advanced age when changes are more noticeable.

How vets diagnose this condition

Stargardt Disease is diagnosed by examining the fundus, or back of the eye. It may be difficult to observe any obvious changes to the retina. But as the disease progresses, there will be mottling of the tapetum (a layer of tissue immediately behind the retina) and thinning of the retinal blood vessels. Changes to the back of the eye are bilateral and symmetrical, helping to distinguish Stargardt Disease from other retinal diseases. If the retinas cannot be evaluated due to other abnormalities, a veterinary ophthalmologist can perform electroretinography (ERG), the definitive test, which measures the electrical activity and, thus, the function of the retinas.

How this condition is treated

Currently, there is no widespread treatment for Stargardt Disease; however, gene and stem cell therapies are an evolving field.

Actions to take if your dog is affected

- Affected dogs may experience a painful sensitivity to light and may squint in bright light.
- Dog owners can help affected dogs navigate their homes and the outside world by keeping furniture in the same location, ensuring they are on a leash in unfamiliar territory, and training them to understand verbal commands or using scent markers.

Genetic Diversity and Inbreeding

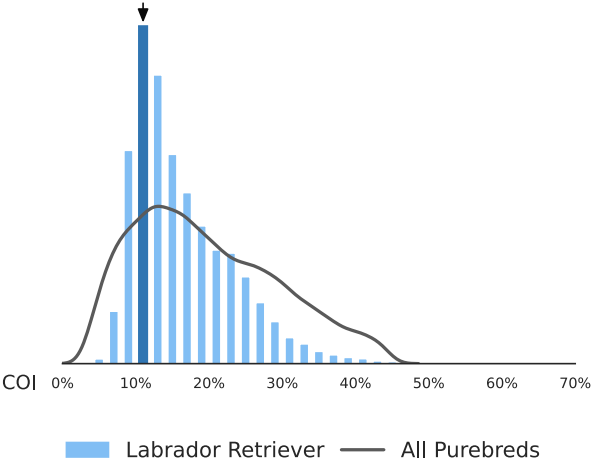
Coefficient of Inbreeding (COI)

Genetic Result: 9%

Our genetic COI measures the proportion of your dog's genome (her genes) where the genes on the mother's side are identical by descent to those on the father's side. The higher your dog's coefficient of inbreeding (the percentage), the more inbred your dog is.

Your Dog's COI

Your Dog's COI: 9%



This graph represents where your dog's inbreeding levels fall on a scale compared to both dogs with a similar breed makeup to her (the blue bars) and all purebred dogs (the grey line).

Genetic Diversity and Inbreeding

More on the Science

Embark scientists, along with our research partners at Cornell University, have shown the impact of inbreeding on longevity and fertility and developed a state-of-the-art, peer-reviewed method for accurately measuring COI and predicting average COI in litters.

Citations

Sams & Boyko 2019 "Fine-Scale Resolution of Runs of Homozygosity Reveal Patterns of Inbreeding and Substantial Overlap with Recessive Disease Genotypes in Domestic Dogs" (<https://www.ncbi.nlm.nih.gov/pubmed/30429214>)

Chu et al 2019 "Inbreeding depression causes reduced fecundity in Golden Retrievers" (<https://link.springer.com/article/10.1007/s00335-019-09805-4>)

Yordy et al 2019 "Body size, inbreeding, and lifespan in domestic dogs" (<https://www.semanticscholar.org/paper/Body-size%2C-inbreeding%2C-and-lifespan-in-domestic-Yordy-Kraus/61d0fa7a71afb26f547f0fb7ff71e23a14d19d2c>)

About Embark

Embark Veterinary is a canine genetics company offering research-grade genetic tests to pet owners and breeders. Every Embark test examines thousands of genetic markers, and provides results for over 250 genetic health conditions, breed identification, clinical tools, and more.

Embark is a research partner of the Cornell University College of Veterinary Medicine and collaborates with scientists and registries to accelerate genetic research in canine health. We make it easy for customers and vets to understand, share and make use of their dog's unique genetic profile to improve canine health and happiness.

Learn more at embarkvet.com

Veterinarians and hospitals can send inquiries to veterinarians@embarkvet.com.