Dognomics
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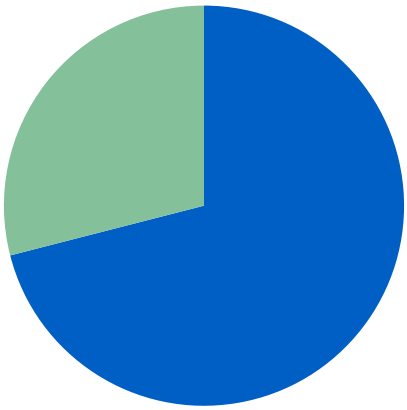
ABOUT

Arya

Breed



Arya is a mix of 2 different breeds.

- 71% German Shepherd Dog
- 29% Staffordshire Bull Terrier

Health

We have tested the DNA from Arya for 237 different genetic variants (mutations) that increase the risk of developing a health condition.

Increased health risk:

1 condition

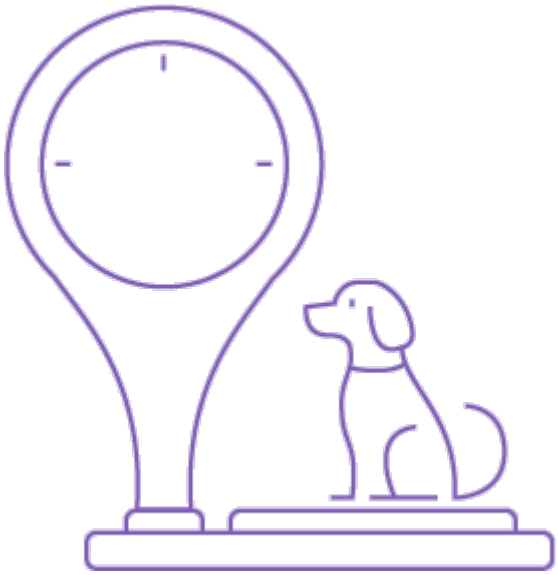
Carrier only:

1 condition

Clear result (no variants detected):

235 total conditions tested

Weight



45-68 (lb)

Detailed Breed Results

German Shepherd Dog

The German Shepherd is a police dog and military dog that originated in Germany. The breed is a versatile working and service dog.

Appearance & Grooming

The German Shepherd is a large dog with a muscular body. The breed has a medium-long double coat in tan, red, black, gray, silver, reddish-brown, brown, and yellow. The German Shepherd Dog sheds regularly and requires weekly brushing.

Behavior & Disposition

The German Shepherd is courageous, aloof, calm, loyal, and confident. They tend to play well with children. However, adult supervision is recommended when playing with other dogs.

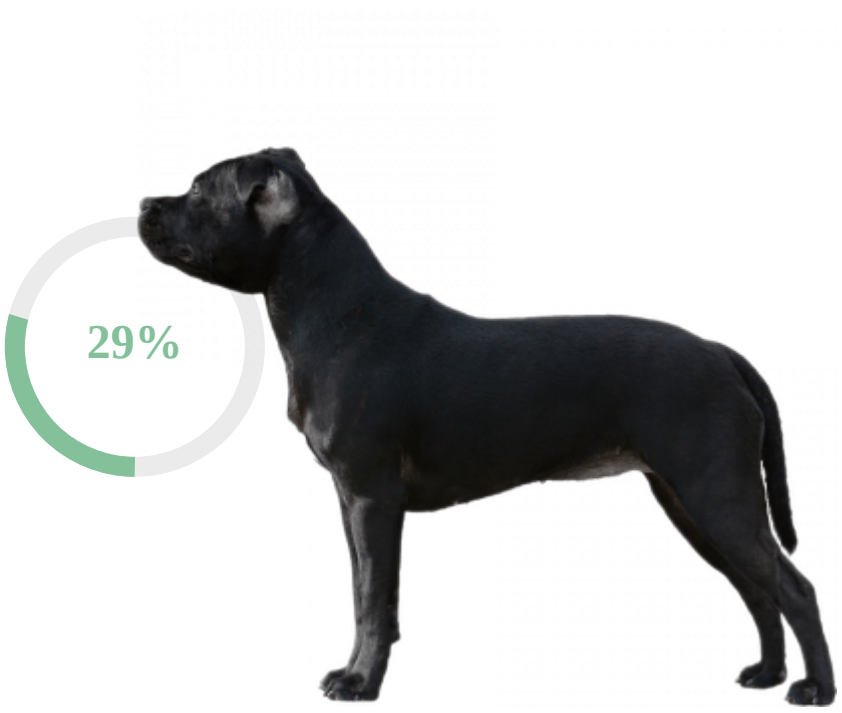
Activity Level

The German Shepherd has a moderate activity level and it is easy for the breed to become overweight. For optimal health, the German Shepherd Dog should be carefully monitored for calorie consumption and avoid foods containing cooked bones and high

fat contents.

Training

The German Shepherd is a very smart dog and can learn quickly. A combination of verbal praises and rewards with consistency is recommended. Early socialization and obedience training are also recommended.



Staffordshire Bull Terrier

The Staffordshire Bull Terrier is a terrier dog used to catch rats. The breed originated in Great Britain.

Appearance & Grooming

The Staffordshire Bull Terrier is a medium-sized dog with a muscular body. The breed has a short and soft coat in black, blue, brindle, red, fawn, and white. The Staffordshire Bull Terrier sheds occasionally and requires weekly brushing.

Behavior & Disposition

The Staffordshire Bull Terrier is affectionate, fearless, reliable,

	and intelligent. They tend to play well with children. However adult supervision is recommended when playing with other dogs.
Activity Level	The Staffordshire Bull Terrier has a high activity level, but it is still easy for the breed to become overweight. For optimal health, the Staffordshire Bull Terrier should be carefully monitored for calorie consumption and should have daily walks.
Training	The Staffordshire Bull Terrier is a very smart and sociable dog and can learn quickly. Early obedience training is highly recommended because of their aggressive nature towards other dogs.

Health details

We have tested the DNA from Arya for 237 different genetic variants (mutations) that increase the risk of developing a health condition.

Increased health risk:

1 condition

"Increased health risk" means your dog has a higher chance of experiencing the health condition(s) identified below. This does **NOT** mean your dog has or will experience this health condition. Our DNA test has identified the presence of one or two variants (genetic mutations) that *increase the likelihood* of this health condition compared to dogs without these variants.

We recommend sharing the results with your vet and asking what you can do to be proactive with your dog's care. This discussion is typically not urgent and can usually wait until your next vet appointment.

In addition, pups from an affected parent are more likely to inherit the genetic health condition. However, this does not mean that all pups will experience the health condition or symptoms.

Increased health risk - Adverse Reaction to Certain Drugs, Variant 1

What it is

Adverse Reaction to Certain Drugs is an inherited disorder that can cause afflicted dogs to display adverse symptoms after certain drugs are administered.

Possible symptoms

The most common symptoms of Adverse Reaction to Certain Drugs are anaphylaxis shock, rash, diarrhea, runny nose, tremors, and seizures.

Heredity characteristics

If these symptoms are observed, please immediately consult your veterinarian.

Related gene ABCB1

Citations L Alves et al 2011

Carrier only:

1 condition

"Carrier only" means your dog is **not** at *increased* risk for experiencing the health condition(s) identified below. However, your dog is a carrier for this condition and therefore is more likely to pass it along to their offspring, especially if your dog breeds with another dog that is also a carrier for the same condition.

Carrier only - Progressive Retinal Atrophy Crd4/Cord1

What it is

Progressive Retinal Atrophy is an inherited disease that slowly leads to vision loss over a period of time.

Possible symptoms

Progressive Retinal Atrophy is an inherited disorder that leads to gradual vision loss over time by damaging the retina. As they

are losing eyesight, affected dogs may often bump into objects and become hesitant to walk.

Heredity characteristics

There is currently no known treatment for this condition. Removing objects in their path and creating a comfortable and familiar environment can help maintain a high quality of life. In addition, training your dog in visual commands can be an excellent way to maintain communication.

Related gene RPGRIP1

Citations C S Mellersh et al 2006

Clear result (no variants detected):

235 total conditions tested

"Clear" means your dog is **not** at *increased* risk for experiencing the health conditions identified below. Our DNA test has **not** identified the presence of one or more variants (genetic mutations) that increase health risk.

We test for a long list of health conditions and most dogs will have a clear result for the vast majority of them. You can see the complete list of clear results below.

Because DNA is only part of the story when talking about good health, your dog can still experience one or more of these health conditions. The good news is that your dog's genetics do not increase the likelihood of this happening.

Clear Results

- Leukocyte Adhesion Deficiency Type III
- Dilated Cardiomyopathy, Variant 3

- Neuroaxonal Dystrophy, Variant 2
- Ehlers-Danlos Syndrome Classic Type 1, Variant 2
- Ehlers-Danlos Syndrome Classic Type 1, Variant 1
- Alexander Disease
- Dilated Cardiomyopathy, Variant 2
- Neuroaxonal Dystrophy, Variant 1
- Child-Like Syndrome
- Hypotrichosis, Variant 2
- X-Linked Hypohidrotic Ectodermal Dysplasia
- Canine Paroxysmal Dyskinesia
- Ectodermal Dysplasia
- Ehlers-Danlos Syndrome Type VII
- Ehlers-Danlos Syndrome Classic-Like Type 1, Variant 2
- Ehlers-Danlos Syndrome Classic-Like Type 1, Variant 1
- Dilated Cardiomyopathy, Variant 1
- Juvenile Neuroaxonal Dystrophy
- Scott Syndrome
- Hypotrichosis, Variant 1
- Leukocyte Adhesion Deficiency Type I
- Lysosomal Storage Disease
- Gallbladder Mucoceles
- Beta Mannosidosis, Variant 2
- Hereditary Cataracts, Variant 2
- Laryngeal Paralysis
- Lethal Acrodermatitis
- Stargardt Disease 1
- Glycogen Storage Disease Type IIIa
- Trapped Neutrophil Syndrome
- Adverse Reaction to Certain Drugs, Variant 2
- Persistent Mullerian Duct Syndrome
- Periodic Fever Syndrome
- Glycogen Storage Disease Type II (Pompe Disease)
- Glycogen Storage Disease Type Ia
- Multi-Drug Resistance
- Thrombasthenia, Variant 2
- Thrombopathia, Variant 3
- Severe Combined Immunodeficiency Disease, Variant 3
- Myotonia Congenita, Variant 3
- Familial Enamel Hypoplasia Amelogenesis Imperfecta, Variant 2

- Thrombopathia, Variant 2
- Pyruvate Kinase Deficiency, Variant 3
- Congenital Myasthenic Syndrome, Variant 4
- L-2-Hydroxyglutaric Aciduria, Variant 2
- Myotonia Congenita, Variant 2
- Familial Nephropathy, Variant 2
- Familial Adenomatous Polyposis
- Primary Ciliary Dyskinesia, Variant 1
- Mucopolysaccharidosis VI, Variant 1
- Bleeding Disorder due to P2Ry12 Defect
- Cyclic Hematopoiesis
- L-2-Hydroxyglutaric Aciduria, Variant 1
- Thrombasthenia, Variant 1
- Pyruvate Kinase Deficiency, Variant 2
- Dental Hypomineralization
- Spinal Dysraphism
- Factor VII Deficiency
- Mucopolysaccharidosis I
- Mucopolysaccharidosis VII, Variant 2
- Mucopolysaccharidosis VII, Variant 1
- Thrombocytopenia
- Primary Hyperoxaluria Type I (Oxalosis I)
- Primary Ciliary Dyskinesia, Variant 2
- Primary Lens Luxation, Variant 2
- Exercise-Induced Collapse
- Intestinal Cobalamin Malabsorption
- Congenital Myasthenic Syndrome, Variant 3
- Congenital Myasthenic Syndrome, Variant 2
- Congenital Myasthenic Syndrome, Variant 1
- May-Hegglin Anomaly
- Vitamin D-Deficiency Rickets Type II
- Fecundity
- Methemoglobinemia
- Polycystic Kidney Disease
- Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis
- Narcolepsy, Variant 2
- Narcolepsy, Variant 1
- Myotonia Congenita, Variant 1
- Dry Eye Curly Coat Syndrome

- Congenital Macrothrombocytopenia
- Familial Nephropathy, Variant 1
- Nephritis (Alport Syndrome)
- Recurrent Inflammatory Pulmonary Disease
- Primary Lens Luxation, Variant 1
- Van Den Ende-Gupta Syndrome
- Mucopolysaccharidosis IIIa
- Macular Corneal Dystrophy
- Respiratory Distress Syndrome
- Thrombopathia, Variant 1
- Pyruvate Kinase Deficiency, Variant 1
- Phosphofructokinase Deficiency
- Pulmonary Surfactant Metabolism Dysfunction
- Severe Combined Immunodeficiency Disease, Variant 2
- Severe Combined Immunodeficiency Disease, Variant 1
- Mucopolysaccharidosis VI, Variant 2
- Cone-Rod Dysplasia 1A
- Cone-Rod Dystrophy 2
- GM1 Gangliosidosis, Variant 3
- Neonatal Cerebellar Cortical Degeneration
- Cerebellar Abiotrophy
- Duchenne Muscular Dystrophy, Variant 2
- Palmoplantar Hyperkeratosis, Variant 2
- Progressive Retinal Atrophy Type 1, Variant 2
- Von Willebrand Disease II, Variant2
- Progressive Retinal Atrophy, Variant 4
- Cerebellar Ataxia
- Neuronal Ceroid Lipofuscinosis 8, Variant 3
- Neuronal Ceroid Lipofuscinosis 8, Variant 2
- Neuronal Ceroid Lipofuscinosis 1, Variant 2
- Leukodystrophy (Krabbe Disease)
- Muscular Dystrophy, Variant 3
- Hypothyroidism, Variant 2
- Cone-Rod Dystrophy 1
- Polyneuropathy, Variant 2
- Oculoskeletal Dysplasia 1, Variant 2
- Hemophilia B, Variant 3
- Hemophilia B, Variant 2
- Hemophilia A, Variant 3

- Dystrophic Epidermolysis Bullosa, Variant 2
- Von Willebrand Disease I
- Degenerative Myelopathy, Variant 2
- Progressive Retinal Atrophy, Variant 3
- Progressive Retinal Atrophy Type 1, Variant 1
- Chondrodysplasia
- Neuronal Ceroid Lipofuscinosis 8, Variant 1
- Neuronal Ceroid Lipofuscinosis A, Variant 2
- Neuronal Ceroid Lipofuscinosis 2
- Neuronal Ceroid Lipofuscinosis 4A
- Cystinuria Type 2B
- Achromatopsia
- Osteogenesis Imperfecta, Variant 2
- Leukoencephalomyelopathy
- Craniomandibular Osteopathy, Variant 2
- Multifocal Retinopathy 3 (Cmr3), Variant 2
- Multifocal Retinopathy 1
- Primary Open Angle Glaucoma, Variant 4
- Muscular Dystrophy, Variant 2
- Nemaline Myopathy
- Palmoplantar Hyperkeratosis, Variant 1
- Epidermolytic Hyperkeratosis
- Hyperuricosuria
- Congenital Dyshormonogenic Hypothyroidism with Goiter
- Congenital Hypothyroidism with Goiter
- GM2 Gangliosidosis Type 0 (Sandhoff Disease)
- GM1 Gangliosidosis, Variant 2
- Osteogenesis Imperfecta, Variant 1
- Limb-Girdle Muscular Dystrophy Type 2F, Variant 3
- Spondylocostal Dysostosis
- Neuronal Ceroid Lipofuscinosis 5, Variant 2
- Nasal Parakeratosis, Variant 2
- Hemophilia A, Variant 2
- Hemophilia A, Variant 1
- Simplex Epidermolysis Bullosa
- Dystrophic Epidermolysis Bullosa, Variant 1
- Von Willebrand Disease III, Variant 1
- Progressive Retinal Atrophy With Progressive Rod-Cone Degeneration
- Cone-Rod Dysplasia 1

- Spinocerebellar Ataxia, Variant 2
- Spinocerebellar Ataxia with Myokymia and Seizure
- Late Spinocerebellar Ataxia
- Ichthyosis, Variant 4
- Oculoskeletal Dysplasia 1, Variant 1
- Neuronal Ceroid Lipofuscinosis A, Variant 1
- Spinocerebellar Degeneration and Neuronal Vacuolation
- Neuronal Ceroid Lipofuscinosis 10
- Neuronal Ceroid Lipofuscinosis 5, Variant 1
- Cystinuria
- Hemeralopia Achromatopsia (Cone Degeneration)
- Osteogenesis Imperfecta, Type III
- Leukodystrophy
- Exfoliative Cutaneous Lupus Erythematosus
- Hypocatalasia
- Menkes Disease
- Craniomandibular Osteopathy, Variant 1
- Dandy Walker Syndrome
- Multifocal Retinopathy 3 (Cmr3), Variant 1
- Multifocal Retinopathy 2 (Cmr2)
- Polyneuropathy, Variant 1
- Congenital Eye Malformation
- Encephalopathy
- Primary Open Angle Glaucoma, Variant 3
- Primary Open Angle Glaucoma, Variant 2
- Bilateral Deafness and Vestibular Dysfunction
- Muscular Dystrophy, Variant 1
- Exercise Induced Metabolic Myopathy
- Myotubular Myopathy 1, Variant 2
- Skeletal Dysplasia 2 (Disproportionate Dwarfism)
- Hypothyroidism, Variant 1
- Acral Mutilation Syndrome
- Familial Enamel Hypoplasia Amelogenesis Imperfecta, Variant 1
- Pyruvate Dehydrogenase Phosphatase Deficiency
- Musladin-Lueke Syndrome
- Late Imerslund-Grasbeck Syndrome
- Early Imerslund-Grasbeck Syndrome
- GM2 Gangliosidosis Type 1 (Tay Sachs)
- GM1 Gangliosidosis, Variant 1

- C3 Deficiency
- Spinocerebellar Ataxia, Variant 1
- Limb-Girdle Muscular Dystrophy Type 2F, Variant 2
- Progressive Retinal Atrophy, Variant 2
- Duchenne Muscular Dystrophy, Variant 1
- Limb-Girdle Muscular Dystrophy Type 2F, Variant 1
- Generalized Myoclonic Epilepsy, with Photosensitivity
- Polyneuropathy 2
- Cystinuria Type 2A
- Ichthyosis, Variant 2
- Pituitary Dwarfism
- Hemophilia B, Variant 1
- Cleft Palate With Syndactyly
- Von Willebrand Disease II, Variant 1
- Degenerative Myelopathy, Variant 1
- Progressive Retinal Atrophy, Variant 1
- Progressive Retinal Atrophy GR2
- Hypomyelination of the Central Nervous System
- Hypophosphatasia
- Nasal Parakeratosis, Variant 1
- Cone-Rod Dysplasia 3
- Juvenile Cerebellar Ataxia
- Early Cerebellar Ataxia
- Ichthyosis, Variant 1
- Malignant Hyperthermia
- Renal Cystadenocarcinoma and Nodular Dermatofibrosis
- Neuronal Ceroid Lipofuscinosis 6
- Shaking Puppy Syndrome
- Osteogenesis Imperfecta, Variant 3
- Beta Mannosidosis, Variant 1
- Neonatal Encephalopathy with Seizures
- Bardet-Biedl Syndrome 4
- Primary Open Angle Glaucoma, Variant 1
- Unilateral Deafness and Vestibular Dysfunction
- Myotubular Myopathy 1, Variant 1
- Inherited Myopathy
- Benign Familial Juvenile Epilepsy
- Prekallikrein Deficiency

Genetically Influenced Behaviors

Some DNA in your dog's genes can have an influence on certain behaviors, which can make a behavior more or less likely.

Unlike for breed or health, our science behind these behaviors is at the exploratory stage. You can help improve the science by providing feedback below.

Note that other factors such as training and upbringing could have a larger effect than the DNA.

Desire for affection or attention

How much your dog tends to stay close you or other caregivers to obtain affection or attention. Also, a tendency to become agitated when attention is given elsewhere.

High Medium Low

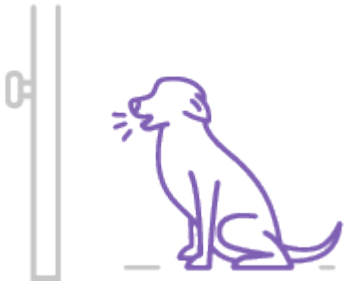
Aggression directed at other dogs

How much aggression your dog displays when approached by unfamiliar dogs.

High Medium Low

Barking

How much your dog barks due to being separated from you or other caregivers.



High Medium Low

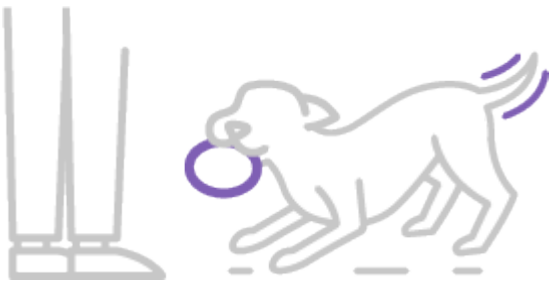
Physical contact with you

Indicates the length of time your dog tries to maintain physical contact with you or other caregivers.

High Medium Low

Fetching

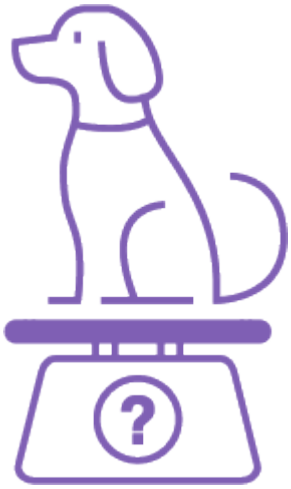
How much your dog desires to fetch objects such as balls and sticks



High Medium Low

“Genetic” Weight

The genetic weight of Arya is calculated to be:



45-68 (lb)

How do we predict the weight of adult dogs?

Our test analyzes several dozens of genetic markers that are known to influence the weight of *adult* dogs.

We have developed a weight prediction algorithm that estimates the adult weight by looking at the relationship between the measured genetic data and the published weight data of a large number of dogs.

Our method also incorporates cutting-edge technology to take account of the effect of breed, resulting in a better weight prediction even on mixed breed dogs.

How accurate are the results?

While our test considers the genetics of your dog to predict the adult weight, numerous other factors also influence the weight. Since genetics only explains about 80% of the weight in a *healthy* adult dog we provide a range of weight.

A major factor is the type of nutrition and amount consumed. The number of overweight dogs has doubled over the past decade so it is something to examine.