



Royal
Kennel
Club

Royal Kennel Club Health Standard

A complete guide to health testing
for responsible breeding.



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Guidance for potential breeders

The Royal Kennel Club's Health Standard consolidates all relevant health tests for your breed in one place, providing clear guidance on which tests to undertake before breeding and how to do so. The 'Good Practice' category highlights the most critical tests as a starting point, while all breeders are encouraged to aim for the 'Best Practice' level by completing all recommended tests.

Although designed primarily for breeders, this document is also a valuable resource for puppy buyers, helping them verify whether a puppy's parents have undergone the appropriate health tests. Additional guidance for puppy buyers is available here: www.royalkennelclub.com/getting-a-dog/buying-a-dog

The placing of tests under each category is based on a number of factors and we have provided a flow diagram to provide transparency of these decisions against an evidence-based criteria, you can find these criteria on pages 22-23. In total, approximately 1.2 million results from the Royal Kennel Club's database have been captured to prioritise these tests, which we plan to monitor and adapt over time to reflect the current landscape of health within each individual breed.

The Health Standard is not exhaustive, as it excludes conditions without recognised tests or health screening programs. For a comprehensive overview of your breed's health, including untestable conditions, consult the Breed Health and Conservation Plan with further information available via the Breeds A-Z here: www.royalkennelclub.com/search/breeds-a-to-z

As new evidence emerges, the Health Standard will be reviewed and updated. Breeders should check it regularly before each litter to stay informed about potential changes. Ensuring all relevant health tests are completed is essential to maintaining and improving breed health. For further details, visit the Breeds A-Z section of our website here: www.royalkennelclub.com/search/breeds-a-to-z

Health testing versus being healthy

Whilst health testing is a valuable tool in breeding away from many known and inherited conditions, some are more complex and cannot currently be tested for. Breeders should [use health results wisely](#) and balance these with other factors such as temperament and conformation, and be aware that many tests are risk-based and not a guarantee that all of the genes and factors responsible for particular diseases will not be passed on.

The Health Standard has been developed to encompass testable conditions, and doesn't include additional considerations that breeders should be making in other important areas, such as genetic diversity, conformation and temperament. You can find out more about how we are helping breeders in this space as part of our breeding for health framework, which can be found here: www.royalkennelclub.com/breedhealthframework

More information about breeding with consideration to complex conditions can be found here: www.royalkennelclub.com/health-and-dog-care/health-dog-care/health/getting-started-with-health-testing-and-screening/inherited-conditions-with-no-test-available/

Breed Club Health Information and Support

Breed Clubs are made up of knowledgeable breeders who often hold a wealth of information and advice relating to the health of their breed. We recommend therefore that you familiarise yourself with the dedicated Breed Club(s) for your breed via the 'Find a Club' tool (www.royalkennelclub.com/search/find-a-club/) or your Breed Health Co-ordinator via your breed's page on our Breeds A to Z.

General FAQs

What are Good Practice tests?

Breeders should, at a minimum, conduct these tests before breeding, as strong evidence indicates that such conditions are a significant concern in the breed.

What are Best Practice tests?

These tests are for conditions which are still important in a breed but may not be as critical as those listed as good practice. They may be less common or newly discovered, and we're still learning how important they are. To help the breed, responsible breeders should make sure they complete **all** the tests in both categories.

To follow our best practice advice, a breeder will have completed all good practice and best practice tests for their breed.

Breeders should be undertaking **all** tests and breeding to best practice; however, the tests have been categorised to give advice on how to prioritise health across the breed, and which are the most important tests looking at the breed as a whole.

How is the decision made to place a test in a particular category?

A rigorous process has been undertaken, on a breed-by-breed basis, to establish where each test should sit for each breed. The criteria for categorisation can be found on pages 22-23.

Best breeding guidance can be found here:

www.royalkennelclub.com/health-and-dog-care/health-dog-care/health/getting-started-with-health-testing-and-screening/

Where can I find out more about the tests and conditions listed in the Health Standard?

Supporting information about each test and condition can be found by clicking on the test listed for your breed. Similarly, more information is available within the glossary or via the Breeds A-Z page on our website (www.royalkennelclub.com/search/breeds-a-to-z).

What if a test I know about isn't listed here?

The tests included here have been accepted as part of an auditing process the Royal Kennel Club has developed to ensure we are encouraging use of the most relevant and useful tests for your breed. This list will continuously change as new tests become available and further research is completed.

If the list below is missing a test, you should contact your Breed Health Co-ordinator, who can submit a request for recognition.

You should also check pages 24-25, which provide an overview of all of the breed-specific club schemes offered. Whilst we cannot record results from these schemes at this time, they are important and may test for serious conditions in your breed that you need to be aware of.

Where can I find out more about priority conditions in my breed?

Every breed is being categorised within our new breeding for health framework, which spans across three key areas of dog health: genetic diversity, conformation, and breed-related disease and wellbeing. You can find out more about whether your breed has been categorised into any of these groups via www.royalkennelclub.com/breedhealthframework

Where can I go to if I have other questions about health in my breed?

If you have any questions, we encourage you to read the Health Standard FAQs which can be found on our website. We also have a feedback form here if you have any questions outside of these: <https://forms.office.com/e/UPObOzRQjc>

Your breed community will also have the expertise to support you. You can contact your Breed Health Coordinator via your breed's page on the A-Z or 'Find a Dog Club' here: www.royalkennelclub.com/search/find-a-club/

Top 10 Royal Kennel Club registered breeds

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Bulldog	Breathing testing (for brachycephalic obstructive airway syndrome (BOAS) using the RKC Respiratory Function Grading scheme) Eye testing using the BVA/RKC/ISDS Eye Scheme	DNA test for hyperuricosuria (HUU) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Dachshund (Miniature Smooth Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK)	DNA test for progressive retinal atrophy (PRA(cord1))
French Bulldog	Breathing testing (for brachycephalic obstructive airway syndrome (BOAS) using the RKC Respiratory Function Grading scheme)	DNA test for hereditary cataracts (HC-HSF4-2) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
German Shepherd Dog	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for degenerative myelopathy (DM) Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Miniature Schnauzer		DNA test for mycobacterium avium (MAC) Eye testing using the BVA/RKC/ISDS Eye Scheme
Retriever (Golden)	DNA test for progressive retinal atrophy (GR PRA2) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Ichthyosis (ICT-A) • Progressive retinal atrophy (GR PRA1)
Retriever (Labrador)	DNA test for: • Centronuclear myopathy (CNM) • Exercise induced collapse (EIC) • Macular corneal dystrophy (MCD) • Progressive retinal atrophy (prcd-PRA) • Skeletal dysplasia (SD2) • Stargadt disease (STGD) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for hereditary nasal parakeratosis (HNPK)
Spaniel (Cocker)	DNA test for: • Acral mutilation syndrome (AMS) • Progressive retinal atrophy (prcd-PRA)	DNA test for: • Adult-onset neuropathy (AON) • Familial nephropathy (FN) Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Spaniel (English Springer)	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Acral mutilation syndrome (AMS) • Dyserythropoietic anemia and myopathy syndrome (DAMS) • Fucosidosis (fuco) • Phosphofructokinase deficiency (PFK) • Progressive retinal atrophy (PRA(cord1))
Staffordshire Bull Terrier		DNA test for: • Hereditary cataracts (HC-HSF4-2) • L-2-hydroxyglutarate dehydrogenase (L-2-HGA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening) <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>

Affenpinscher – Basset Griffon Vendéen (Petit)

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Affenpinscher		<i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Afghan Hound		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Airedale Terrier		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Akita		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Alaskan Malamute	DNA test for Alaskan Malamute polyneuropathy (AMPN)	DNA test for cone degeneration (CD) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Anatolian Shepherd Dog		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Australian Cattle Dog		DNA test for progressive retinal atrophy (prcd-PRA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hearing testing (for deafness) using the RKC BAER Scheme (including litter screening) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Australian Shepherd	DNA test for Collie eye anomaly/ choroidal hypoplasia (CEA/CH)	DNA test for: • Hereditary cataracts (HC-HSF4) • Multi-drug resistance (MDR1) • Progressive retinal atrophy (prcd-PRA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Australian Silky Terrier		
Australian Terrier		
Azawakh		
Barbet		DNA test for progressive retinal atrophy (prcd-PRA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Basenji		Eye testing using the BVA/RKC/ISDS Eye Scheme
Basset Bleu de Gascogne		
Basset Fauve de Bretagne		DNA test (for primary open angle glaucoma (POAG))
Basset Griffon Vendéen (Grand)		
Basset Griffon Vendéen (Petit)	DNA test for primary open angle glaucoma (POAG-5) Eye testing using the BVA/RKC/ISDS Eye Scheme	

Basset Hound – Bloodhound

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Basset Hound	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	DNA test for: • Lafora's • Primary open angle glaucoma (POAG3) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Bavarian Mountain Hound		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Beagle	DNA test for: • Lafora's • Neonatal cerebellar cortical degeneration (NCCD)	DNA test for: • Factor 7 deficiency (FVIIID) • Imerslund-Gräsbeck syndrome (IGS-2) • Musladin-Lueke syndrome (MLS)
Bearded Collie		DNA test for collie eye anomaly/choroidal hypoplasia (CEA/CH) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Beauceron		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Bedlington Terrier	DNA test for copper toxicosis (COMMD1)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Belgian Shepherd Dog (Groenendael)		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Belgian Shepherd Dog (Laekenois)		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Belgian Shepherd Dog (Malinois)		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Belgian Shepherd Dog (Tervueren)		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Bergamasco		
Bernese Mountain Dog	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Bichon Frise	Eye testing using the BVA/RKC/ISDS Eye Scheme	
Black and Tan Coonhound	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Eye testing using the BVA/RKC/ISDS Eye Scheme
Bloodhound	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Eye testing using the BVA/RKC/ISDS Eye Scheme

Bolognese – Bull Terrier (Miniature)

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Bolognese		Eye testing using the BVA/RKC/ISDS Eye Scheme
Border Collie	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	DNA test for: • Collie eye anomaly/ choroidal hypoplasia (CEA/CH) • Ceroid lipofuscinosis (CL) • Imerslund-Gräsbeck syndrome (IGS) • Multi-drug resistance (MDR1) • Trapped neutrophil syndrome (TNS) • Sensory neuropathy (SN) • Severe goniodysgenesis & glaucoma risk (gonio) (GGD) • Raine's syndrome Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hearing testing (for deafness) using the RKC BAER Scheme (including litter screening) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Border Terrier	DNA test for spongiform leucoencephalomyelopathy (SLEM)	
Borzoi		
Boston Terrier	Eye testing using the BVA/RKC/ISDS Eye Scheme	DNA test for hereditary cataracts (HC-HSF4) Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Bouvier des Flandres		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Boxer		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Bracco Italiano		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Braque D'Auvergne		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Briard		DNA test for congenital sensory night blindness (CSNB) <i>* imported dogs must be tested for this to prevent reintroduction into the UK population.</i> Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Brittany		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Bull Terrier		Hearing testing (for deafness) using the RKC BAER Scheme (including litter screening) <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Bull Terrier (Miniature)		DNA test for primary lens luxation (PLL) Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>

Bulldog – Collie (Smooth)

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Bulldog	Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading scheme Eye testing using the BVA/RKC/ISDS Eye Scheme	DNA test for hyperuricosuria (HUU) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Bullmastiff	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Cairn Terrier		Eye testing using the BVA/RKC/ISDS Eye Scheme
Canaan Dog		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Canadian Eskimo Dog		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme
Catalan Sheepdog		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Cavalier King Charles Spaniel	DNA test for: • Curly coat/ dry eye (CC/DE) • Episodic falling (EF) Heart screening (for mitral valve disease (MVD)) using the RKC heart scheme for Cavalier King Charles Spaniels (supported by the VCS)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Cesky Terrier		
Chihuahua (Long Coat)		Eye testing using the BVA/RKC/ISDS Eye Scheme Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Chihuahua (Smooth Coat)		Eye testing using the BVA/RKC/ISDS Eye Scheme Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Chinese Crested		DNA test for: • Primary lens luxation (PLL) • Progressive retinal atrophy (prcd-PRA)
Chow Chow	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	<i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Cirneco Dell'Etna		
Collie (Rough)	Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Collie eye anomaly/ choroidal hypoplasia (CEA/CH) • Degenerative myelopathy (DM) • Multi-drug resistance (MDR1) • Progressive retinal atrophy (PRA-rcd2)
Collie (Smooth)		DNA test for: • Collie eye anomaly/ choroidal hypoplasia (CEA/CH) • Degenerative myelopathy (DM) • Multi-drug resistance (MDR1) • Progressive retinal atrophy (PRA-rcd2) Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme

Coton de Tulear – English Toy Terrier (Black and Tan)

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Coton de Tulear		Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Dachshund (Long Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Dachshund (Miniature Long Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK)	DNA test for progressive retinal atrophy (PRA(cord1)) Eye testing using the BVA/RKC/ISDS Eye Scheme
Dachshund (Miniature Smooth Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK)	DNA test for progressive retinal atrophy (PRA(cord1)) Eye testing using the BVA/RKC/ISDS Eye Scheme
Dachshund (Miniature Wire Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK) DNA test for Lafora's	DNA test for progressive retinal atrophy (PRA(cord1)) Eye testing using the BVA/RKC/ISDS Eye Scheme
Dachshund (Smooth Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Dachshund (Wire Haired)	Spine screening using the RKC intervertebral disc disease (IVDD) screening scheme (supported by Dachshund Health UK)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Dalmatian		DNA test for hyperuricosuria (HUU) DNA test for disproportional dwarfism (DD-PRKG2) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hearing testing (for deafness) using the RKC BAER Scheme (including litter screening) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Dandie Dinmont Terrier	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme.	
Deerhound		<i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Dobermann	DNA test for von Willebrand disease (vWD1)	Dogs to be eye tested minimum of once prior to being used for breeding (for PHPV) DNA test for DINGS2 Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Dogue de Bordeaux	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
English Setter	Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Neuronal ceroid lipofuscinosis (NCL8) • Progressive retinal atrophy (PRA (rcd4)) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hearing testing (for deafness) using the RKC BAER Scheme (including litter screening)
English Toy Terrier (Black and Tan)		DNA test for: • Juvenile dilated cardiomyopathy (JDCM) • Xanthinuria (type II) Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>

Entlebucher Mountain Dog – German Wirehaired Pointer

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Entlebucher Mountain Dog		DNA test for progressive retinal atrophy (prcd-PRA) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Estrela Mountain Dog	Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme.	
Eurasier		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Finnish Lapphund	DNA test for progressive retinal atrophy (prcd-PRA)	DNA test for glycogen storage disease (GSDII) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Finnish Spitz		
Fox Terrier (Smooth)		Eye testing using the BVA/RKC/ISDS Eye Scheme
Fox Terrier (Wire)		Eye testing using the BVA/RKC/ISDS Eye Scheme
Foxhound		
French Bulldog	Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the R KC Respiratory Function Grading scheme	DNA test for hereditary cataracts (HC-HSF4-2) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
German Longhaired Pointer		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
German Pinscher		
German Shepherd Dog	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for degenerative myelopathy (DM) Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
German Shorthaired Pointer		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
German Spitz (Klein)		Eye testing using the BVA/RKC/ISDS Eye Scheme
German Spitz (Mittel)		Eye testing using the BVA/RKC/ISDS Eye Scheme
German Wirehaired Pointer		DNA test for von Willebrand disease (vWD2)* imported dogs must be tested for this to prevent reintroduction into the UK population. Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme

Giant Schnauzer – Hungarian Puli

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Giant Schnauzer	DNA test for progressive retinal atrophy (prcd-PRA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Dilated cardiomyopathy (DCM) • Hyperuricosuria (HUU) • Progressive retinal atrophy (PRA5) Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening)
Glen of Imaal Terrier		DNA test for progressive retinal atrophy (PRA (crd3)) Eye testing using the BVA/RKC/ISDS Eye Scheme
Gordon Setter	DNA test for progressive retinal atrophy (PRA (rcd4)) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme
Grand Bleu de Gascogne		
Great Dane		DNA test for inherited myopathy of Great Danes (IMGD) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Great Swiss Mountain Dog		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Greenland Dog		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Greyhound		DNA test for Greyhound neuropathy (GN)
Griffon Bruxellois		Eye testing using the BVA/RKC/ISDS Eye Scheme Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Griffon Fauve de Bretagne		
Hamiltonstovare		
Harrier		
Havanese	Eye testing using the BVA/RKC/ISDS Eye Scheme	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Hovawart		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Hungarian Kuvasz		
Hungarian Mudi		
Hungarian Puli		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme

Hungarian Pumi – Japanese Chin

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Hungarian Pumi	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Hungarian Wire Haired Vizsla	DNA test for hyperuricosuria (HUU)	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Hungarian Vizsla	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	
Icelandic Sheepdog		
Ibizan Hound		
Irish Red and White Setter		DNA test for canine leukocyte adhesion deficiency (CLAD)* <i>imported dogs must be tested for this to prevent reintroduction into the UK population.</i> Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Irish Setter	DNA test for progressive retinal atrophy (PRA (rcd4))	DNA test for: • Canine leukocyte adhesion deficiency (CLAD) • Progressive retinal atrophy (PRA(rcd1))* <i>imported dogs must be tested for these tests to prevent reintroduction into the UK population.</i> Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Irish Terrier		DNA test for hereditary footpad hyperkeratosis (HFH)
Irish Wolfhound		Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Italian Greyhound		Eye testing using the BVA/RKC/ISDS Eye Scheme
Italian Spinone	DNA test for cerebellar ataxia (CA) <i>*imported dogs must be tested for this test to prevent reintroduction into the UK population.</i> Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Eye testing using the BVA/RKC/ISDS Eye Scheme
Jack Russell Terrier	DNA test for primary lens luxation (PLL)	DNA test for: • Late onset ataxia (LOA) • Spinocerebellar ataxia (SCA) Eye testing using the BVA/RKC/ISDS Eye Scheme
Japanese Akita Inu		DNA test for amelogenesis imperfecta/ familial enamel hypoplasia (AI/FEH) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Japanese Chin		Eye testing using the BVA/RKC/ISDS Eye Scheme Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme

Japanese Shiba Inu – Maltese

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Japanese Shiba Inu	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	DNA test for: • Gangliosidosis (GM1_2) • Gangliosidosis - type II (GM2_2) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Japanese Spitz		
Keeshond	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for primary hyperparathyroidism (PHPT) Eye testing using the BVA/RKC/ISDS Eye Scheme
Kerry Blue Terrier		
King Charles Spaniel		Eye testing using the BVA/RKC/ISDS Eye Scheme Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Komondor		
Kooikerhondje		DNA test for: • Hereditary necrotising myelopathy (ENM) • von Willebrand disease (vWD3)
Korean Jindo		
Korthals Griffon		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Lagotto Romagnolo	DNA test: • Juvenile epilepsy (JE) • Lysosomal storage disease (LSD)	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Lakeland Terrier		Eye testing using the BVA/RKC/ISDS Eye Scheme
Lancashire Heeler	Eye testing using the BVA/RKC/ISDS Eye Scheme	DNA test for: • Collie eye anomaly/ choroidal hypoplasia (CEA/CH) • Primary lens luxation (PLL)
Large Munsterlander	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for hyperuricosuria (HUU) *imported dogs must be tested for this to prevent reintroduction into the UK population. Eye testing using the BVA/RKC/ISDS Eye Scheme
Leonberger	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Laryngeal paralysis and polyneuropathy (LPPN3) • Leonberger polyneuropathy (LPN1) • Leonberger polyneuropathy (LPN2) • Leukoencephalomyelopathy (LEMP)
Lhasa Apso	DNA test for progressive retinal atrophy (PRA4)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Lowchen (Little Lion Dog)		
Maltese		Eye testing using the BVA/RKC/ISDS Eye Scheme

Manchester Terrier – Parson Russell Terrier

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Manchester Terrier		DNA test for: • Juvenile dilated cardiomyopathy (JDCM) • Xanthinuria (type II) • DNA test for von Willebrand disease (vWD1) Eye testing using the BVA/RKC/ISDS Eye Scheme
Maremma Sheepdog		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Mastiff	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Eye testing using the BVA/RKC/ISDS Eye Scheme
Miniature American Shepherd		
Miniature Pinscher		Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening) <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Miniature Schnauzer		DNA test for mycobacterium avium (MAC) Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening)
Neapolitan Mastiff	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Eye testing using the BVA/RKC/ISDS Eye Scheme
Newfoundland	DNA test for cystinuria (CU) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Norfolk Terrier		
Norwegian Buhund		DNA test for hereditary cerebellar ataxia (HCA) Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Norwegian Elkhound	DNA test for: • Primary open angle glaucoma (POAG-2) • Progressive retinal atrophy (prcd-PRA)	DNA test for chondrodysplasia (CDSL) Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Norwich Terrier		
Old English Sheepdog	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for primary ciliary dyskinesia (PCD) DNA test for multilocular defect (MOD)
Otterhound	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for Glanzmann's thrombasthenia* <i>imported dogs must be tested for this to prevent reintroduction into the UK population.</i> <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Papillon	DNA test for progressive retinal atrophy (pap-PRA)	DNA test for: • Neuronal axonal deficiency (NAD-PLA2G6) • von Willebrand's disease (vWD1) Eye testing using the BVA/RKC/ISDS Eye Scheme
Parson Russell Terrier	DNA test for: • Late onset ataxia (LOA) • Primary lens luxation (PLL)	DNA test for spinocerebellar ataxia (SCA) Eye testing using the BVA/RKC/ISDS Eye Scheme

Pekingese – Pug

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Pekingese		Eye testing using the BVA/RKC/ISDS Eye Scheme Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Pharaoh Hound		<i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Picardy Sheepdog		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Pointer		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Polish Hunting Dog		
Polish Lowland Sheepdog		DNA test for progressive retinal atrophy (PRA (rcd4)) Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Pomeranian		Eye testing using the BVA/RKC/ISDS Eye Scheme
Poodle (Miniature)		DNA test for: • Osteochondrodysplasia (OC) • Progressive retinal atrophy (prcd-PRA) Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Poodle (Standard)		DNA test for: • Progressive retinal atrophy (PRA (rcd4)) • Progressive retinal atrophy (prcd-PRA)* imported dogs must be tested for these tests to prevent reintroduction into the UK population. DNA test for von Willebrand disease (vWD1) Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Poodle (Toy)	DNA test for progressive retinal atrophy (prcd-PRA)	Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Portuguese Podengo		
Portuguese Pointer		
Portuguese Water Dog	DNA test for progressive retinal atrophy (prcd-PRA)	DNA test for: • Gangliosidosis (GM1) • Progressive retinal atrophy (EOPRA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Pug	Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading scheme Eye testing using the BVA/RKC/ISDS Eye Scheme	DNA test for Pug dog encephalitis (PDE) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>

Pyrenean Mastiff – Rottweiler

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Pyrenean Mastiff		
Pyrenean Mountain Dog		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Pyrenean Sheepdog (Long Haired)		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Pyrenean Sheepdog (Smooth Faced)		<i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Retriever (Chesapeake Bay)	DNA test for degenerative myelopathy (DM) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for progressive retinal atrophy (prcd-PRA) Eye testing using the BVA/RKC/ISDS Eye Scheme
Retriever (Curly Coated)	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for exercise induced collapse (EIC)
Retriever (Flat Coated)	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Retriever (Golden)	DNA test for progressive retinal atrophy (GR PRA2) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Ichthyosis (ICT-A) • Progressive retinal atrophy (GR PRA1)
Retriever (Labrador)	DNA test for: • Centronuclear myopathy (CNM) • Exercise induced collapse (EIC) • Macular corneal dystrophy (MCD) • Progressive retinal atrophy (prcd-PRA) • Skeletal dysplasia (SD2) • Stargardt disease (STGD) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for hereditary nasal parakeratosis (HNPK)
Retriever (Nova Scotia Duck Tolling)	DNA test for: • Degenerative myelopathy (DM) • Progressive retinal atrophy (prcd-PRA)	DNA test for: • Collie eye anomaly/ choroidal hypoplasia (CEA/CH) • Degenerative encephalopathy (DE) • Juvenile Addison's disease (JADD) Eye testing using the BVA/RKC/ISDS Eye Scheme Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Rhodesian Ridgeback	DNA test for juvenile myoclonic epilepsy (JME) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for degenerative myelopathy (DM) <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Rottweiler	DNA test for juvenile laryngeal paralysis and polyneuropathy (JLPP) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for leukoencephalomyelopathy (LEMP-2) Eye testing using the BVA/RKC/ISDS Eye Scheme

Russian Black Terrier – Sloughi

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Russian Black Terrier	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: - Hyperuricosuria (HUU) - Juvenile laryngeal paralysis and polyneuropathy (JLPP) - Progressive retinal atrophy (prcd-PRA)
Russian Toy		Eye testing using the BVA/RKC/ISDS Eye Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25</i>
Saluki		DNA test for neuronal ceroid lipofuscinosis (NCL8) <i>* imported dogs must be tested for this to prevent reintroduction into the UK population.</i>
Samoyed		DNA test for: - X-linked hereditary nephritis (XLHN) - X-linked progressive retinal atrophy (XL-PRA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Schipperke		DNA test for: - Mucopolysaccharidosis (MPSIIIB) - T-box
Schnauzer		DNA test for dilated cardiomyopathy (DCM) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Scottish Terrier		
Sealyham Terrier	DNA test for primary lens luxation (PLL)	Eye testing using the BVA/RKC/ISDS Eye Scheme
Shar Pei	Eye testing using the BVA/RKC/ISDS Eye Scheme	DNA test for primary open angle glaucoma/ primary lens luxation (POAG/PLL) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Shetland Sheepdog	Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening)	DNA test for: - Collie eye anomaly/ choroidal hypoplasia (CEA/CH) - Multi-drug resistance (MDR1) - Progressive retinal atrophy (BBS2-PRA) - Progressive retinal atrophy (CNGA1-PRA) - von Willebrand disease (vWD3-2) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Shih Tzu	Eye testing using the BVA/RKC/ISDS Eye Scheme	Breathing testing (for brachycephalic obstructive airway syndrome (BOAS)) using the RKC Respiratory Function Grading Scheme
Siberian Husky	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Skye Terrier		
Sloughi		

Slovakian Rough Haired Pointer – Spanish Water Dog

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
Slovakian Rough Haired Pointer		
Small Munsterlander		
Soft Coated Wheaten Terrier		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Spaniel (American Cocker)	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	DNA test for progressive retinal atrophy (prcd-PRA) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Spaniel (American Water)		
Spaniel (Clumber)	DNA test for exercise induced collapse (EIC) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for pyruvate dehydrogenase deficiency (PDP-1)
Spaniel (Cocker)	DNA test for: • Acral mutilation syndrome (AMS) • Progressive retinal atrophy (prcd-PRA)	DNA test for: • Adult-onset neuropathy (AON) • Familial nephropathy (FN) Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Spaniel (English Springer)	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Acral mutilation syndrome (AMS) • Dyserythropoietic anemia and myopathy syndrome (DAMS) • Fucosidosis (fuco) • Phosphofructokinase deficiency (PFK) • Progressive retinal atrophy (PRA(cord1))
Spaniel (Field)		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Spaniel (Irish Water)	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Spaniel (Sussex)		Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Spaniel (Welsh Springer)	Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Spanish Water Dog	DNA test for progressive retinal atrophy (prcd-PRA) Eye testing (and gonioscopy for PLA) using the BVA/RKC/ISDS Eye Scheme	DNA test for: • Congenital hypothyroidism with goitre (CHG) • Neuroaxonal dystrophy (NAD-TECPR2) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme

St. Bernard – Whippet

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
St. Bernard	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Staffordshire Bull Terrier		DNA test for: • Hereditary cataracts (HC-HSF4-2) • L-2-hydroxyglutarate dehydrogenase (L-2-HGA) Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme (including litter screening) <i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>
Swedish Lapphund		
Swedish Vallhund		DNA test for retinopathy Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Tibetan Mastiff	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Tibetan Spaniel		DNA test for progressive retinal atrophy (PRA3) Eye testing using the BVA/RKC/ISDS Eye Scheme
Tibetan Terrier	DNA test for: • Neuronal ceroid lipofuscinosis (NCL12) • Primary lens luxation (PLL) • Progressive retinal atrophy (PRA (rcd4)) Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	DNA test for: • Pituitary dwarfism (DP-LXH3) • Progressive retinal atrophy (PRA3) Eye testing using the BVA/RKC/ISDS Eye Scheme
Turkish Kangal Dog		
Weimaraner		Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Welsh Corgi (Cardigan)		DNA test for progressive retinal atrophy (PRA-rcd3) <i>* imported dogs must be tested for this to prevent reintroduction into the UK population.</i> Eye testing using the BVA/RKC/ISDS Eye Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Welsh Corgi (Pembroke)		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme
Welsh Terrier	DNA test for primary lens luxation (PLL)	
West Highland White Terrier		
Whippet		<i>This breed also has a breed club health scheme, with further information on pages 24-25.</i>

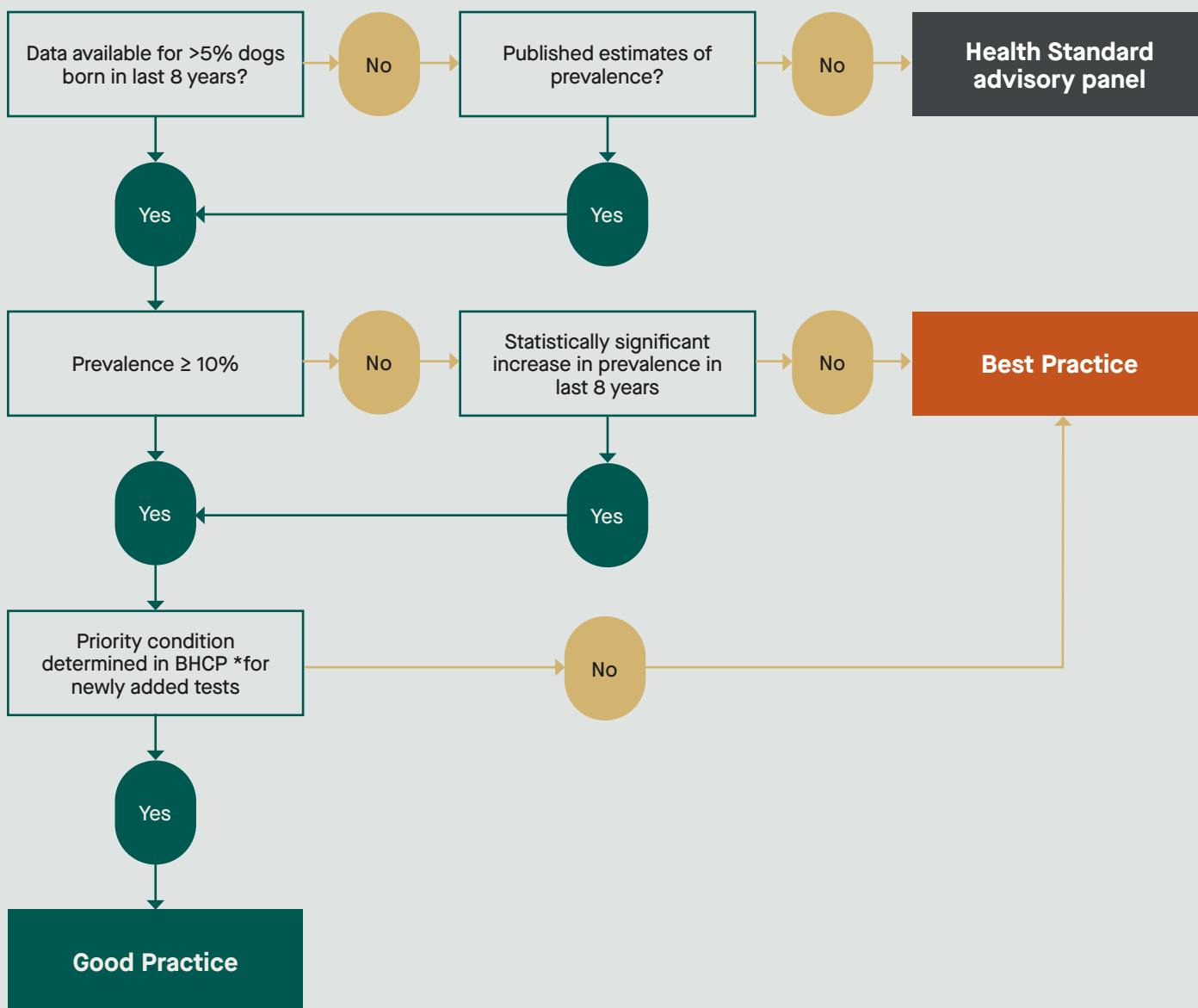
White Swiss Shepherd Dog – Yorkshire Terrier

	Good Practice	Best Practice (will have completed all tests in Good Practice, and the below column to achieve Best Practice status)
White Swiss Shepherd Dog	Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme	
Yakutian Laika		
Xoloitzcuintle (Mex Hairless) Int		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme
Xoloitzcuintle (Mex Hairless) Min		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme
Xoloitzcuintle (Mex Hairless) Std		Hip testing (for hip dysplasia) using the BVA/RKC Hip Dysplasia Scheme Elbow testing (for elbow dysplasia) using the BVA/RKC Elbow Dysplasia Scheme Eye testing using the BVA/RKC/ISDS Eye Scheme
Yorkshire Terrier		

Methodology – Prioritisation of clinical (phenotypic) tests

The below flowchart details how each test for each breed was considered in its categorisation.

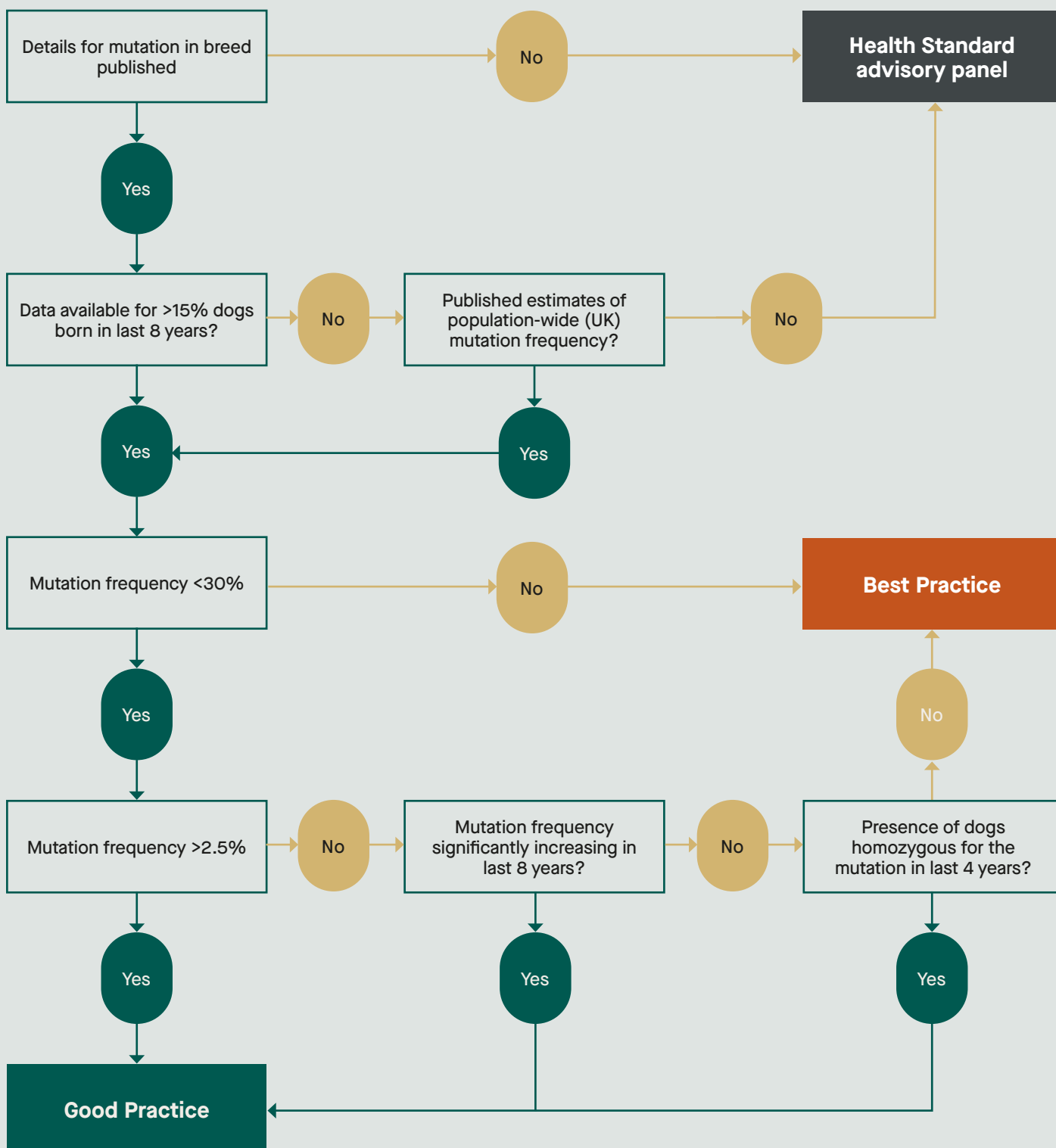
Phenotypic test prioritisation for health standard



Methodology – Prioritisation of DNA (genotypic) tests

The below flowchart details how each test for each breed was considered in its categorisation.

DNA test prioritisation for Health Standard



Breed club health schemes (A-P)

Breed clubs often run their own complementary health schemes to test for conditions that are known and relevant within a breed but have not been developed into a formal scheme from which the Royal Kennel Club can record results. Whilst these are not formal schemes at this time, it is still best practice to be aware of these and avoid breeding from dogs that are affected. It's important to remember that the inheritance of these conditions may not yet be known and breeding advice for some may not be available, however advice on testing from complex conditions can be found on our website here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/inherited-conditions-with-no-test-available/>.

The below tests will lead you to more information on the breed club's website, and to any further support or advice needed.

Breed	Test	Link
Affenpinscher	Patellar testing	https://affenpinscherclub.co.uk/about-the-affen/health/
Basset Hound	Breed Club Health Certificate Scheme	https://www.bassetrus.uk/health-certificate-scheme.html
Boxer	Heart testing	http://www.boxerbreedcouncil.co.uk/as.html
Bull Terrier	Heart testing Kidney testing	https://miniaturebullterrierclub.org/heart-disease/ https://miniaturebullterrierclub.org/kidney-disease/
Bull Terrier (Miniature)	Heart testing Kidney testing	https://miniaturebullterrierclub.org/heart-disease/ https://miniaturebullterrierclub.org/kidney-disease/
Bulldog	Breed Council Health Scheme	https://www.bulldogbreedcouncil.co.uk/i/health-scheme
Chow Chow	Chow Chow Health Scheme	http://www.chowchowbreedcouncil.com/healthscheme.htm
Coton de Tulear	IVDD testing	https://cdtclubuk.org/health/
Deerhound	Heart testing Liver shunt testing	https://deerhoundhealth.org/
English Toy Terrier (Black & Tan)	Patellar testing	https://www.english-toy-terrier-club.com/about-the-breed/health-and-welfare/
Eurasier	Patellar testing Thyroid testing	http://www.eurasiersociety.org.uk/breedhealth.php
French Bulldog	Breed Club Health Scheme	https://www.thefrenchbulldogclubofengland.com/health-scheme-information.html
German Shepherd Dog	Haemophilia testing	https://www.gsdbreedcouncil.co.uk/main.htm
Great Dane	Heart testing	https://danecouncil.org.uk/great-dane-health-matters/dilated-cardiomyopathy-research/
Havanaese	Patellar testing	https://www.havanese-club-gb.co.uk/general-5
Hovawart	Thyroid testing	https://www.hovawart.org.uk/
Irish Wolfhound	Heart testing Liver shunt testing	https://www.iwhealthgroup.co.uk/about-the-scheme.html https://www.iwhealthgroup.co.uk/liver-shunt.html
Miniature Pinscher	Patellar testing	https://www.miniaturepinscher.co.uk/about-the-miniature-pinscher/health/
Newfoundland	Heart testing	https://www.thenewfoundlandclub.co.uk/hearttesting.html
Otterhound	Check epilepsy/ fitting list	https://otterhoundclub.co.uk/index.php/breeders/fitters-list
Pharaoh Hound	Patellar testing	https://pharaohhoundclub.co.uk/the-original-pharaoh-hound-club/health/
Poodle (Standard)	Sebaceous adenitis testing	https://www.standardpoodleclub.com/copy-2-of-home-1
Pug	Breed Council Health Scheme	https://www.pughealth.org.uk/pug-5-star-health-scheme/

Breed club health schemes (P-W)

Breed clubs often run their own complementary health schemes to test for conditions that are known and relevant within a breed but have not been developed into a formal scheme from which the Royal Kennel Club can record results. Whilst these are not formal schemes at this time, it is still best practice to be aware of these and avoid breeding from dogs that are affected. It's important to remember that the inheritance of these conditions may not yet be known and breeding advice for some may not be available, however advice on testing from complex conditions can be found on our website here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/inherited-conditions-with-no-test-available/>.

The below tests will lead you to more information on the breed club's website, and to any further support or advice needed.

Breed	Test	Link
Pyrenean Sheepdog (Long Haired)	Heart testing	https://www.pyreneansheepdogclub.com/health
Pyrenean Sheepdog (Smooth Faced)	Heart testing	https://www.pyreneansheepdogclub.com/health
Rhodesian Ridgeback	Dermoid sinus testing	https://rrcgb.co.uk/advice/puppy-advice/
Russian Toy	Patellar testing	https://www.russiantoyclubuk.co.uk/health
Soft Coated Wheaten Terrier	Kidney testing	https://wheaten.org.uk/health/
Staffordshire Bull Terrier	Patellar testing	https://www.eastangliansbtclub.co.uk/health
Whippet	Heart testing	https://www.thewhippetclub.com

Test glossary (B-H)

BAER testing

BAER (Brainstem Auditory Evoked Response) testing is most commonly conducted on puppies before rehoming but can also be conducted on adults. There are a number of centres in the UK that offer testing; a list of centres and further information on testing can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/baer-testing/>

Breed Watch

Whilst not a test in itself, Breed Watch is a system that the Royal Kennel Club has introduced to help breeders and exhibitors identify visible health concerns in their breed which are due to extremes in conformation. More information can be found here: <https://www.royalkennelclub.com/events-and-activities/dog-showing/judging-dog-shows/breed-watch-health-and-welfare-of-show-dogs/>

BVA/KC Chiari-like malformation/syringomyelia (CM/SM) screening

This scheme is recommended to be repeated over a dog's lifetime, at an age of one year, three to five years, and over five years. There are a number of veterinary centres which offer MRI scanning facilities using the protocol recommended by the scheme. Further information can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/cmsm-screening-scheme/>

DNA testing

The noted DNA tests in the Health Standard have been proven to accurately predict a dog's likelihood of developing the disease associated with the mutation and is for a relevant and notable condition in your breed. It is worth checking whether you can get all tests as part of a panel or bundle which may save you money. These tests may be offered by a number of approved laboratories and you can find a list of accepted laboratories here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/dna-testing/>

Elbow grading

This test should be conducted under the BVA/KC Elbow Dysplasia Scheme. Where estimated breeding values (EBVs) are available, breeders should use the estimations from these as a complementary tool, as well as the results from the screening scheme. This test is undertaken once in a dog's lifetime. Further information about the test can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/elbow-dysplasia-screening-scheme/>

Eye screening

Should be carried out under the BVA/RKC/ISDS Eye Scheme. It is recommended that examinations should be within 12 months prior to the date of mating to allow for breeders to be aware of any conditions affecting their dog. Gonioscopy testing - for predisposition to glaucoma (also known as pectinate ligament abnormality, or PLA) should be repeated every 3 years due to the progressive nature of the disorder. Further information about eye testing can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/eye-screening-scheme/>

Genetic diversity tools

All breeders should refer to inbreeding coefficient calculators of a potential litter to assist them in making balanced breeding decisions. Breeders can use the Royal Kennel Club's Inbreeding Coefficient calculator. Breeders should always take into consideration the number of generations used to produce the calculation, whether dogs have been imported recently within the lines, and the number of offspring already sired by the male. More information can be sourced here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/genetic-diversity-managing-and-maintaining/>

Hip scoring

This test should be conducted under the BVA/RKC Hip Dysplasia Scheme. Where estimated breeding values (EBVs) are available, breeders should use the estimations from these as a complementary tool, as well as the results from the screening scheme. This test is undertaken once in a dog's lifetime. Further information about the test can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/hip-dysplasia-screening-scheme/>

Test glossary (T)

The Royal Kennel Club and University of Cambridge Respiratory Function Grading Scheme

This test is available for French Bulldogs, Bulldogs and Pugs, and should only be carried out by an approved regional assessor. The scheme must be used for all breeding stock over the age of 12 months, and repeated every two years, for as long as the dog is being used for breeding. The details for regional assessors and further scheme details can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/respiratory-function-grading-scheme/>

The Royal Kennel Club/Dachshund Health UK IVDD Scheme for Dachshunds

This scheme is available for all varieties of Dachshund. The scheme should be used on dogs between 24 and 48 months of age at the time of X-ray. Participating centres and breeding advice can be found here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/ivdd-scheme-for-dachshunds/>

The Royal Kennel Club Heart Scheme for Cavalier King Charles Spaniels Supported by the Veterinary Cardiovascular Society

This scheme is only available for Cavalier King Charles Spaniels to screen for mitral valve disease. The scheme should be used for all breeding stock over the age of 18 months, and repeated every two years, for as long as the dog is being used for breeding. A number of approved cardiologists have been appointed to carry out the examination, with a list of these available here: <https://www.royalkennelclub.com/health-and-dog-care/health/getting-started-with-health-testing-and-screening/heart-scheme-for-cavalier-king-charles-spaniels/>

Condition glossary (A-C)

Acral mutilation syndrome (AMS)

This severe disease causes a dog to self-mutilate limb extremities (such as the paws), as well as have an insensitivity to pain. Affected dogs may cause bleeding through excessive licking of their footpads and paws and in severe cases dogs may chew and lick to the point of amputation. Age of onset ranges from 3 to 12 months

Alaskan Malamute polyneuropathy (AMPN)

This disease affects the nervous system, and gradually causes neurological symptoms and muscle wastage. Symptoms usually occur during the first 2 years of a dog's life and include exercise intolerance, an inability to move all limbs and loss of reflexes. Dogs affected with the condition may fall down, have an abnormal gait or walk on the tops of their feet.

Brachycephalic obstructive airway syndrome (BOAS)

Dogs with a flat-faced, wide-shaped head are said to be brachycephalic ('brachy' meaning short, and 'cephalic', meaning head). The soft tissue in the nose and throat of some brachycephalic dogs can partially block the airways and make it difficult for them to breathe normally. This can cause symptoms such as noisy breathing, reluctance to exercise, and vomiting, and hugely impact a dog's quality of life. This condition is known as BOAS and is a disorder that can impair a dog's ability to breathe, exercise, play, eat and sleep.

Breed-specific retinopathy

Retinopathy is a form of progressive retinal atrophy (see PRA), which causes retinal degeneration. Retinopathy has a very variable age of onset. It is characterised by a discolouration of the layer of the eye containing the retina, and associated with vision impairment, although this may vary amongst dogs.

Canine leukocyte adhesion deficiency (CLAD)

This disorder affects the ability of white blood cells to fight infection. Affected puppies' white blood cells are not able to fight infections as effectively and usually die early in life from multiple severe infections, even when treated with doses of antibiotics.

Cerebellar ataxia (CA)

This neurological disorder affects movement and balance. The cerebellum is the part of the brain that regulates the control of movement. In this condition, cells in the cerebellum begin to deteriorate, causing poor coordination and lack of balance. Symptoms have an early onset and usually present within the first few weeks or months of life. The disease is progressive and affected puppies are often euthanised before the age of one.

Chiari-like malformation/ syringomyelia (CM/SM)

CM is a term used to describe the shape of a dog's head, which can predispose an individual to SM, a disease of the spinal cord where lesions develop. SM can cause severe pain, to the point where euthanasia is needed, due to extremely poor quality of life. Symptoms include scratching around the neck and ears, yelping when being picked up or jumping, poor mobility and behaviour changes.

Cobalamin malabsorption

This condition (also known as Imerslund-Grasbeck syndrome) occurs where vitamin B12 is not absorbed properly in the small intestine. Vitamin B12 is needed for normal cell growth and helps the nervous system function properly. Symptoms usually appear early in a dog's life and include a loss of appetite, weakness and lack of energy. Puppies with this disorder fail to grow normally.

Collie eye anomaly/ choroidal hypoplasia (CEA/CH)

CEA/CH causes abnormal development of the choroid - an important layer of tissue under the retina of the eye. Since the choroid layer does not develop normally from the start, this disorder can be diagnosed at a very young age. The symptoms and impact can vary greatly between affected dogs, with some not showing any signs of vision impairment, to others that have blindness.

Cone degeneration

This disease causes day blindness due to the cells in the retina, called cones, breaking down. Cones respond mainly to bright daylight and help the brain form images. Unlike progressive retinal atrophy (see PRA), cone degeneration does not affect night vision. Signs of vision problems are noticeable between 8 and 12 weeks of age. Exposure to bright light may be irritating or painful.

Congenital hereditary cataract (CHC)

A cataract is an "opacity", or loss of transparency of the lens of the eye. The opacity may be within a small area of the lens, or it may affect the whole structure. A congenital cataract is present from birth and can cause blindness in affected puppies.

Congenital sensory night blindness (CSNB)

CSNB is an inherited, progressive disease caused by a genetic mutation. Symptoms include night blindness and a loss of vision in daylight that can vary in severity between individual dogs. This disease manifests in Briard dogs from a young age (from 6 weeks of age onwards).

Condition glossary (C-F)

Copper toxicosis (CT)

CT causes a build-up of dietary copper in the liver. Symptoms do not typically show in the earlier stages, however can progress to weight loss, lack of appetite, depression, vomiting, weakness, lack of energy, dehydration, bruising and bloody poos. Without treatment, affected dogs develop liver disease and sadly die, usually between 3 to 7 years of age.

Curly coat/ dry eye (CC/DE)

Affected dogs are unable to produce tears, which makes their eyes very sore. Their skin becomes very dry and flaky, particularly around the feet, and this can make walking and standing difficult and painful. Dogs will have a dry and usually curly coat which is visible from birth.

Cystinuria (CU)

Dogs with cystinuria are not able to properly deal with cystine passing through the kidneys, which results in a buildup to abnormally high levels. When these levels become too high, they form crystals, which over time grow to become stones. Dogs affected may have repeated urinary tract inflammations, and are at risk of urinary blockage, which if untreated, can lead to kidney failure and bladder rupture. The average age of symptoms from cystinuria is about 5 years, but in Newfoundlands, signs appear as early as 6 months to 1 year.

Deafness

Deafness at birth (known as congenital deafness) is often inherited in some breeds. How this condition is inherited is not fully understood, but is believed to be controlled by many different genes, possibly with additional breed-specific risk factors.

Degenerative encephalopathy (DE)

DE is a neurological disorder and is characterised by a breakdown in the part of the brain that is important for controlling movement and some aspects of behaviour. Symptoms include loss of coordination, anxiety and aggression, excessive focus on food and abnormal tail position. Symptoms worsen with age, with most affected dogs being euthanised by 3-5 years of age due to poor quality of life.

Degenerative myelopathy (DM)

This disease is a result of a deterioration within the spinal cord. Although the changes may be found anywhere in the spinal cord, they are most severe in the lower back. The disease has an onset typically between 7 and 14 years of age. It begins with a loss of coordination in the hind limbs. The disease worsens overtime, resulting in paralysis and death.

Dilated cardiomyopathy (DCM)

This heart condition causes swelling of the lower chambers of the heart (ventricles). This reduces the heart's ability to pump blood and causes the heart to become large and beat weakly. Symptoms include collapsing, appetite loss, lethargy, abdominal swelling, coughing and gasping for breath. These signs may not be apparent for years but will show eventually, and in Schnauzers it has been reported that to affect dogs at a much younger than in other breeds.

DINGS

This early-onset neurological disease causes a range of symptoms, and often leads to euthanasia due to poor quality of life. Symptoms include deafness, circling, a head tilt, and poor or complete lack of balance. These symptoms begin to show early in life, from around three weeks of age. Whilst the lack of balance and circling can improve as the dog ages, deafness is permanent.

Elbow dysplasia

This is a complex inherited condition where the elbow joint does not develop correctly and the bones sit loosely within the joint. As a dog gets older, the joint undergoes wear and tear and breaks down, leading to a loss of function. This can cause varying degrees of pain, stiffness and lameness, and results in arthritis.

Episodic falling (EF)

EF is a neurological condition, triggered by exercise, excitement or frustration, where the muscles are unable to relax, causing the dog to become rigid and fall over. Affected dogs are usually affected before 1 year old, with most cases having their first episode aged 4-7 months. Symptoms range from mild, occasional falling to freezing or seizure-like episodes lasting hours.

Exercise induced collapse (EIC)

This condition leads to a breakdown in nerve communication during intense exercise, temperature and/ or excitement. Affected dogs may show signs of leg weakness followed by complete collapse. Severely affected dogs may collapse with mild exercise - other dogs only infrequently. Symptoms show usually between 5 months and 3 years of age but can appear later.

Familial nephropathy (FN)

Dogs affected with FN have a genetic defect within their kidneys, meaning that the organs are unable to properly filter urine and become damaged over time. This disease is progressive and ultimately fatal; however, the disease can become worsen more quickly in some dogs than others. Dogs typically develop kidney failure between 6 months and 2 years of age. Symptoms include excessive thirst, excessive urination, poor growth rate or weight loss, poor quality hair, reduced appetite and vomiting.

Condition glossary (F-J)

Fucosidosis (Fuco)

Fuco results from destruction of the nervous system that progresses over several months, sometimes from an early age. In affected dogs, an important enzyme (a molecule which breaks down proteins so that they can be used by the body) is missing, which results in the build-up of toxic compounds within nerve cells. The disease is severe, gets worse overtime and ultimately fatal. It affects young adults, usually between 18 months and 4 years of age. Symptoms include incoordination and loss of balance, change in temperament, loss of learned behaviour, apparent deafness, vision loss and depression.

Gangliosidosis

Gangliosidosis is a storage disease that leads to problems in the nervous system, including the brain and spinal cord. Symptoms of puppies affected by gangliosidosis include loss of coordination and balance, vision problems, lethargy, seizures and changes in behaviour. Affected dogs are usually euthanised due to poor quality of life.

Glaucoma/ pectinate ligament abnormality (PLA)

Glaucoma is a painful condition caused by a build-up of pressure inside the eye. This pressure can occur if the eye isn't able to properly drain away enough of the fluid that's made inside it. The rise in pressure (referred to as intraocular pressure) can become so high that it causes damage to other tissues within the eye, leading to permanent vision impairment and blindness. PLA causes a narrowing of the drainage angle around the iris and cornea which in turn causes a rise in pressure, and risk of developing glaucoma.

Hereditary cataract (HC)

A cataract is an "opacity", or loss of transparency of the lens of the eye. The opacity may be within a small area of the lens, or it may affect the whole structure. Obvious cataracts occur between 9 and 15 months of age with further progression and over 2-4 years. This is a blinding condition if left untreated.

Hip dysplasia

This is a complex inherited condition where the hip joint does not develop correctly and the bones sit loosely within the joint. As a dog gets older, the joint undergoes wear and tear and breaks down, leading to a loss of function. This can cause varying degrees of pain, stiffness and lameness, and results in arthritis.

Hyperuricosuria (HUU)

In affected dogs, uric acid does not dissolve easily in urine and builds up. The excessive amount of uric acid forms crystals which lead to stones, which may require surgery to be removed. Signs may appear from 3 to 6 years of age, with affected dogs suffering from repeat urinary tract inflammations, risk of urinary blockage, which if untreated, can lead to kidney failure and bladder rupture.

Imerslund-Grasbeck syndrome (IGS)

See cobalamin deficiency.

Intervertebral disc disease (IVDD)

IVDD is a condition that is caused by a gradual deterioration of the shock absorbing parts of the spine, known as intervertebral discs. These discs are filled with a jelly-like substance and sit between the bones in the spine. Intervertebral discs help hold the spine together, give the back its flexibility and also protect the spine by cushioning any impact. As dogs get older these discs can degenerate and harden (calcify). In Dachshunds this can happen at a much earlier age compared to other breeds. The calcification of these discs means they don't absorb shock as well and can lead to a slipped disc (disc herniation) and spinal cord compression.

Juvenile dilated cardiomyopathy (JDCM)

JDCM is a serious heart condition that affects dogs early in life, normally at around 6 months of age. The disease can range in severity, with some dogs showing no symptoms and others with more severe disease having problems such as lethargy, reluctance to exercise and sudden death following exercise.

Juvenile epilepsy (JE)

This inherited epilepsy causes seizures in young puppies. Symptoms usually begin in puppies at 3 to 9 weeks of age and usually resolve by 8 to 13 weeks of age at the latest. Dogs may be mildly affected by slight shivering or a wobbly gait, but puppies with severe seizures also have other neurological signs such as paralysis or inability to walk. It should be noted that the expression of the abnormal gene is very variable. Even if puppies inherit two abnormal genes they may show no signs of the disease. Conversely even puppies with severe clinical signs once the signs have resolved live a normal lifespan.

Condition glossary (J-M)

Juvenile myoclonic epilepsy (JME)

JME is a specific form of epilepsy, a neurological condition that causes seizures in young dogs. Symptoms include muscle jerks or twitches especially during sleep or rest. These signs can begin between 6 weeks to 18 months in affected dogs and can progress to generalised seizures. Seizures can be triggered by resting or by external factors such as light.

L-2-Hydroxyglutaric acid (L-2-HGA)

This neurometabolic disorder (a metabolic disorder that affects the nervous system), is caused by high levels of L-2-hydroxyglutaric acid in urine, plasma and cerebrospinal fluid. L-2-HGA affects the nervous system, with symptoms usually showing between 6 months and 1 year (although they can appear later). Symptoms include epileptic seizures, a "wobbly" gait, tremors, muscle stiffness as a result of exercise or excitement, and altered behaviour.

Lafora's disease

This is an inherited form of epilepsy that is caused by an abnormal build-up of toxic starch-like material inside cells, particularly in nervous, liver and muscle tissue. Symptoms include rapid shuddering or jerking, which may be spontaneous or triggered by loud noise, flickering lights or sudden movement. Symptoms typically occur in dogs over 5 to 7 years of age and may progress slowly over many years, gradually causing other neurological problems such as loss of control of movement, blindness and dementia.

Late onset ataxia (LOA)

LOA causes progressive incoordination and loss of balance. There is no treatment for this condition and affected dogs are often put to sleep around two years after onset. Affected dogs begin showing signs between 6 and 12 months of age. These signs can include changes in the way the dog walks (often weaving of the hind limbs) and difficulty balancing.

Leonberger polyneuropathy (LPN)

There are two forms of LPN, LPN1 and LPN2. This neuromuscular disease causes nerve loss and worsens to the point where a dog is unable to support its own weight. Symptoms of type 1 neuropathy usually begin at 2-4 years old. Type 2 onset ranges from less than 1 year of age to 11 years of age. Signs include slowly worsening exercise intolerance, gait abnormalities, and degeneration of hind leg muscles. Noisy breathing, difficulties swallowing and a change in their bark may also occur.

Leukoencephalomyelopathy (LEMP)

LEMP is a neurological disorder that affects the white matter of the central nervous system. The condition usually appears when dogs are young (around 1 to 4 years old). Symptoms include problems walking, not walking in a straight line, spontaneous knuckling and dragging of the paws. Dogs may become increasingly immobile over a few months.

Lysosomal storage disease (LSD)

LSD is a metabolic disorder that leads to the dysfunction of lysosomes, parts of the cell which are essential for processing unwanted material into useful substances that the body can use. This causes a build-up of unwanted material and damage to cells. Symptoms include staggering, an uncoordinated gait, involuntary eye movements and behavioural changes. The age of onset ranges from 3 months to 4 years or more, and the condition is progressive and may eventually lead to euthanasia.

Mitral valve disease (MVD)

MVD is a type of heart disease that is caused by one of the valves in the heart leaking. This leaking valve can get worse over time and cause the heart to become enlarged and less effective. Symptoms of MVD include reluctance to exercise and lethargy, coughing, and in severe cases can lead to heart failure and death.

Mucopolysaccharide (MPS)

This disease interferes with the body's ability to break down large sugar molecules, the build-up of which can lead to disruption of cell function, particularly in the brain. The symptoms appear between 2 to 4 years of age and are associated with the cerebellum, a part of the brain which plays an important role in balance and smooth, coordinated movement. Symptoms include tremors, difficulty balancing, walking, and negotiating obstacles such as stairs. The disease is progressive and gets worse overtime.

Multidrug resistance (MDR1)

MDR1 is a condition that makes affected dogs particularly sensitive to drugs like ivermectin (an anti-parasitic) and loperamide (an opioid to treat diarrhoea), as their bodies are unable to properly remove drugs and toxins from the blood circulation. The result is that exposure of affected dogs to such drugs can cause severe reactions requiring emergency veterinary care, or in some cases can be fatal.

Condition glossary (M-R)

Multifocal retinal dysplasia (MRD)

MRD is a type of eye condition where folds occur within the retina. Many dogs with MRD have no obvious symptoms and their vision appears to be unaffected. On occasions, extensive retinal dysplasia may be associated with visual defects and, rarely, blindness. Upon examination of affected dogs, retinal folds may become less obvious over time, or even disappear.

Musladin-Leuke syndrome (MLS)

MLS affects the development and structure of connective tissue and can affect multiple organs and structures. The condition manifests with short outer toes on the front and sometimes all four feet, small stature, a stiff gait, high-set creased ears, slant narrowed eyes and very thick, tight skin with little scruff. Some dogs may be affected by seizures. Some will live a normal lifespan as the condition can stabilise once they reach maturity, but some dogs die very young due to problems associated with the disease.

Mycobacterium avium complex (MAC)

MAC is a condition of the immune system which leads to infection in affected dogs and is considered a serious and lethal disease. It is a zoonotic disease which means it can be transmitted from animals to humans and vice versa. Symptoms include lethargy, lack of appetite, weight loss, weakness, diarrhoea, conjunctivitis and nasal discharge. The disease also affects the lymph nodes, spleen and liver.

Neonatal cerebellar cortical degeneration (NCCD)

The symptoms of NCCD are due to damage in their cerebellum (the part of the brain that controls movement and balance). Affected puppies start showing signs around 3 weeks of age. They are slower and less coordinated than unaffected puppies, fall more often, have tremors and possibly spastic paralysis.

Neuronal ceroid lipofuscinosis (NCL)

NCL is a form of lysosomal storage disease (see lysosomal storage disease). This type leads to degeneration of brain and eye cells, and causes severe neurological impairment and early death. Affected dogs appear normal at birth but begin to exhibit signs early in life – around 1-2 years of age. The age of onset and severity of the disease can vary greatly among individuals. The symptoms include progressive motor decline with seizures and loss of coordination, vision loss, decline in mental processes such as learning, memory and attention, and abnormal behaviour.

Persistent hyperplastic primary vitreous (PHPV)

This condition can be found from birth (congenital) and is picked up during an eye examination. The condition can vary from having no impact on a dog's vision, to being severe and causing complete blindness.

Phosphofructokinase deficiency (PFK)

This disease affects muscle cells and red blood cells and prevents them from being able to produce enough energy for them to function properly. Symptoms include weakness, lack of energy and reluctance to exercise, muscle cramps, anaemia, jaundice and dark-coloured urine (particularly after exercise or excitement).

Primary ciliary dysplasia (PCD)

Dogs affected with this suffer from a build-up in mucus, which causes inflammation and infections in the lungs, nose, sinuses and ears. Symptoms include sneezing, nasal discharge, cough and chronic bronchitis. Effects also include hydrocephalus (increase of fluid around the brain) and reduced fertility in males.

Primary lens luxation (PLL)

In affected dogs, fibres which support the lens in the eye break down, causing the lens to fall into the wrong position. This can cause rapid loss of vision, severe pain and glaucoma. Symptoms include a reddening in the eye, and loss of vision, which may be detectable from 20 months of age. Complete lens luxation typically occurs at the age of 3-8 years.

Primary open angle glaucoma (POAG)

POAG is a type of glaucoma caused by an increase in fluid pressure within the eye and gradually causes blindness. The disease is normally seen in dogs aged between 3 and 6 years of age but can develop at an older age. Both eyes are affected, usually at the same time, and may cause reduced vision or the eye appearing larger in size. It is a subtle disease and pain, or discomfort, is not a normal feature.

Progressive retinal atrophy (PRA)

PRA causes cells in the retina at the back of the eye to degenerate and die. Owners of affected dogs first notice that their dog becomes night blind, and whilst not painful, this can eventually progress to total blindness. The age of onset of first signs varies from breed to breed, however, in all cases puppies are born with perfect vision and their sight begins to degenerate later in life, from around 3 years of age or later. Pyruvate dehydrogenase phosphate deficiency (PDP1) This disease affects cells in the body and prevents them from being able to produce enough energy for them to function properly. Symptoms include a reluctance to exercise or collapsing after exercise.

Raine's syndrome

Dogs affected by this disease have teeth that are not as strong as they should be. This means that their teeth can be worn down more easily which can cause pain. Signs usually appear at an early age, and include brown discoloured teeth, smooth enamel, signs of wear, cracked teeth and inflammation. The only way to treat this condition is to extract worn teeth.

Condition glossary (R-X)

Retinal pigment epithelial dystrophy (RPED)

This disease (sometimes called CPRA, or central progressive retinal atrophy) affects the retina in the eye, which may reduce a dog's eyesight, lead to total blindness, or cause the formation of cataracts (see hereditary cataract). The disease is very similar in appearance to another triggered by deficiencies of vitamin E in a dog's diet.

Sensory neuropathy (SN)

This progressive disease destroys sensory nerves. Affected dogs usually begin to show signs of the disease from between the age of 2 to 7 months old. The chances of survival for this condition are small as there are currently no treatments available. Symptoms may include poor coordination, loose or limp joints, knuckling of the feet, lack of sensation or pain in their limbs, chewing or excessively licking their paws or legs, urinary incontinence and vomiting.

Spinocerebellar ataxia (SCA)

SCA is a progressive irreversible condition that damages the spinal cord. Most dogs are put to sleep at a young age due to poor quality of life. Affected dogs show signs as early as 2-6 months of age. These include poor coordination, such as hindlimbs swaying when walking, difficulty jumping and climbing stairs, and difficulty standing up.

Spongiform leukencephalomyelopathy (SLEM)

This condition, also known as shaking puppy syndrome (SPS), affects the nervous system of affected puppies, and is usually picked up when they begin to try to walk. Symptoms include severe tremors, mainly in the hindquarters, which only stop when the puppy sleeps. Affected pups have difficulty feeding and often grow slowly. In many cases they are put to sleep because of welfare concerns but a few have recovered with careful nursing and appear to be relatively normal as adults.

T-box (bobtail)

T-box causes dogs to be born with shorter tails (or bobtails) compared to dogs that carry no copies of the gene. The range of short tail varies, from being a couple of centimetres, to being a quarter of the length compared to dogs born with full tails. There are no known health concerns associated with having one copy of the gene, but puppies carrying two will likely die prenatally, and if born suffer from severe deformities and die during, or shortly after birth.

Total retinal dysplasia (TRD)

This condition is commonly associated with non-attachment of the retina, or complete detachment, which causes blindness. Affected puppies are often blind from birth and may have a completely white pupil. There are several different forms of the condition present in various breeds.

Trapped neutrophil syndrome (TNS)

TNS affected puppies have an impaired immune system and will eventually die from infections they cannot fight. Because it is an autoimmune disease, young puppies present a variety of symptoms depending upon what infections they fall prone to. Many cases are not properly diagnosed and have just been thought to be "fading puppies". The age of onset varies, but most puppies become ill before leaving the breeder, and die or are euthanised by about 4 months of age.

Von Willebrand's disease (vWD)

This condition is due to an inability to clot blood properly, which can cause affected dogs to suffer from a range of symptoms. There are three different types of vWD, some being milder (vWD1), and others much more severe (vWD II and vWDIII). The symptoms range from dogs showing no signs at all of disease, to frequent nosebleeds or bleeding gums, blood in poo, or having excessive bleeding during surgery or injury.

Xanthinuria (type II)

This disease results from the inability of the body to properly manage waste products of the urine, resulting in the build of xanthine crystals within the urinary tract, and potential kidney damage overtime. The disease can range in severity, with some dogs showing no symptoms, and others having symptoms such as problems peeing or blood in the urine, and in more severe cases the need for surgery to remove the crystals.