

# Hip Dysplasia (HD)

Hip dysplasia is a common condition of large breed dogs. The larger the dog, the more likely the development of this problem becomes, particularly as the dog ages.

## What is Hip Dysplasia?

The term dysplasia means abnormal growth, thus hip dysplasia means abnormal growth of the hips. Hip dysplasia occurs during a puppy's growing phase and refers to a poor fit of the "ball and socket".

When a dog has hip dysplasia, the ball and socket do not fit smoothly. The socket is flattened and the ball is not held tightly in place, thus allowing for some slipping. This makes for an unstable joint and the body's attempts to stabilize the joint only end up yielding arthritis.

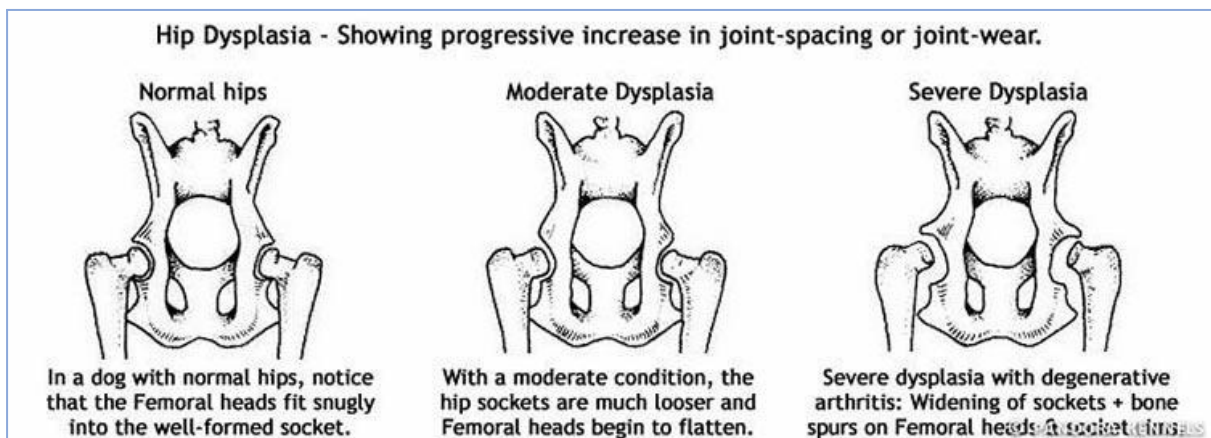


*Normal Canine Hips*



*Bad Hip Dysplasia*

If Hip Dysplasia starts in puppyhood why are most affected dogs elderly?



*Hip Dysplasia development*

## What causes Hip Dysplasia?

The primary cause of hip dysplasia is genetic but inheritance of this trait is not as simple as a dominance/recessive relationship like we study in high school biology. Normal dogs can breed and yield dysplastic offspring as the condition may skip generations. Until a test based on the actual DNA can be developed, the best we can do to prevent this disease is to breed only dogs with normal hips, scored by the NZVA or AVA.

Nutritional factors are also important in the development of hip dysplasia. For example, it has been popular to try to nutritionally “push” a large breed puppy to grow faster or

larger by providing extra protein, more calcium, or even just extra food. Practices such as these have been disastrous, leading to bones and muscle growing at different rates and creating assorted joint diseases of which hip dysplasia is one. One study showed that when puppies of hip dysplasia prone breeds were allowed to free feed, two thirds went on to develop hip dysplasia while only one third developed hip dysplasia when the same diet was fed in meals. Another study showed German Shepherds were nearly twice as likely to develop hip dysplasia if their adult weights were above average.

Studies such as these have led to the development of puppy foods designed for large breed puppies, where the optimal nutritional plane is lower than for small breed puppies.

Excessive exercise in a young dog aged 3 till 18 months. Such as repetitive movements: walking stairs, jumping in cars and jumping over gates. But also rough play or walks that are too long for the puppies age.

## How Can we reduce the chance of Hip dysplasia?

When purchasing a puppy, particularly one of a larger breed, the parents should be hip scored with the NZVA or AVA. Score results no more than 10 in total, with a goal of reducing the incidence of hip dysplasia. What this means is that the breeder has had the hips of the dog's parents x-rayed by a vet and send off to an official scoring team of independent vets. A dog for breeding can have radiographs taken at age 12-18 months. Offspring of parents with a low hip score would be less likely to develop dysplasia themselves.

## Hip Dysplasia Statistics

### Hip Dysplasia by Breed Source:

**Breeds having at least 100 evaluations January 1974 through December 2012**

Breed	Rank	Number of Evaluations	Percent Excellent	Percent Dysplastic
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BULLDOG	1	536	.4	72.0
PUG	2	483	.0	67.1
DOGUE DE BORDEAUX	3	431	1.2	57.3
OTTERHOUND	4	395	.3	50.4
BOERBOEL	5	126	5.6	47.6
NEAPOLITAN MASTIFF	6	156	2.6	47.4
ST. BERNARD	7	2124	4.1	46.8
CLUMBER SPANIEL	8	899	3.0	44.0
BLACK RUSSIAN TERRIER	9	499	3.4	43.3
SUSSEX SPANIEL	10	262	1.5	41.6
CANE CORSO	11	771	6.7	39.8
ARGENTINE DOGO	12	203	3.0	38.9
BASSET HOUND	13	200	.0	37.0
PERRO DE PRESA CANARIO	14	189	4.2	34.4
NORFOLK TERRIER	15	287	.0	33.4
AMERICAN BULLDOG	16	1792	4.9	33.0

BOYKIN SPANIEL	17	3092	2.3	32.8
GLEN OF IMAAL TERRIER	18	160	.6	30.6
SPANISH WATER DOG	19	109	5.5	30.3
FILA BRASILEIRO	20	599	7.5	30.1
FRENCH BULLDOG	21	1050	1.5	29.0
LAGOTTO ROMAGNOLO	22	116	7.8	28.4
AMERICAN STAFFORDSHIRE TERRIER	23	2944	2.4	25.9
BLOODHOUND	24	2825	2.8	25.6
NEWFOUNDLAND	25	15118	8.5	25.0
AMERICAN PIT BULL TERRIER	26	751	5.7	24.4
MAINE COON CAT	27	1096	4.2	24.3
BULLMASTIFF	28	5509	3.9	24.3
LOUISIANA CATAHOULA LEOPARD	29	552	12.0	22.1
ENGLISH SHEPHERD	30	355	11.0	21.7
CHESAPEAKE BAY RETRIEVER	31	12664	12.5	20.3
ROTTWEILER	32	93301	8.3	20.2

CARDIGAN WELSH CORGI	33	1888	3.2	20.0
GOLDEN RETRIEVER	34	133383	4.2	19.6
NORWEGIAN ELKHOUND	35	3822	7.4	19.5
MASTIFF	36	10785	7.9	19.4
CHOW CHOW	37	5286	7.3	19.4
SHIH TZU	38	623	1.9	19.3
GORDON SETTER	39	6046	8.9	19.1
<b>GERMAN SHEPHERD DOG</b>	<b>40</b>	<b>105204</b>	<b>4.0</b>	<b>19.0</b>
PEMBROKE WELSH CORGI	41	10962	3.2	18.8
GREATER SWISS MOUNTAIN DOG	42	2648	13.7	18.4
PYRENEAN SHEPHERD	43	114	2.6	18.4
OLD ENGLISH SHEEPDOG	44	10641	11.8	18.4
HYBRID	45	1346	8.6	18.2
GIANT SCHNAUZER	46	4341	9.9	17.9
KUVASZ	47	1754	14.2	17.9
BEAGLE	48	895	2.6	17.8

FIELD SPANIEL	49	1026	8.6	17.7
ICELANDIC SHEEPDOG	50	244	12.7	17.6
CHINOOK	51	643	10.0	17.3
STAFFORDSHIRE BULL TERRIER	52	577	1.9	17.2
SHILOH SHEPHERD	53	768	9.5	17.2
WELSH TERRIER	54	113	5.3	16.8
EPAGNEUL BRETON	55	141	2.8	16.3
ENGLISH SETTER	56	10359	10.6	16.0
ENTLEBUCHER	57	308	4.2	15.9
BERNESE MOUNTAIN DOG	58	17384	13.8	15.8
SPINONE ITALIANO	59	1167	18.3	15.8
AFFENPINSCHER	60	287	3.8	15.7
POLISH LOWLAND SHEEPDOG	61	490	8.6	15.5
AUSTRALIAN CATTLE DOG	62	3511	4.5	15.5
LABRADOODLE	63	228	10.1	15.4
HAVANA SILK DOG	64	188	2.1	15.4

CURLY-COATED RETRIEVER	65	1156	8.7	15.1
BOUVIER DES FLANDRES	66	8116	6.2	15.0
BLACK AND TAN COONHOUND	67	692	10.3	14.7
BRITTANY	68	18101	8.8	14.5
LEONBERGER	69	1664	19.8	14.1
TIBETAN MASTIFF	70	923	7.8	14.1
BRIARD	71	2397	13.3	14.0
HARRIER	72	323	9.0	13.9
BEAUCERON	73	373	13.9	13.7
CHINESE SHAR-PEI	74	9572	9.2	13.3
NORWICH TERRIER	75	794	7.1	13.2
ENGLISH SPRINGER SPANIEL	76	14741	8.8	12.9
AKITA	77	16177	19.1	12.8
PORTUGUESE WATER DOG	78	7872	14.1	12.7
CAVALIER KING CHARLES SPANIEL	79	6249	4.1	12.4
KOMONDOR	80	972	12.6	12.2



SMOOTH FOX TERRIER	81	337	8.3	12.2
PUDELPOINTER	82	410	14.6	12.2
POODLE	83	22785	11.9	12.0
GREAT DANE	84	12526	11.7	12.0
IRISH SETTER	85	11237	9.2	11.9
WEST HIGHLAND WHITE TERRIER	86	312	2.9	11.9
IRISH WATER SPANIEL	87	1302	17.1	11.8
LABRADOR RETRIEVER	88	227013	18.2	11.7
BOSTON TERRIER	89	205	6.3	11.7
WELSH SPRINGER SPANIEL	90	1971	15.5	11.5
ALASKAN MALAMUTE	91	13808	16.9	11.4
AIREDALE TERRIER	92	5887	7.2	11.4
PETIT BASSET GRIFFON VENDEEN	93	706	4.1	11.2
SAMOYED	94	15905	10.5	11.0
FINNISH LAPPHUND	95	164	11.0	11.0
BOXER	96	5398	3.5	10.9

BORDER COLLIE	97	10923	13.1	10.7
ANATOLIAN SHEPHERD	98	1795	18.3	10.2
PULI	99	1746	16.7	10.0
HAVANESE	100	3106	9.2	9.9
WIREHAIRD VIZSLA	101	111	10.8	9.9
CAIRN TERRIER	102	102	2.0	9.8
AKBASH DOG	103	542	24.2	9.6
AMERICAN ESKIMO DOG	104	1012	8.9	9.5
TIBETAN SPANIEL	105	334	6.9	9.3
NORWEGIAN BUHUND	106	185	10.3	9.2
GREAT PYRENEES	107	5853	14.0	9.1
SMALL MUNSTERLANDER	108	143	14.0	9.1
SWEDISH VALLHUND	109	212	5.2	9.0
AUSTRALIAN KELPIE	110	122	9.8	9.0
GERMAN WIREHAIRD POINTER	111	4071	16.8	8.9
COTON DE TULEAR	112	703	9.5	8.8

STANDARD SCHNAUZER	113	4163	8.2	8.5
MINI AMERICAN/MINI AUSTRALIAN SHEPHERD	114	1365	17.2	8.4
WEIMARANER	115	11989	21.3	8.4
POINTER	116	1567	14.0	8.0
WIREHAIRD POINTING GRIFFON	117	1983	20.3	7.9
DUTCH SHEPHERD	118	211	17.5	7.6
AMERICAN WATER SPANIEL	119	754	10.2	7.6
FRENCH SPANIEL	120	174	18.4	7.5
BICHON FRISE	121	3482	11.4	7.1
VIZSLA	122	13484	16.7	7.0
BULL TERRIER	123	105	11.4	6.7
NOVA SCOTIA DUCK TOLLING RET.	124	1803	18.6	6.5
COCKER SPANIEL	125	12929	10.8	6.4
LHASA APSO	126	813	14.6	6.4
SCHIPPERKE	127	450	9.8	6.4
KEESHOND	128	4660	9.2	6.3

DOBERMAN PINSCHER	129	15337	18.0	6.1
BEARDED COLLIE	130	4441	16.4	6.0
HOVAWART	131	133	24.1	6.0
FINNISH SPITZ	132	324	17.0	5.9
AUSTRALIAN SHEPHERD	133	31675	16.4	5.8
AFGHAN HOUND	134	6701	29.7	5.7
ENGLISH COCKER SPANIEL	135	6874	18.9	5.7
TIBETAN TERRIER	136	3935	30.6	5.7
SHIBA INU	137	3029	18.5	5.6
KERRY BLUE TERRIER	138	1543	13.0	5.6
BELGIAN MALINOIS	139	2619	18.7	5.3
NORTH AMERICAN SHEPHERD	140	336	16.7	5.1
RHODESIAN RIDGEBACK	141	11053	22.0	4.9
IRISH RED & WHITE SETTER	142	229	31.9	4.8
IRISH WOLFHOUND	143	1771	26.5	4.8
SOFT COATED WHEATEN TERRIER	144	5952	17.0	4.8

SHETLAND SHEEPDOG	145	19651	27.6	4.6
DALMATIAN	146	3412	10.4	4.5
FLAT-COATED RETRIEVER	147	5440	19.9	4.2
GERMAN SHORTHAIRED POINTER	148	15575	25.9	4.2
BORDER TERRIER	149	2580	20.6	3.8
PARSON RUSSELL TERRIER	150	109	24.8	3.7
TOY AUSTRALIAN SHEPHERD	151	108	27.8	3.7
BASENJI	152	2539	22.8	3.6
BELGIAN TERVUREN	153	5832	26.1	3.5
RAT TERRIER	154	471	15.5	3.0
BELGIAN SHEEPDOG	155	3999	32.8	2.9
EURASIER	156	102	33.3	2.9
COLLIE	157	2909	30.4	2.8
PHARAOH HOUND	158	464	15.3	2.8
IBIZAN HOUND	159	346	35.3	2.6
CANAAN	160	438	17.1	2.3

AUSTRALIAN TERRIER	161	183	6.0	2.2
GREYHOUND	162	346	35.8	2.0
SIBERIAN HUSKY	163	17293	33.8	2.0
GERMAN PINSCHER	164	371	21.3	1.9
BORZOI	165	858	31.1	1.9
SALUKI	166	261	42.5	1.5
WHIPPET	167	161	37.9	1.2
ITALIAN GREYHOUND	168	222	59.0	.0