

PHENOTYPIC CHARACTERIZATION OF RAJAPALAYAM DOG - A HOUND DOG BREED OF INDIA

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Received : 09.05..2014

Accepted : 20.06.2014

ABSTRACT

The present study was carried out to characterize the Rajapalayam dog breed. Due to the delightful appearance and hardy nature, the Rajapalayam breed of dogs is more familiar among the pet owners and breeders as guarding dogs. This breed of dog having its breeding tract at Rajapalayam Taluk of Virudhunagar district in Tamil Nadu, India. Rajapalayam dogs of different age groups maintained under normal domestic management environment by different families were randomly selected and identified for recording the physical measurements of dog. By the current study, Rajapalayam dog breed is a hound dog and falls in the mid sized hound dog category. The average body weight of Rajapalayam dog ranges from 25-30 kg and the height falls within the range of 65 to 72 cm.

KEY WORDS : Hound dog, phenotypic characterization, Rajapalayam dog.

Dogs have been the best companion of man since time immemorial. Domesticated dogs served early humans as a guard animal, a source of food, fur, and a beast of burden. The process continues to this day, with the intentional artificial selection and cross-breeding of dogs to create new varieties. In the past, man domesticated the dog for providing safety and to guard his properties and animals. Apart from that, dogs were used to hunt down animals, for providing food for humans. In our society dog has evolved as a primary

companion animal throughout its association with man for long time³.

The dogs belonging to the hound varieties are known to be the best guard dogs. In this hound category, the dogs breeds like Rajapalayam, Kanni and Chippiparai are the best animals for guarding and they have the native breeding tract at southern district of Tamil Nadu state in India. Due to the delightful appearance and hardy nature, the Rajapalayam breed of dogs are more familiar among the pet owners and breeders. This breed of dog having its breeding tract at Rajapalayam Taluk of Virudhunagar district in TamilNadu, India. History is replete with information about the origin of this dog but no solid evidence exists to prove its exact origin. The peculiarity of this breed is the pure

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white body with pink colour nose. However, most of the people who are not familiar with this breed are unaware about the authentic details. The main reasons for such oversights being the unavailability of scientific studies about this breed. Keeping this point in deliberation, this study was carried out to document the morphometric characteristics of the Rajapalayam dog breed.

The study was conducted in the breeding tract of the Rajapalayam dog breeds. The main breeding tract is Rajapalayam Taluk of Virudhunagar district. This district is located in the southern part of Tamil nadu State, India.

Rajapalayam dogs of different age groups maintained under normal domestic management

environment by different families were randomly selected and identified for recording the physical measurements. The sampled dogs were aged between 5 months to 5 years, divided into four age groups: namely 5-12 months, 13-24 months, 25-36 months and above 36 months. Age of the dog was recorded based on the thorough personal interactions and also by perusing the available records with the breeders. The live weight of the dog was recorded using portable digital spring weighing scale to the accuracy of one gram. The basic biometrical measurements were recorded in the normal standing position of the dog using graduated plastic tape to the accuracy of one cm⁶ (Fig.1).

The following measurements were recorded

Body length (BL)	Distance between base of the neck and base of the tail
Withers height (WH)	Distance between withers and ground (normal standing position of the dog)
Chest circumference (CC)	Circumference around the widest part of the cage
Chest depth (CD)	Height between the withers to the lower part of the chest immediately after the ribs
Abdomen depth (AD)	Height between the ribs to the lower part of the abdomen immediately below the ribs
Head Circumference (HC)	Head Circumference at the widest part
Neck length (NL)	Distance between base of neck and junction of ears
Neck circumference (NC)	Neck Circumference at base of neck

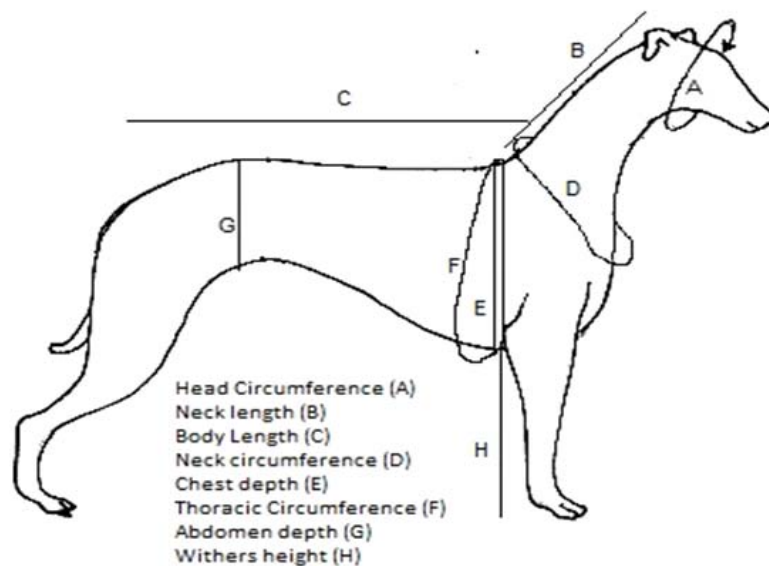


Fig.1

Characterization of Rajapalayam dog

The adult body weight of male and female Rajapalayam dogs ranged between 25 to 27 Kg and 23 to 25 kg , respectively. This dog breed attains the above body weight when it crosses one year of age in both sexes. The body length in adult was between 60- 63 cm irrespective of the sex. The height at withers in adult male dog was (67-69 cm) higher than adult female dog (64-66 cm). The thoracic circumference of an adult female was lesser (65 cm) than male (67-70 cm). There is a slight difference in chest depth between adult male (26-27 cm) and adult female (25-26 cm).The depth of the abdomen in both the adult male and female were 17-18 cm. The circumferences of head in adult male and female dogs were 42-44 cm and

37-40 cm, respectively. The neck lengths in both the sexes were 32-33 cm at adult age. The circumference of the neck in adult male was 40-42 and in adult female was 37-40 cm.

The chest depth is 26-27 cm in adult and the depth of abdomen is 17-18 cm. The depth of chest and abdomen are not important in other breeds but in hound dogs these two parameters are very essential. In hound dogs the chest is deeper and the abdomen is narrow than the other breed of dogs. So, the above measurements are very essential to evaluate the speed of hound dogs. The body weight and the wither height of various breeds of dogs that are similar to the Rajapalayam dog breed are listed in the following table 1.

Table 1. Data on various hound breeds, origin and means of height and weight

Breed	Origin	Wither height (cm)			Body weight (kg)		
		Overall	Male	Female	Overall	Male	Female
English Hound ¹	Afghanistan	--	60-74	--	--	25-30	--
Greyhound	UK	--	71-75	48-71	27-32	--	--
Rampur Grey Hound	India	--	50-75	48-61	27-30	--	--
Saluki ²	Middle East	58-71	--	48-57	--	--	--
Sloughi ²	Middle East	58-71	--	48-57	--	--	--
Turkish Tazi ²	Turkey	60	--	38	--	--	--

Some data were reported for hound breeds from various countries. According to size and weight, they can be categorized in three groups².

1. Big (Higher than 70 cm at withers and heavier than 40 kg live weight). Russian Borzoi (Russia), English Greyhound (UK), Irish Wolfhound (Ireland), Polish Greyhound (Poland) and Scottish Deerhound (UK) are listed under this category.
2. Midsized hounds (51-70 cm at withers, and 20-40 kg in weight). The Afghan Hound (Afghanistan), Arabian Greyhound (Morocco), Galgo Espanol (Spain), Kyrgyz Taigan (Kyrgyzstan), Pharaoh Hound (Malta),

Rampur Greyhound (India), Saluki, Sloughi (Middle East), Tuareg Greyhound (Western Sahel), and Turkish Tazi (Turkey) are listed under this group.

3. Small-sized hounds are lower than 50 cm at withers and generally lighter than 20 kg live weight. Italian Greyhound (Italy) and Whippet (UK) are thus small-sized hounds. Their original habitat are generally plain areas².

According to the above classification and the results obtained in this study, Rajapalayam dog breed is a hound dog and falls in the mid sized hound dog category. The average body weight of Rajapalayam dog ranges from 25-30 kg

and the height falls within the range of 65 to 72 cm. Kanni, the Indigenous hound dog found in Southern parts of Tamil Nadu state also classified under this category⁴.

From the current study, it could be inferred that, Rajapalayam dogs fall under the group of

midsized hound dogs and they reach the adult body weight at the age of 12-18 months. The other morphometric traits like height, body length head and neck size and circumference were reached when they crosses the age of 12- 16 months (Table 2).

Table 2: Live weight and biometrical measurements (Mean ± SE) of Rajapalayam breed of dog

Age-group	Body Weight (kg)	Body Length (cm)	Withers height (cm)	Thoracic Circumference (cm)	Chest depth (cm)	Abdomen depth (cm)	Head Circumference (cm)	Neck length (cm)	Neck circumference (cm)
MALE									
5-12 months (n=14)	16.26±0.28	61.5±0.79	67.8±1.08	67.1±0.89	28.1±0.50	17.2±0.37	39.4±0.54	33.2±0.52	40.3±0.58
13-24 months (n=10)	25.2±0.56	65.2±0.70	72.4±0.94	67.8±0.73	28.5±0.47	17.8±0.31	40.4±0.86	33.5±0.53	38.1±0.65
25-36 months (n=6)	37±0.84	62.5±0.67	68.7±0.82	70.2±0.74	27.4±0.60	18.2±0.57	42.2±0.89	36.2±0.62	41.1±0.85
Above 36 months (n=5)	26.5±0.32	62.1±1.17	69.2±0.94	67.1±1.49	27.5±0.50	18.7±0.45	40.9±0.54	34.2±0.59	42.3±0.84
FEMALE									
5-12 months (n=8)	15.7±0.38	59.4±0.32	67.4±1.23	64.5±0.88	25.4±0.50	17.2±0.52	38.6±0.79	36.2±0.55	36.3±0.73
13-24 months (n=7)	24.8±0.81	60.8±1.28	68.1±1.25	61.5±0.85	25.4±0.54	17.5±0.45	37.8±0.74	33.2±0.40	36.7±0.88
25-36 months (n=8)	28.8±1.02	63.3±0.89	69.8±0.89	69.1±0.55	25.8±0.50	17.8±0.39	39.5±0.80	32.4±0.58	40.3±0.77
Above 36 months (n=7)	34.8±0.6	61.5±1.82	64.8±1.91	65.5±1.04	26.2±0.55	18.1±0.60	40.1±0.36	38.5±1.04	40.8±0.57

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