



Staffordshire Bull Terrier Hindquarters – A General Overview

by Mick Smith (Willowstaff)

Having discussed the forequarters in a previous article it would seem appropriate to proceed to the hindquarters. As mentioned before, the forequarters have to cope with 60% of the weight of the dog and are obviously of great importance. The rear quarters are nevertheless of equal importance as they provide the propulsion and drive for forward locomotion.

When examining the hindquarters, I believe the croup should be taken into consideration. A sloping croup provides that extra effort and power when required, particularly with reference to a dog originally bred for combat. It must be emphasised that a sloping croup IS NOT INDICATIVE of a poor topline.

Without going into the complicated musculature anatomy, it is important to stress that the muscles of the hindquarters (e.g. first and second thigh) should not be short and bunched; they should be of good length and not be overloaded and bulky. Short, bunched muscles lack flexibility and during exercise retain lactic acid and fatigue quickly due to lack of oxygen.

Correct angulation is important, and a Stafford should have well bent stifles and the hocks should be well let down in accordance with the Standard. Angulation and specific angles are well documented; suffice to say that straight stifles are undesirable and produce the all too common stilted action and invariably are a cause of knee and hip joint problems. Over angulation is also detrimental and places undue stress on the knee and hock joints, and results in the 'bobbing up and down' action and 'crabbing' movement. What is of greater importance is that front

and rear angulations are complimentary and symmetrical. The extremes however must be avoided, as well as asymmetry front and rear.

'Well let down in the hock' is a well known term and often misunderstood, but basically it means the Stafford should be short in the hock. A well let down hock is beneficial in terms of fatigue, however to understand how short hocks improve stamina we must look at the mechanics of the hock and consider the principles of levers.

The hindquarters are illustrated in Figure 1 which indicates the point of the hock (os calcis) and the hock joint

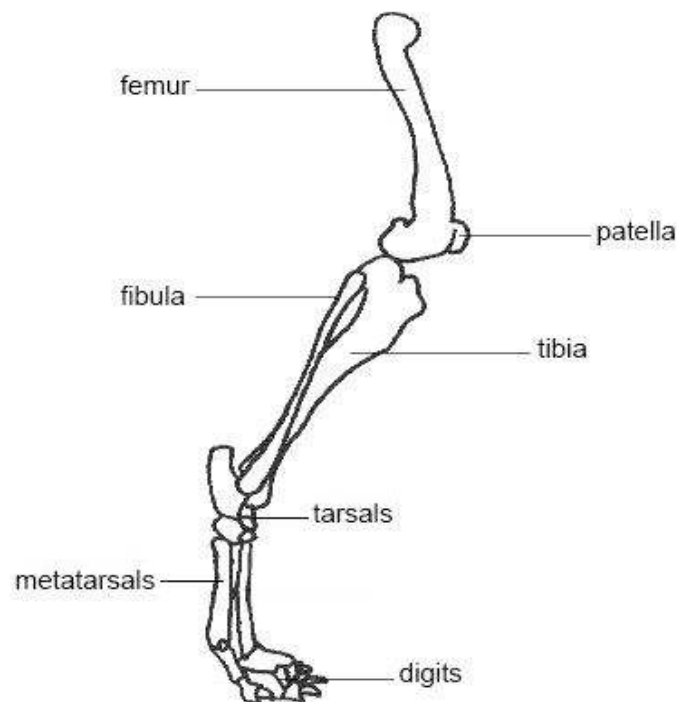


FIGURE 1



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The hock is operated by muscle running down the back of the leg attached by the Achilles tendon to the point of the hock, as depicted in Figure 2.



FIGURE 2

To reduce the effort at the point of hock the distance of the point of hock from the hock joint must be increased. This is however within limits governed by nature, so the other alternative is to reduce the length of the rear pastern. This effectively lessens the working arc of the rear foot reducing the amount of work done, thus requiring less effort per step. Practical examples of the characteristics of hock length are the rabbit and the coyote. The rabbit has a long hock and can accelerate from a standing start very quickly; conversely the coyote is short in the hock and is renowned for its endurance.

In essence relative to the femur, tibia and fibula, the hock is shorter when stamina is required. The length of the hock invariably affects the length of the other bones in the rear assembly. Long hocks are usually accompanied by shorter upper and lower thighs, which in turn have shorter muscles making them less efficient, i.e. the longer the muscle the more they are able to contract, giving a greater capacity to pull. Long hocks are also contributory to 'crabbing' as in theory the rear feet can reach further under the dog's body, interfering with the front assembly.



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When viewed from the rear, hind legs should be straight and well boned with good width at the stifle and strong hock joints to withstand the rigours of combat. The stifles should not turn outwards and the hocks should not turn inwards.

When moving, close movement should not be confused with ‘single tracking’. Close movement is a result of mis-aligned bones, e.g. ‘toeing in’/‘cow hocks’. Single tracking is the tendency of the feet to converge to the centre of gravity when moving forward at a good pace.

As a general rule, when the hind feet are placed approximately in line with the rump the rear pasterns should be perpendicular and the topline level. Sickie hocks – where the hocks slope backwards – are indicative of over-angulation and are often accompanied with a sloping topline (similar to the German Shepherd).

A Stafford should have a strong, positive rear action and when viewed from the rear should ideally be parallel when moving at a steady pace. Movement should not be assessed when the animal is moving at a rapid pace, as they will invariably single track.

The hind feet cannot be omitted and are a vital feature of the rear quarters. They absorb the rear driving forces and receive more wear and tear than the front feet, particularly on the toes. The back pads are smaller than the front pads and therefore it is essential that the rear feet are strong and compact and not weak and splayed.

Finally, the tail requires a mention. A typical low set tail (akin to an old fashioned ‘pump handle’) is also indicative that the correct slope of croup is in evidence. In general, a well set tail without any malformations is a good indicator that the spine is anatomically sound.