

ASSESSING & PREDICTING SOUNDNESS FROM A CONFORMATION PERSPECTIVE

Global expert **JUDY WARDROPE** of JW Equine explains the pillar of support and how speed & weight impact the forelegs. (www.jwequine.com)



Since most racing injuries tend to be of the forelegs, that is where we will start looking for an additional way to predict soundness. Because most people start examining a horse from the front, and most can judge whether a horse has straight legs or not, we will look at assessing further soundness factors, including lightness of the forehand.

The principles of physics tell us that there are two factors which increase force (in this case concussion): speed and weight. Since we are talking about racehorses, we are not likely to decrease the speed, which leaves us with decreasing the weight. In other words, lightness of the forehand lessens the concussive effects on the forelegs at racing speed. Not only is the concussion reduced through lightness, so is the amount of work the horse has to do to lift the forehand, and fatigue is also a factor in both racing success and racing failure.

Factors for Lightness

Using the pillar of support (visually created by extending a line through the naturally occurring groove in the forearm) as gauge for lightness of the forehand and therefore soundness provides us with an additional tool for assessing racehorses, prospects and breeding stock.

One of the factors for lightness is how far in front of the withers the line emerges. The closer to the withers, the heavier the horse is on the forehand, and conversely, the further in front of the withers, the lighter the horse is on the forehand.

In addition, where the line for the pillar of support emerges on the bottom affects soundness. The ideal position is for the line to

“One of the strongest assets for lightness is a high set to the base of neck. A famous trainer in the USA said that he wanted horses with “the look of eagles.”

bisect the rear quarter of the hoof. If it emerges behind the hoof, there is considerably more stress put on the suspensory apparatus of the foreleg, especially at racing speed. You have likely seen photos of the hoof as well as the fetlock striking the ground during a race. This is normal in a well-constructed racehorse; however, if you visualize a horse that is heavy on the forehand and has a pillar of support that emerges behind the hoof, you can imagine why that horse is unlikely to stay sound when working at speed.

Other factors for lightness on the forehand include the length and rise of the humerus (from elbow to point of shoulder) and the positioning of the base of the neck. A short, steep humerus

would add the most lightness while a long, level humerus would add the most weight to the forehand. Keep in mind that there are numerous possible combinations of length and rise. However, it is also important to remember that length must be considered in distance preferences – something we will examine in future articles. Simply put, a distance horse generally requires a longer humerus (more reach/longer stride) than a sprinter (quicker turn over rate).

In general terms, the higher the base of the neck in relation to the point of shoulder the lighter the forehand is and the lower the base the heavier the forehand is. However, we must consider the combined affect of the base of the neck and the rise of the humerus. Obviously, a high point of shoulder (as produced by a steep rise to the humerus) and a base of neck well above that point of shoulder would produce the most lightness and a low point of shoulder (as produced by a humerus with little or no rise) and a base of neck at the point of shoulder would produce substantial heaviness, but most often we see horses that are somewhere between these two extremes.

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