

# STRAIGHT TALKING

THAT SLIPPING SADDLE CAN LIMIT PERFORMANCE AND LEAD TO DISCOMFORT AND POTENTIALLY INJURY FOR BOTH HORSE AND RIDER. CENTAUR BIOMECHANICS' **DR RUSSELL MCKECHNIE-GUIRE** LOOKS AT THE CAUSES OF RIDER ASYMMETRY AND HOW IT CAN BE TACKLED.

It is known that the human body has a dominant side, as evidenced by which hand we would write with, and which leg we would use to kick a ball. A similar pattern is seen in horses, with some horses preferring to bend easier to the left or right, or performing transitions on one rein with greater fluidity.

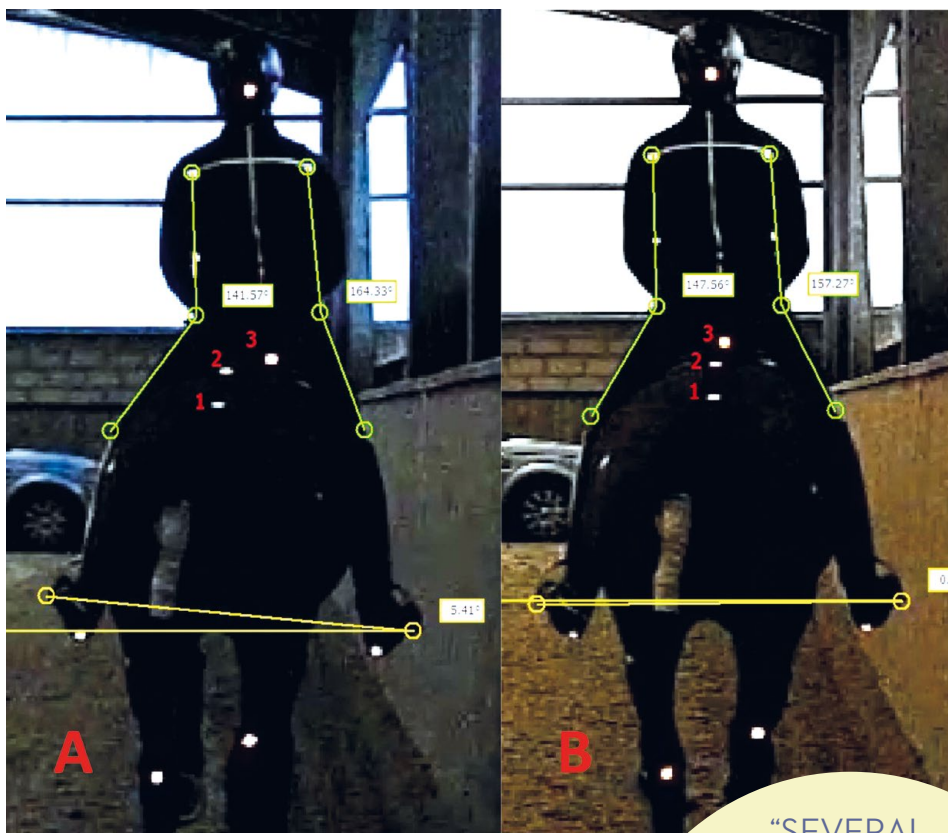
These preferences can be defined in brief as 'laterality' and 'handedness'. Understanding laterality and its effect on horse and rider performance is becoming the subject of many scientific investigations.

In the context of a rider, when sitting on a pressure mat, a group of experienced right-handed riders confirmed that they were sitting equally on both the left and right seat bones, but based on objective measures, they were sitting more on their left side, despite confirming they were equally weighted. Is this laterality in action or is this difference between feel and quantitative measures a sign of rider asymmetry, and how does this then translate to the horse?

Although it is accepted that riders (and horses) have a sided preference, attempts should be made to ►

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**ABOVE:** USING SPECIALIST SOFTWARE, A BIOMECHANICS EXPERT CAN ANALYSE WHERE ASYMMETRY OCCURS, AND RECOGNISE WAYS TO ADDRESS IT.

“SEVERAL STUDIES HAVE DEMONSTRATED THAT THE HORSE IS THE PRIMARY FACTOR IN RIDER ASYMMETRY.”

help reduce the functional differences between the left and right sides of the body. In most cases, addressing these functional asymmetries off-horse, using exercises such as physio, pilates, strength and conditioning etc. can be hugely beneficial.

It is important that the rider considers their asymmetry and the effect it may have on the horse. Horses will develop a locomotor strategy to alleviate any discomfort caused, in this case a rider who is asymmetric (leaning to one side). This strategy may lead to asymmetry in the horse, and that can result in a loss of performance, and increase the risk of injury. It is important for riders, who are addressing their asymmetries that they are aware of the underpinning factors which may be causing them in the first place.

Horse, saddle and rider interaction is a complex area and requires a multidisciplinary approach when evaluating it. The saddle and its design can have a significant effect on the rider's position. In the case of

saddle slip, rider asymmetry is often cited as the primary cause of the saddle slipping to one side.

In an attempt to resolve the saddle slipping, riders will explore various on-horse strategies. A saddle which slips to one side will generally only be apparent on one rein.

For example, a saddle that slips to the right: when on the left rein, the back of the saddle will displace towards the outside (right) in all gaits and movements. The saddle follows the movement of the horse's back, and as a result, the rider's pelvis follows the movements of the saddle, and displaces to the outside. As an intrinsic subconscious compensation strategy, the rider will lean towards the inside with their upper body, may also grip with one knee, and it may appear that they have one leg longer than the other. When on the opposite rein, the saddle and rider will be straight.

In these cases it would be easy to critique the rider, however in horses who have saddle slip, it is vital that the causes are identified. As easy as it may be to 'blame' the rider, saddle slip is often initiated by the horse-saddle interaction and has been shown to be induced by the horse's subtle or major movement asymmetries. Several studies have demonstrated that the horse is the primary factor, and that the rider follows the movements of the saddle and horse.

Whilst the rider should address their own asymmetries, it is important that the horse-saddle interaction is evaluated with a team (veterinarian, saddle fitter, physio etc.), as if the underpinning factors causing the saddle to slip are not identified, this may lead to loss of performance and increase risk of injury. It is essential that riders do not solely pursue an on-horse approach to correct their "position" and saddle slip, they must work with their home team. Of course, the rider is a contributing factor, but what is of paramount importance, is to address the primary cause of saddle slip.

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