



# Is lameness the cause of that slipping saddle?

*This fundamental cause is often overlooked*

**A number of factors** can cause saddle slip, not just a poorly fitted saddle. Often, lameness is the cause, according to **Sue Dyson**, VetMB, PhD, head of clinical orthopedics at the Center for Equine Studies, Animal Health Trust (AHT) in the United Kingdom.

For many years, Dyson has noticed saddle slip on horses with hindlimb lameness. Often, however, lameness is not recognized as the fundamental cause of the saddle slip, she told *The Modern Equine Vet*.

“I was prompted to initiate the study because I had seen a horse with saddle slip in which the saddle slipped a lot, but the rider sat squarely, and I could not see lameness. But when I blocked the tarsometatarsal joint, the saddle slip resolved. I became intrigued and wanted to know more about the incidence of this and thought that it was an excellent project for my intern, Dr. **Line Greve**,” Dyson explained.

Together Dyson and Greve con-

ducted a prospective study of 128 horses referred to AHT for lameness or poor performance, or were undergoing a prepurchase examination. Some were overtly lame, and some were not moving properly but lameness had not necessarily been recognized, according to Dyson. The horses were ridden by two riders during the assessment.

Saddle slip was defined as the saddle consistently slipping to one side when observed from the ground (this may have been only on one rein but was a consistent feature). With grade-1 saddle slip, the riders continued without readjusting the saddle. In many cases, the riders were not aware of the saddle slip. However, they generally became aware if they intermittently had to stop and re-adjust the position of the saddle (grade-2 saddle slip).

Saddle fit was assessed in all horses. “In two horses, one with forelimb lameness and one with hindlimb lameness, we identified an ill-fitting saddle. Saddle slip

Photo courtesy of Dr. Dyson

By Marie Rosenthal, MS

was not eliminated by resolution of the lameness; saddle slip was eliminated when we used a correctly fitting saddle,” she said.

The saddle consistently slipped to one side in 38 of 71 horses that had hindlimb lameness, compared with 1 of 26 horses with forelimb lameness. There was no saddle slip in 20 horses with back pain and/or sacroiliac joint pain or in 11 sound horses.

Saddle slip improved in 97% of horses after the lameness was addressed.

“I was surprised by the proportion of horses with hindlimb lameness that we documented with saddle slip,” Dyson said. “I was not surprised at all that 97% improved after elimination of the lameness.

“The fact that saddle slip occurred with at least two riders and was abolished when the lameness was resolved proved a causal relationship between hindlimb lameness and saddle slip,” she added.

Hindlimb lameness probably alters back movement, she explained. “In most affected horses with saddle slip the saddle slipped toward the side of the lame or lamest limb, but in a small proportion the saddle slipped toward the less lame hindlimb. Therefore, horses must be adapting their gaits in the face of lameness differently.

“It gets quite complex,” she said. Saddle slip worsened when the horse was ridden in a circle vs a straight line, reflecting the way in which horses change their gaits on a circle compared with straight lines. It worsened in rising trot than sitting trot because of the way

in which the forces on the stirrups change. In some, it was worse during canter, presumably because the three-beat asymmetric gait produces different forces than the two-beat trot, according to Dyson. She plans to study the biomechanics of this.

Dyson also noted that horses with a rounder back in the caudal saddle region were more prone to saddle slip than less rounded horses.

recognizing lameness should examine a horse carefully if the owners complain of frequent saddle slip. But first, make sure the saddle fits properly, and the rider is sitting squarely on the saddle. When assessing lameness, remember that the saddle normally slips toward the side of the lamer limb, but not always. “It can be confusing because occasionally, it slips the other way,” Dyson said.

Dyson indicated that the AHT



Photo courtesy of Dr. Dyson

“Interestingly, the presence or absence of saddle slip was not related to the severity of lameness, but we need more numbers to see if horses with different types of pain causing lameness are more at risk for saddle slip,” she said.

Veterinarians experienced in

riders were probably better at feeling saddle slip than the typical horse owner, and veterinarians and technicians should train owners about how to “feel” saddle slip. Have someone stand behind them and watch the movement of the saddle, she suggested. **MeV**

Above: Saddle slip as a result of lameness.

Left: Saddle slip worsens when the horse is ridden in a circle vs a straight line.

**For more information:**

Greve L, Dyson S. An investigation of the relationship between hindlimb lameness and saddle slip. *Equine Vet J* 2012 Dec 18. doi: 10.1111/evj.12029. <http://www.ncbi.nlm.nih.gov/pubmed/23360352>