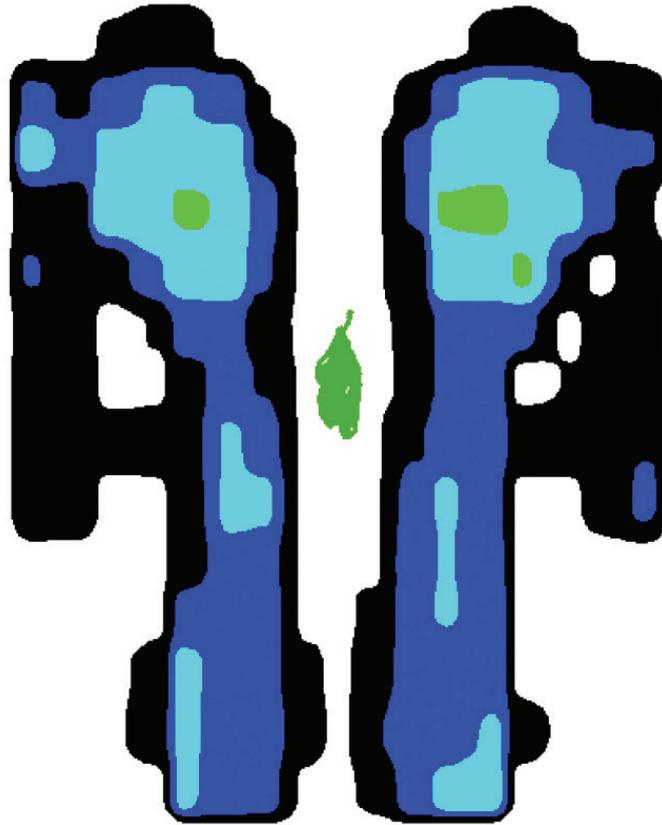


FIGURE 1: Dressage saddle at the walk.



## Is My Saddle the Problem, or Something Else?

BY ANNE CROWELL  
AND ANNETTE GAVIN

A well-fitting saddle is a must for any riding horse. A quality saddle that has been properly fitted can dramatically benefit both horse and rider performance. Unfortunately, however, the saddle is not a cure-all. The best top-of-the-line saddle that fits well will not fix problems that are not related to saddle fit. Let's go over saddle fit assessments, dynamically induced saddle pressures, and a procedure for assessing back soreness in horses.

### SADDLE FIT ASSESSMENTS

Saddle fit assessments are divided into two areas: static fitting and dynamic performance.

Static fitting occurs when the horse is standing still. Saddle parameters like balance, panel contact, wither clearance, and tree shape are assessed at this time. Saddles are always evaluated for fit when in the proper placement on the horse's back. The tree points must be located behind the scapula, and

*A properly fitted saddle is important to ensure happy careers for horse and rider, but the tack is not always to blame when things go wrong.*

the saddle panels should not extend beyond the last rib, T-18.

Dynamic performance: This occurs when the saddle has been girthed, rider has mounted, and the horse is in motion. During this phase, the saddle will be evaluated for performance and stability and the horse's way of going will be assessed. Evaluation of the horse's way of going is an extremely important part of the fitting process! Horses do not have agendas; they react to the comfort of the saddle and

the balance that the saddle puts the rider in. Generally, this occurs very quickly. On occasion, a horse that has been ridden in a poorly fitting saddle may take a few days to react positively to a new well-fitting saddle. In most cases, a single test ride is ample time to assess the comfort of a new saddle for any horse and rider pair. For horses and riders that have prior fitting difficulties, a week of test riding in a demo saddle will serve as an excellent predictor of the suitability of a particular saddle model for the horse.

## CONFORMATIONAL DIFFICULTIES

There are some conformational issues that occur in horses that can make dynamic stability of the saddle difficult to attain. These include but are not limited to the following: forward girth pockets, flat shoulders, asymmetrical shoulders, atrophy of the musculing along and around the saddle position.

Conformational issues can cause the saddle to slip forward and twist side to side on the horse. In general, they are very difficult to eliminate. Your fitter may recommend the use of shims, shim pads, nonslip girths or pads, and shaped girths to try to improve the saddle performance. Horses that have excessively high withers may need to use a quality half-pad with their saddle to provide some additional clearance.

These solutions are not “Band-Aids.” Many of the horses that exhibit conformational problems like those listed above have quality saddles with excellent static fits. “Band-Aiding” refers to the process of trying to make a poorly fit saddle useable on a horse. There is a big difference between “Band-aiding” and the use of professional saddle fitting items to improve dynamic performance on horses with conformational issues.

## ASSESSING BACK SORENESS

Back soreness in riding horses is not an uncommon occurrence. Dressage,

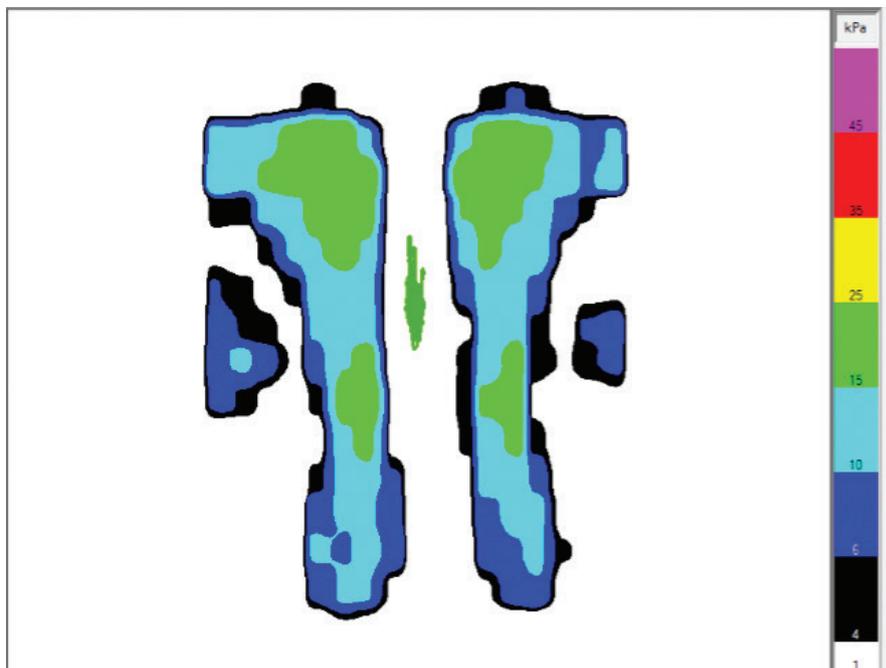


FIGURE 2: Dressage saddle at the piaffe.

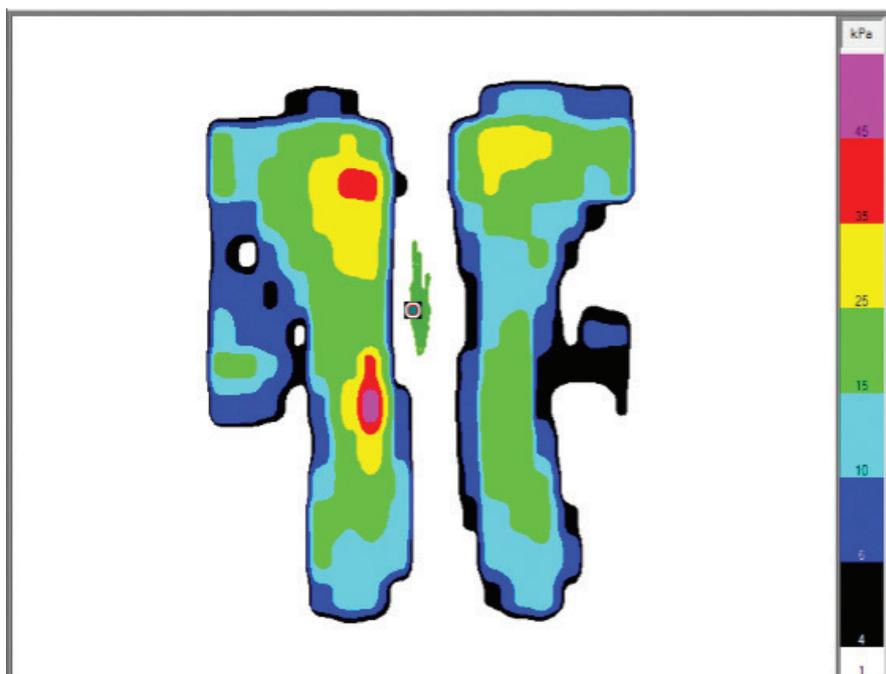


FIGURE 3: Maximum pressure recorded at the piaffe.

eventing, and show jumping are high impact sports. Movement, especially movement at speed, generates high forces and pressures on the horse's back. For example, galloping and jumping create a repetitive loading cycle on the horse's back which can cause back soreness that has nothing to

do with the fit of the saddle.

Causes of back soreness fall into three major categories:

### 1) Poor Saddle Fit

Poor saddle fit causes localized areas of soreness and tissue damage due to excessive applied pressures.

For example, an excessively wide saddle that is resting on the forward thoracic spinal processes or withers will cause pain and tissue damage to the area on and around the applied pressure. A saddle that is excessively narrow and bridges will cause pain and soreness under the points and toward the rear of the saddle left and right.

### 2) Impact- or Movement-Related Soreness

Movement of the horse and rider causes huge changes in the forces and pressures between your horse's back and the saddle. Pressure testing research done with dynamic load measuring equipment shows that the horse's back can be subject to high intermittent pressures.

Figures 1 and 2 are average pressure maps of a new top-of-the-line dressage saddle on a Grand Prix dressage horse at the walk and the piaffe. The saddle was professionally fit and the horse's movement in the saddle was excellent. The rider is a USDF gold, silver, and bronze medalist. The average peak pressures, for this test, were 32 percent higher at the piaffe than at the walk. Figure 3 shows the frame that captured the maximum peak pressure for the entire scan sequence. It is 51.5 percent higher than the average peak pressure at the piaffe. This pressure increase is a product of the movement of the horse and rider together. Another test conducted on this same Grand Prix dressage rider and his mount showed the overall net force on the horse's back was, at times, two to two-and-a-half times the rider's static weight.

Tests run during jumping again show very high intermittent pressures occur under the tree points during take-off and landing. The above tests were conducted on saddles that were built on quality trees and the saddle fit was assessed as excellent by a qualified saddle fitter. These dynamic pressure changes cannot be eliminated and can make the horse sore in the back. Also, poor riding technique is often a cause for back soreness in the horse. A horse ridden with a braced and hollow back can become very back sore.

*“It is very important to be logical and thorough in assessing back soreness in your horse. You must identify the true cause of the soreness if you are going to be successful in reducing or eliminating it.”*

### 3) Medical Conditions or Poor Farrier Work

There are a multitude of medical conditions that can cause back soreness in horses. Conditions like Lyme's Disease and EPM can cause extreme back soreness. Incorrect shoeing that disturbs the horse's natural gait can also cause back soreness. Back soreness caused by medical problems needs to be addressed by your veterinarian.

## EVALUATING BACK SORENESS

Have a qualified fitter check the saddle fit and evaluate the dynamic stability. Event riders that are riding in two saddles need to have both saddles examined. If the saddle(s) check out, then look at dynamic-related issues. Ask yourself the following: Has my horse's workload increased dramatically? Am I warming up enough before asking for highly collected dressage work? Is my horse through the back and on the aids? A one or two week reduction in the intensity of the horse's training regime can be very telling with regard to impact related back soreness. Lastly, call the vet at any point in the above process should you feel your horse may have a medical issue. The following account offers an excellent example of back soreness that was misdiagnosed by an equine massage therapist.

The equine massage therapist found a client's horse reactive and sore along both sides of the horse's back. The massage therapist told the customer that the saddle was causing the soreness. The saddle was checked by a trained saddle fitter and the saddle was found to fit well. The saddle was more than a year old and the horse had performed well in the saddle for many months. A subsequent veterinary examination of the horse found that the horse tested positive for Lyme's disease. The horse was treated for the Lyme's disease and the back soreness was eliminated.

It is very important to be logical and thorough in assessing back soreness in your horse. You must identify the true cause of the soreness if you are going to be successful in reducing or eliminating it. Changing the saddle when the saddle is not the issue will not fix the problem. 