Dr. Beverly Gordon

Gordon Chiropractic, P.C.
www.TheHorseInMotion.com
TheHorseInMotion@aol.com
EquineDC@aol.com

The Horse In Motion, LLC, Pres.
Oyster Bay, NY 11771
Wellington, FL, 33414
cell # (516) 606-4141

Saddle Fit and Performance – Part 2

One problem which exists when trying to fit a saddle is that (a lot like trailer loading) everyone thinks they are an expert. Saddle fitting has many components to consider and sometimes what looks like a good fit for the horse is not for the rider, and vice versa. Not every back problem is saddle related, and not every poorly fitting saddle is the cause of a back problem. The best way to determine if your saddle is right for both you and your horse is to consult a qualified (and I stress the word 'qualified') professional. There are, however, several points of reference you can use to help determine if your saddle might be a problem for you or your horse.

Assessing your Saddle: Construction, Parts, and Performance

The saddle is has several key components, which are: the tree, the panels, the seat, the gullet, the stirrup bars, the flaps, and the billet straps

-THE TREE is the basic structural foundation of the saddle. It traverses the entire length of the saddle from pommel to cantle. A too narrow tree will likely sit with the pommel too high and saddle will angle up in front; too wide and the pommel will sit too low and saddle will angle down in front. Always make sure there is wither clearance, and saddle points do not press into the sides of the withers. **Performance issue:** *A too narrow tree creates pressure points on the sides of the withers, discouraging the horse from lifting his back, elevating his withers and lightening his forehand. Often there will be atrophy of these muscles.*

-THE PANELS are the padded segments on the underside of the saddle and are usually stuffed with wool or foam. Check that the panels are symetrical, smooth, lie evenly against the horse's spine, and that they conform to horse's shape; some horse's backs are round and flat (indent along spine with large muscles on either side) while others can be steep and narrow (prominent spine with unremarkable musculature). **Performance issue:** *Pressure from the panels can cause pain and tension in the muscles which support the spine causing the horse to move with a stiff, unyielding back and shortened stride. If the horse consistently moves with his back dropped from the discomfort resistances usually develop he can develop permanent changes in his spine.*

-THE SEAT should fit the rider so that it allows the rider the freedom of movement while supporting their proper position. Seat size is usually measured from the button of the saddle to the center of the cantle, but sizing is not standard since saddle designs may have the buttons in different places. And, different saddle designs change your position so that you might require a different seat size. A well fitting seat will allow the pelvis to rest comfortably in a neutral position with the rider's seat bones in the

correct spot so that his weight falls in the center of the saddle. **Performance issue:** *If the seat is the wrong size, shape, balance, or at all uncomfortable, the rider will compensate by tensing muscles to generate effective aids and stay in balance. Also, the shape and angle of the seat is instrumental in determining the rider's pelvic and hip position, which directly affects weight and leg aids.*

-THE GULLET is the space between the panels and should be wide enough so that there is no pressure against the horse's spine. A too narrow gullet will interfere with suppleness of the horse's spine, and can create rubs along the spine which can cause permanent changes. A too wide gullet will put undue pressure on the horse's ribs. **Performance issue:** *The horse's spine moves and flexes, especially when the horse is asked to bend, and a narrow gullet channel leaves little room for this flexion, thereby inhibiting freedom of movement and performance. Additionally, the pressure on the vertebrae due to the proximity of the panels in a narrow gullet creates pain in the spine and spinal fixations occur as a result.*

-THE STIRRUP BARS (placed further backward for dressage and longer leg position) should hang perpendicular to the ground in a straight line when the leg is in the proper position. The ideal rider position demonstrates a vertical line which passes through rider's ear, shoulder, hip, and ankle (upper body slightly forward for jumping). **Performance issue:** *Stirrup bars incorrectly placed interferes with rider's influence on the aids as it results in muscle tension from artificially "holding" the proper leg position, disturbs balance and compromises the correct hip and pelvic angle. Stirrup bars too far forward can cause the saddle to flex downward in the front when the rider puts her weight in the stirrups and puts pressure on the forward points of the saddle on either side of the withers. This causes pain and discomfort for the horse and usually results in a hollow back with the horse putting additional weight on his forehand.*

-THE FLAPS lie between the rider's leg and the horse. Most saddles have two flaps, one next to the horse (sweat flap) and one directly under the rider's leg. Flaps of the jumping saddle are more forward than those of a dressage saddle to accommodate leg position. Flaps can have knee rolls and/or thigh rolls. The job of the knee roll is to support the rider's thigh; however, it can create problems if the rider is unable to use his leg *behind* the knee roll. Knee roll length, size, and shape also effect the placement of the rider's leg. **Performance issue:** *Once the knee passes in front of the knee roll, the leg is artificially turned outward, and makes it more difficult for the rider to use the 'riding muscles' properly (see Sidelines Sept.'06). Flaps too long interfere with leg/horse communication; flaps too short can get caught on the top of the boots. The knee roll's angle, length and size directly influence leg position, and therefore effectiveness of the leg aids.*

-THE BILLET STRAPS help stabilize the saddle. Commonly, saddles have 3 billets, which should hang in a straight line when attached to the girth. Some saddles now have the "V" system which is thought to offer more stability to the saddle. Saddles need to fit when the horse is in *motion*, therefore, the saddle should NOT shift forward or backward and the girth should lie straight when attached to the billets. **Performance issue:** *Shifting saddles can cause rubs and or pressure on the horse's back, and can interfere with the rider's balance and leg position as a shifted saddle will no longer be level.* (*note: incorrect billet strap placement is not the only factor which can allow a saddle to shift on the horse's back during movement)

A Few More Important Facts

1- Placement of the saddle: Always check your saddle without a pad and with the horse standing on level ground as squarely as possible, and try to place the saddle on your horse's back where it is most stable – that would be about 2 inches behind the shoulder blade (not including the flaps of a jumping saddle which can be forward of the shoulder blade as they are not weight bearing saddle points). Never place the saddle too far forward so that it interferes with scapula movement or too far backward so that it is behind the last thoracic vertebra (thoracic vertebrae have ribs). The center of the saddle should be level with the ground, and a straight line from the top of the pommel to the top of the cantle level would show the cantle to be about 1-2 fingers higher.
2- Symmetry: Check that the saddle has evenly stuffed panels, even gullet width, lies balanced on the horse with no side higher or lower than the other, and that it doesn't twist or rock. Check there is no flexion in the tree (that it is not broken), and that there are no tears in the leather or straps. You should also check for unevenness in your horse's anatomy which might affect saddle fit
3- Spinal pressure: There should be sufficient wither clearance and the saddle should not touch the horse's spine. The forward points of the saddle should not press into the side of the horse's withers and the panels should lie evenly in the same contour as the horse's spine.

It is important to mention that just placing a saddle on the horse's back and looking at it does not necessarily mean the saddle fit is correct! Riding is dynamic, therefore determining how the fit of the saddle influences the both the rider's position and the horse's back *while the horse is in motion* is paramount to good saddle fitting. All saddles should be checked with your horse in motion and a rider in the saddle. Often I have been asked to evaluate horses' backs whose owners notice their horse develops a "bump" along the spine after having been ridden. Some of these riders have used saddles which were actually fit to their horse. Certified Master Saddler Jochen Schleese (Schleese Saddlery Service) discusses this issue, which is at the heart of understanding that movement of the horse's back is *dynamic* and that the rigid saddle must fit well enough so as to NOT hinder this movement. Regarding these "bumps" Jochen says "… too much movement (of the saddle).. the skin gets moved back and forth over the spinal processes.. This irritates the skin and may actually cause 'shearing' of the top of the seven layers of skin…. it is important that the movement of the saddle be stopped." Think "balance and stability" when fitting saddles.

Professional assessment

Since there are many variables to consider when fitting a saddle to both the horse and rider, consulting a qualified saddle fitter offers the best chance of finding a saddle which is right for you and your horse. Saddle fitters can specifically address unevenness in the horse, changes in muscular development, conformation, movement issues, and equally as important – the needs of the rider. Whether you consult a professional or not, the goal when fitting a saddle remains the same. That is, to fit the saddle so there is no discomfort to either horse or rider, and the freedom of the horse's movement (and therefore performance) can be realized to its full potential!

Until next time,

Dr. Bev Gordon