

Riding on Air

and other uplifting innovations in saddle design

text and photos by Amy Harris

There is a lot to be said for tradition, especially in the horse industry, which relies, to an extent, on tried and true methods to get the job done. Enlightened horse owners are, however, starting to look for ways to make the riding experience more comfortable for their mounts. A greater awareness of the consequences of "tradition" is also forcing the rules to change and attitudes to evolve.

One instance where this is particularly true is in saddle fit and design. In a very literal sense, the saddle is the only thing that comes between you, your horse and the best possible ride. Unfortunately, when it comes to saddle design, the theory of 'we've always done it this way' is not only standing in the way of optimum performance, it is physically damaging our horses.

Jochen Schleese of Schleese Saddlery in Holland Landing, Ontario, has been in the saddle business a long time. He learned from the best in his trade while apprenticing in Germany and his designs have won the respect and accolades of internationally known equestrians and professionals.

Familiar with the concept of tradition, Schleese was often told during his training, 'There is nothing wrong with the way we make saddles. We've done this for a hundred years and that's how we'll keep doing it'. He admits, however, that while some things still hold true, certain

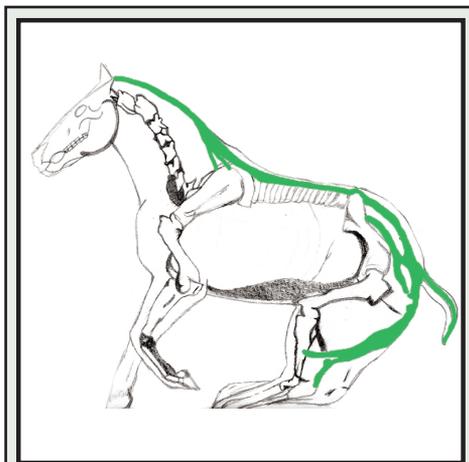


Illustration by Laurie Harris

"One of the most important parts is the dorsal ligament system," said Schleese. "It supports the spinal column and gives the back strength. When the saddle fits on top of the ligament system, the horse will not engage."

aspects of traditional saddle design should not, for the sake of our horses' health and comfort. He has noticed an evolution starting to come about in design, lately and said "Saddles are being built more and more with consideration for the comfort of the horse first and then with the comfort of the rider".

Modern saddlers have three objectives, he said, for the improvement of their designs, all of which stem from the irreversible damage caused by tradition-

ally designed saddles. "I find that whether in Holland or in Hong Kong," said Schleese, "saddlers are all trying to eliminate the three major things you can't fix on a horse: 1. nerve damage; 2. spinal damage; 3. bone chipping in the shoulder."

If the tree angle is wrong, severe pressure resulting in nerve damage can occur. This has been substantiated with the use of fibre optic cameras in Europe.

Schleese said that increasing or decreasing the thickness of your saddle pad is not the way to solve poor saddle fit. "A saddle pad is not the answer," he said. "If a horse has a problem with a part of the saddle rubbing and you throw a big pad on, that decreases the room between horse and saddle, thus decreasing the range of motion. So, you fix the obvious problem and then severely damage something which can't be fixed. It doesn't make any sense."

As far as damage to the spine is concerned, ligaments are most affected by a poor saddle fit. When the gullet or channel width between the panels of the saddle is not sufficient, or else too wide, your horse's ability to lengthen his spine can be decreased due, again, to an uneven distribution of pressure. Over time, the horse can lose the ability to fully extend his hind quarters.

Traditionally, the tree, which keeps the



This tree is made from a lightweight material specially developed for Schleese Saddlery. A single tree weighs 2.75 lbs. Traditional ones are made from laminated beechwood and weigh 4 lbs.



Two trees are shown above. The one on the bottom is an older model with forward facing points. The one on top has backward facing points, which free up space for the withers allowing the shoulder full range of motion.

shape of the saddle and provides space for the withers, has been designed so that the tree points are forward in order to prevent rider discomfort. Schleese said that this element of design is the third cause of irreversible damage.

"When the horse moves, the shoulder rotates up and backwards beneath the saddle. Research with fibre optic cameras has shown that incorrect saddle adjustment and forward facing tree points actually damage the shoulder.

"Why do they use forward pointing trees? They are inexpensive and have been made that way for a hundred years," said Schleese. "To this day, there are many trees that go forward, but there are some that go straight or back wards. You would think that if the tree were to go backward, it would bruise your leg, but now, thanks to newer thinner and lighter materials, it won't. We have material that is as light as paper, but as strong as steel."

Schleese incorporates several of the latest technological advancements in his designs, with these three objectives in mind, to the benefit of his clients and their horses alike. One such example he particularly advocates is the use of air panel systems, available in most custom

saddlery today. The Flair and Cair air panel systems can be installed in traditionally flocked saddles by your saddler as well.

The systems are both quite simple and similar in design, using four valve-sealed air bags in replacement of traditional wool flocking, but differ in that the Flair system uses a gel lining and foam inside the bags and is adjustable. The Cair system, on the other hand, uses air-filled bags only and can be adjusted by adding or subtracting the wool between the tree and the bags.

These systems allow horses to move unrestricted under saddle as the panels conform easily to the back and shoulder muscles, also resulting in an increased weight bearing surface, thus reducing pressure points. The air-filled bags also serve as shock absorbers for both horse and rider's spines, without causing the rider to bounce in the saddle.

Because the equine body goes through several changes through the course of development, particularly at ages three, five and eight, and as a result of regular growth and

Techno Fitting

One of the newest advancements in saddle fitting technology, the computerized pad shown below, has 256 sensor points, which take 40 images per second, of the pressure points felt by your horse .

In order to obtain the most accurate readings, your saddler will ask you to take your horse through all his gaits.

A lap top computer is used to analyze the images that are generated by the sensor pad. These images show the saddler how much pressure per inch the rider creates in the saddle. Ideally, the pressure should be evenly distributed, not concentrated in any areas.

While this system can be used as the principle method of determining a good saddle fit, it is primarily used as an additional tool to solve saddle fit problems. It can also be used by riders trying to decide between two saddles that both seem to fit well.



Photo courtesy of Schleese Saddlery

muscling, the air panel systems are ideal in that they can be adjusted to suit each stage of development.

It is a good idea to have your horse and your saddle reassessed by your saddler at least every two years or any time you notice a significant change in your horse's body and are concerned about the saddle fit. Be warned, however, that attempting to re-pump or readjust your saddle on your own, could nullify any warranties that come with these systems. Besides, Schleese said "You can do it yourself, but you should have a pro do it. Every action has a reaction. You can stuff as well as any other, but the difference is knowing what will happen if you do it one way versus another".



One way of customizing a saddle is to measure your horse's withers using a length of wire and then tracing this shape on to a piece of paper. Your saddler can use this information to shape the tree and stuff your saddle accordingly.

So, what happens if your saddle fits your horse like a second skin, but leaves you reeling in pain? Most people would tough it out – that's what. But as brave as you think you're being, your body will unconsciously protect itself, leaving you hunched up and awkward in the saddle, in any number of self-preserving poses.

"When people suffer in the saddle they feel the need to protect themselves from it. By leaning backwards, riders put too much pressure into the horse's loin area. If they lean forward, the pressure goes into the forehead. If the saddle shifts and makes the rider sit on the diagonal, the pressure goes into the spine."

If after reading this article you are convinced that you need a brand new saddle – wait. Many saddlers, including Schleese, will revamp your older, ill-fitting saddle. Some trees can be adjusted and wool flocking can be replaced with air panel systems. Keep in mind, however, that not all older saddles have wool flocking, but use foam instead. If you are in the market for a new saddle and want to avoid any guess work, you can always have one custom made.

Schleese recommended that people do their homework before purchasing any equipment for their horses and said that the application of third party testing has allowed for major advancements in

saddle design. "They don't make saddles, they just do the testing. So, to them it doesn't matter if saddlery A or B is better. It's good to see what a product really does and doesn't do," because, he said, while companies make claims of "new and improved", the consumer doesn't really know if the product has been tested and proven to be so. 



Only specific types of saddle trees can be made wider or narrower using the tree adjuster. This option comes in handy when you get a new horse that differs in size and shape from your previous mount.



The innerworkings of the Flair air panel system, which replaces traditional wool or foam flocking is shown above. The white foam is surrounded by the grey PVC, air-filled bag which, though it can't be seen here, has been lined with a thin layer of silicone. Inset, the air tubes tuck neatly beneath the saddle flap, but leaves the air valve accessible to your saddler for repumping.

Photo by Nicole Kitchener