

Saddle Fitting with DK Saddlery

With Master Saddle Fitter Danny Kroetch

Written by Amy C. Barton

DK Saddlery is all about adjustability. That one word, adjustability, sums up everything that DK Saddlery believes in. Danny Kroetch is a world renowned Master Saddle Fitter and designer. The success of his saddle designs is based on the fact that an adjustable fit is incorporated into every saddle the company builds. Danny believes that saddles which do not have the ability to be fit asymmetrically to a horse's withers cannot ever truly fit. That may sound confusing, but read on to gain a deeper understanding of saddle fit.

This theory has been proven time and again by Danny, who has a lifetime of experience fitting saddles to horses. He fits over 2,000 horses a year, more than 60,000 to date. Danny was invited to take part in a research study at the University of Utrecht Veterinary Clinic in Holland. The study was "How Ill-Fitted Saddles Affect Horses." It was the first ever research study done on saddle fit by a veterinary university. The results were published in The Veterinary Journal in August 2005 and proved that an asymmetrically fitted saddle was far better for a horse's back than a symmetrically fitted saddle.

Twenty years ago when Danny started with adjustable English saddles there was only one other company in the world doing it. Now, there are close to twenty manufacturers incorporating some form of adjustability in their saddles. "I certainly don't agree with all their designs", says Danny, "but, the point is more companies recognize that the consumer is looking for adjustability". He stresses, "It is a concept that has been proven to work, but only when done correctly".

The adjustable fit technology that Danny has proven in the English world for the past twenty years, he has now brought to the world of Western riding. Danny has designed and patented the first fully adjustable western saddle. It can truly be fitted to any horse because it addresses the issue of fitting a horse's asymmetries. If we think about the anatomy of a horse logically, fitting a saddle asymmetrically makes perfect sense. All horses, just like humans, are built asymmetrically; meaning we all have a strong side and a weak side. On the horse one shoulder will be carried more forward than the other, there will be less muscling on one shoulder, and less muscle mass over the ribcage on one side. Therefore you need to have the ability to adjust the bars to the asymmetry of the horse. Danny also changed the angles of the bars so they are correctly positioned on the muscles of the horse which are meant for carrying weight.

In 2009 the University of New Mexico did research on western saddle fit. They took 180 western saddles of all different makes and models. They tested them using a thin saddle pad and also tested them gradually increasing the thickness of the saddle pad. The fit was analyzed over a computerized compression pad. The research found 180 saddles that did not fit. They also discovered that the thicker the pad, the worse the saddle fit. Danny responds, "If your shoes are too tight and pinching your foot and I give you a thicker sock or an insole, is that going to make the shoe fit better? Saddle pads don't fix problems. They never have, they never will. If you have a properly fitted saddle, you should be able to ride your horse with no saddle pad and never hurt your horse."

Something that Danny hears all the time in the industry is, "I have this one saddle and I put it on every horse I own and it fits beautifully." Danny's response to this statement is, "Go stand in a group of people and look around. How many of those people (in the group) could you fit in their pants or their shoes?" This brings us back to the concept of adjustability.

The most important thing about having an adjustably fitted saddle is the fact that all horses (just like people) change. Four things change horses: work, feed, age, and metabolism. In winter metabolism slows down causing weight gain. In spring and summer metabolism speeds up causing weight loss and gains in muscle and body mass. Danny asks, "If a person were to gain, or lose, 15 pounds would their pants still fit?" When you buy a traditional western saddle, which is symmetrical and can't be adjusted, and then your horse changes (as they all do), or you change horses, your saddle will no longer fit."

A big buzz word in the western saddle world is "tradition". The industry says that on a traditional western saddle we want the top part of the bars to make contact with the horse, and we want the bottom part of the bars to flare off the horse. Danny strongly disagrees with this traditional philosophy, based on scientific research of biomechanics of the horse in motion. "The traditional design of a western tree puts too much pressure at the top of the withers and also fills in the shoulder hole of the horse. This is a huge problem," explains Danny. He continues, "If you take a bare horse and look at the shoulder hole [of the horse] while standing still, you can have anywhere from a shallow to a very deep shoulder hole. However, when the front leg is lifted and brought forward to create motion, the rotation of the scapula fills the shoulder. The traditional western tree, which is rigid and has the bars flared off at the bottom, and I'll say this again, puts too much pressure at the top of the withers and fills the shoulder hole in. That's where the scapula needs to go. This creates an

enormous amount of resistance: the shoulder trying to get under the rigid tree. In this tree configuration the bars are not stable enough over a horse's withers. Consequently when the saddle is girthed down, the front of the saddle becomes too low, again putting way too much pressure over the withers.

The very purpose of any saddle tree is to distribute the rider's weight over a greater surface area. In the above scenario, when the saddle is girthed down, the front of the saddle comes down and the back of the saddle lifts. So now, the entire weight of the rider is only distributed over the front half of the saddle, not fully over the whole tree. This puts way too much pressure over the withers. Therefore, the top of the bars need to come off the horse's withers and the bottom of the bars needs to have contact with the horse's shoulder approximately 9 inches down from the withers of the horse.

Danny has addressed these issues by redesigning the tree. His tree creates the correct angle of the bars allowing the shoulder hole of the horse to remain open, enabling the scapula to fully rotate under the bar. The bars on a DK western saddle can adjust from a semi quarter horse out to more than a draft cross bar, but also adjust to fit each horse's asymmetrical shape.

Additionally, Danny would like to explain what happens when there is too much pressure on the withers. Research has shown that the muscle of a horse can withstand 2.5 pounds of pressure [per square inch] over the withers before it becomes damaged. From 2.5 pounds to 4 pounds of pressure we are damaging the muscle. From 4 pounds to 6 pounds of pressure we have restricted blood flow into the muscle, killing the hair follicles. This creates those tell tale white hairs we are all too familiar with. Danny relates, "When I hear people tell me, well, I don't have any white hairs on my horse, so I've never made him sore with my saddle. This statement is incorrect. This simply means you haven't reached the threshold of 4 to 6 pounds, it doesn't mean you're not damaging the muscle."

Most of us have heard that if your saddle fits properly there should be equal sweat under the saddle pad from front to back. This is also incorrect. Danny explains, "All your girthing power, and your stirrups, everything that holds the saddle to the horse is in the front half. When you have air and heat, it creates sweat. If you're getting sweat under the front half of your saddle, it means the saddle is moving. The instability is allowing your saddle to shift from side to side over your horse." On a saddle that fits correctly the front half should be dry and under the back half of the saddle should be wet. The sweat marks over the back half [of your saddle] should be very large and symmetrical. The front third of the saddle should have large, symmetrical dry areas, indicating the saddle is fitting straight and

stable over the horse's withers. If you are seeing small, uneven dry spots under the front of your saddle this is very bad. It's a sure sign your saddle is bearing too much pressure over a small area. Those white spots we spoke of earlier are typically found 3 inches below the withers. This is where the traditional western tree creates too much pressure at the top of the bars.

Frequently Danny hears people remark that we've been using the same kind of tree in western saddles for hundreds of years and it's been working. Danny responds, "When I walk up to a horse and put as little as 10 pounds of pressure over the withers, or the top line of a horse, and the horse drops 4 or 5 inches [under my touch] from the pain, I say, clearly this is not working!" He continues, "We're getting by on the willingness of the horse to do what we ask of him. It's time we stopped taking advantage of their willingness."

Danny's fully adjustable western saddles have been out for three years and he has unbelievable testimonials from riders and trainers. The veterinarians and chiropractors that work with these horses are astounded by how quickly the horses' backs have recovered when worked in a properly fitted saddle. "The best part", says Danny "is that horses build muscle in my saddles. They develop more muscle over the withers and top line because of unrestricted blood flow. Better blood flow means more oxygen and nutrients reach the muscle." The bars can, of course, be adjusted as the horse builds muscle in these areas assuring a proper fit at all times. So, next time you're thinking about how your saddle fits, think adjustability=fit.