



The seat of the matter

How much influence does a saddle have on a horse and rider's performance, and could yours be holding you back? Andrea Oakes investigates

Few things have as much influence on your horse's performance – and your own riding enjoyment – as a saddle.

Find the right one and you and your equine partner will be able to communicate clearly with each other and work in comfort and harmony.

Get it wrong, however, and the resulting back problems and behaviour issues could be the bane of your life.

The past decade has seen an explosion in saddlery developments. There has certainly never been a greater choice when it comes to shopping for new kit – from air-filled panels and asymmetric girth straps, to hybrid designs and adjustable trees.

But how are these innovations helping the everyday horse and rider? We investigate how modern saddle design has the potential to maximise performance.

A delicate balance

We may be living in a high-tech world, yet relatively little has changed when it comes to the basic design of a saddle.

According to Anne Bondi of the Saddle Research Trust (SRT), most of

'Comfort for both the horse and rider is a delicate balance'



our saddles bear a close resemblance to pre-first-century models.

"Early saddle design was basically two pieces of wood on either side of a gullet to carry the rider," she says. "It still is, if you boil it down to its essence.

"The saddle later developed to offer stability while the rider stood in the stirrups to shoot an arrow or throw a spear. Today, it has evolved into a more discreet shape to suit what we do with the modern horse."

Anne says riders nowadays generally require a narrow 'twist' – that's the seat area just under and in front of the rider's crotch.

"Our legs are built on an A-frame and the saddle is at the top of that," she says. "Most riders need to balance on the seat bones, leaving the thighs free

to rotate in the hip joints and allowing synchronised movement.

"The need for a narrower twist, however, must usually be mirrored on the underside of the saddle – which eats into the bearing surface of the panels and reduces the all-important weight distribution across the horse's back."

Anne states that some of the new ideas we are seeing are purely cosmetic. Yet the struggle to resolve the conflict between horse and rider comfort is one of the driving forces behind modern saddle design.

"It inevitably comes down to damage limitation," she explains. "Comfort is important for both horse and rider, so it is a delicate balance.

"Some innovations are trying to improve on this, altering design and even taking parts away altogether.

"The result is anything on a scale from a rigid-framed saddle to a floppy bareback pad."

The design equation

Not so long ago, the horse barely featured in the design equation, says design expert and Society of Master Saddlers (SMS)-registered and qualified saddle fitter Vanessa Fairfax.

"Many saw the saddle purely as a seat for the rider," she says. →

GET THE RIGHT FIT

"The best saddle in the world won't work if it doesn't fit properly," points out fitter Vanessa Fairfax.

Like all of our experts, Vanessa emphasises the need for professional help when buying a new saddle or routinely checking the fit of a current model.

To find your nearest SMS-qualified and registered saddle fitter, contact the SMS, visit: www.mastersaddlers.co.uk or tel: (01449) 711 642.



Have a saddle professionally fitted



Using the right saddle is key for enjoyment and performance

A TRAINER'S VIEW

Showjumping trainer Michael Jones believes many riders fail to take full advantage of modern saddle design.

"Every day, I see instances where a saddle is not helping the horse or the rider," he says, stating that there's little excuse for an ill-fitting saddle with the models now available.

"Many people try to make do with something from a previous horse because they are comfortable in it themselves, but it doesn't always suit the shape of their new mount.

"If a horse is uncomfortable, he will lose flexion through the back

and won't develop a good topline, as he's unable to work properly.

"Long-term, a horse can suffer muscle wastage behind the withers. If the saddle then drops into these hollows, the rider cannot physically sit up and will struggle to collect and shorten as they're leaning forwards.

"At the other extreme, a rider will be constantly fighting to get to the front of a saddle that's too narrow for the horse, as it will pitch them back.

"These aren't problems caused by saddle design. The right saddle is out there if you seek qualified help."

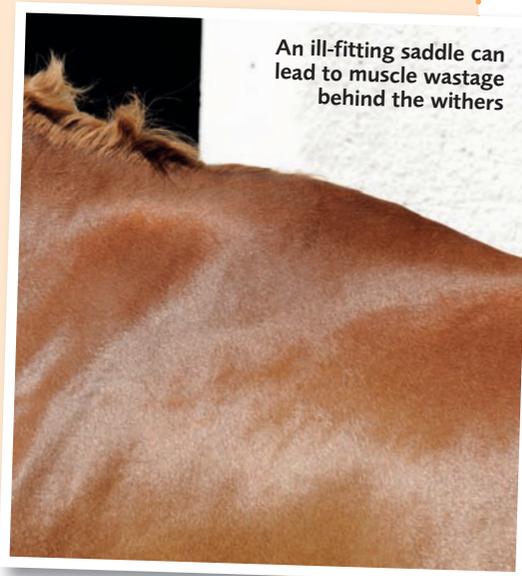
"Then people became aware of how a horse's movement, performance and general health were affected if the saddle wasn't right. Manufacturers started to think a lot harder about the interaction between the saddle and the horse – as well as the rider."

Major changes in tree design, explains Vanessa, have enhanced horse comfort.

The use of modern materials such as carbon fibre and polymer has reduced weight and allowed more accurate construction.

Alterable trees with changeable gullets allow a customised fit.

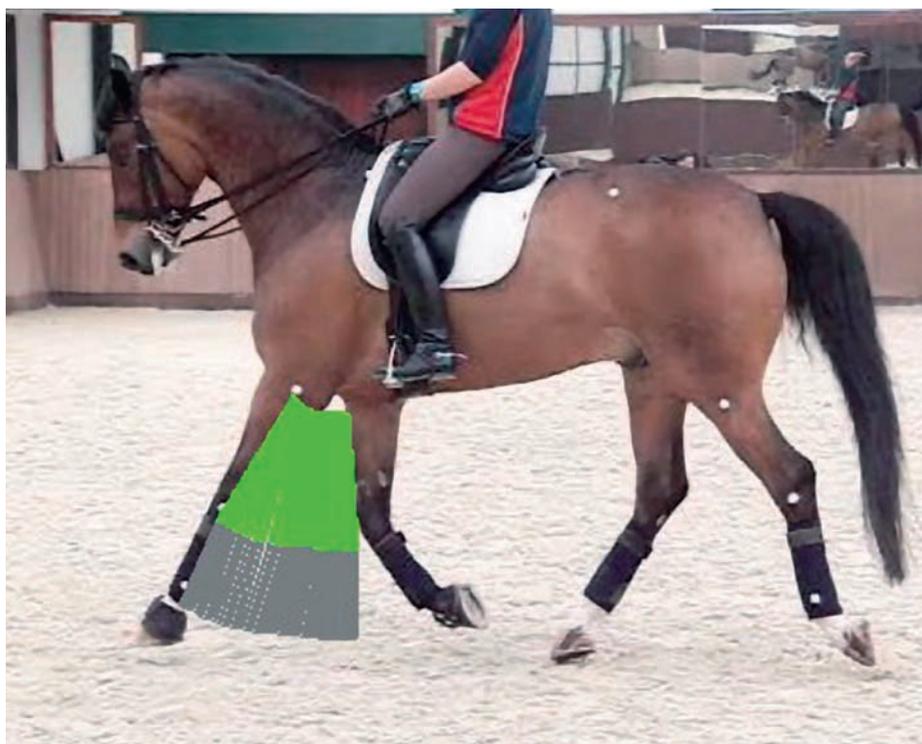
And while the idea of filling the gap between the tree and the horse with some kind of mouldable element remains much the same, nowadays this



An ill-fitting saddle can lead to muscle wastage behind the withers



Modern, changeable saddle gullets allow for a customised fit



Gait analysis helps show if a saddle restricts movement or not

filling or 'flocking' could be latex foam, gel or air, instead of the traditional wool.

"Before, a saddle either fitted or it didn't," explains Vanessa. "There's much more opportunity for fine adjustment now.

"Alongside tree development, another positive step forward has been the gusset – the insertion of a seam in the saddle panel to adjust its depth.

"The old-style, one-piece bagged panel tended to concentrate pressure in one spot, but most manufacturers now use gussets to bring the saddle into better contact with the horse and make up for any conformational defects.

"Saddle design has become more complicated as horse breeding programmes have changed so much," adds Vanessa, pointing out that a big yard nowadays may be home to differently shaped Thoroughbreds, warmbloods, cobs and cross-breeds.

"One saddle does not fit all. However, manufacturers now offer reasonable solutions such as high-withered or extra-wide models that feature specific tree and panel designs combined with girthing arrangements to suit a particular shape."

Drastic consequences

A horse was never designed to carry a human on his back but Vanessa feels manufacturers are working hard to minimise the restriction a saddle can cause and enable the horse to cope more easily with a rider on board.

"Saddle companies are more aware of the effects of design," she believes.

"A horse's movement and willingness to work will be hampered if things

'A top rider could probably ride well on a dustbin lid'

aren't right and he'll suffer discomfort and possibly long-term back damage.

"Consequences for the rider are not so drastic, but you may well feel uncomfortable and you won't progress nearly as quickly."

So, what can we, as riders, gain from modern saddle design?

"Ideally, the saddle should help you find the correct centre of balance and feel happy, confident and at one with your horse," says Vanessa.

"A top rider could probably ride well on a dustbin lid – for the elite, the saddle is little more than something to hang the stirrups on. But the less-experienced rider needs a level of support.

"Riders of this ability are not as stable in the saddle as those who are better, and benefit from a model that gives support to the leg position.

"Adjustable knee and thigh blocks can help (or hinder, if used incorrectly) and there's a good choice now in terms of seat shape and style.

"Discipline-specific saddles can encourage the legs into a better, more secure position, while hybrid models such as the 'very slightly dressage' provide flexible riding options."



New designs can be easily adjusted

Factual feedback

A saddle manufacturer may assure us that its new design will benefit our horses and our riding, but where's the scientific proof?

Until now, there has been little hard evidence to back up any claims.

SMS-registered and qualified saddle fitter Mark Fisher agrees it has been difficult to quantify any improvements in horse performance as a result of changes in saddle design.

"In any trade there are always opinions, and too many opinions can confuse matters and prevent progress," he says.

"But things have moved forwards in the past two or three years."

Mark operates Pliance, a pressure-mapping system that uses a thin, under-saddle mat containing more than 200 sensors to detect potentially harmful pressure points on the horse's back.

He says that recent research using Pliance in conjunction with the Centaur Biomechanics gait-analysis system has produced

breakthrough results.

"We've been using Pliance to look at where pressure develops under the saddle and how we can reduce it," explains Mark.

"We are starting to learn what can restrict a horse's movement and what doesn't necessarily affect it – and asking why a horse moves happily in one saddle and not another.

"We may think we are making improvements, but are they going to enhance performance?"

The aim, he says, is to develop tree and panel design to allow the horse's shoulders – or, more specifically, the muscle mass behind the shoulders – as much freedom to move as possible.

"By using Pliance and Centaur together, we can quantify that performance improvement," he adds.

"We previously relied on rider feedback, which can be subjective. This takes opinion out of it."

Mark, who has also worked with the Animal Health Trust's Pegasus gait-analysis system, acknowledges the limitations of current research methods.

"It is quite difficult to work in a clinical way, as all horses and riders



Linking saddle slip and lameness

Raising awareness of issues surrounding saddles, equine backs and performance is the aim of the Saddle Research Trust (SRT), a charitable organisation established to facilitate scientific research and provide support and advice.

A recent study carried out by the SRT and Animal Health Trust (AHT) shows consistent saddle slip may be an early indicator of hind-limb lameness, and not necessarily a manifestation of an ill-fitting saddle, a crooked rider or asymmetric shape of the horse's back – as was previously thought.

Vet Dr Sue Dyson of the AHT points out: "Picking up on saddle slip provides an opportunity for owners, riders and trainers to detect low-grade and subclinical [where symptoms are not yet showing] lameness, with important welfare consequences."

Further exciting scientific studies are planned to build on these findings.

● To find out more about the SRT, visit: www.saddleresearchgroup.co.uk.



have good and bad days," he says. "Different horses have a different threshold for discomfort, too.

"There are so many variables, but we try to keep them as controlled as possible and work with as many horses as we can.

"A lot of the research we have done involves World Class athletes, as Pliance is co-owned by the SMS and the British Equestrian Federation. Eventually, the findings will filter down to benefit all horses and riders.

"For every answer we find, we come up with more questions. But there is no doubt that advancements in saddle design are proving beneficial.

"While we may not be able to magic the rider's weight away, we can help distribute it in a way that makes it easier for the horse to carry." ■