

Reducing saddle pressure can increase flexion and power

Research into a new saddle design showed the racehorses moved better

STRIDE length and power can be improved if the pressure under racing exercise saddles is lessened, research has indicated.

A study comparing movement of horses on the gallops in full-, half- and three-quarter-tree saddles was carried out by Vanessa Fairfax of Fairfax Saddles, Russell Mackechnie-Guire of Centaur Biomechanics and Rachel Murray of RosSDales Veterinary Surgeons, and published in the *Journal of Equine Veterinary Science*.

The aim was to measure and locate any pressure under the saddles, and assess and measure the horses' movement, then do the same in a saddle designed to remove or reduce the pressure.

Ms Fairfax told *H&H* studies had shown reducing pressure on the 10th to 13th thoracic vertebrae improved movement in sport horses, so she wanted to see if the same were true in racehorses.

"That area, the base of the withers, is a massive muscle junction," she said.

"Impingement affects the neck, head carriage, legs. I thought we'd find it in the racehorses, too — and we did, with bells on.

"It affected dressage and jumping horses differently but in both, it reduces movement and lumbar function, and the horse uses itself in a compromised way. The more I look at horses, the more I realise everything is connected; you can never look at just one part of the horse."

Ms Fairfax said there had been little research in this area, and that as most racehorses' ridden work is in exercise saddles, if they exert pressure that compromises movement, this will affect horses' musculature and performance.

She said the researchers used pressure-mapping and high-speed

By ELEANOR JONES

motion capture simultaneously, to analyse pressure under the saddles and, using gait analysis data, the effect on the horses' limb function and movement, on a sand track used for daily exercise.

She said the pressure under the standard saddles was "through the roof", in the crucial area, higher than in the sport horses, and than that associated with back pain.

The different standard saddles caused high pressure in different areas, Ms Fairfax added, while under the new design, pressure was significantly lower.

It was also found the horses' limb movement was significantly greater in the modified saddle.

"With the hip flexion, two degrees of difference is significant; we were seeing seven or eight," Ms Fairfax said, adding that horses also showed significantly increased stride length and femur angle, indicating increased hindlimb flexion.

"The horses used themselves much more productively, and the potential benefits to welfare and performance are exciting."

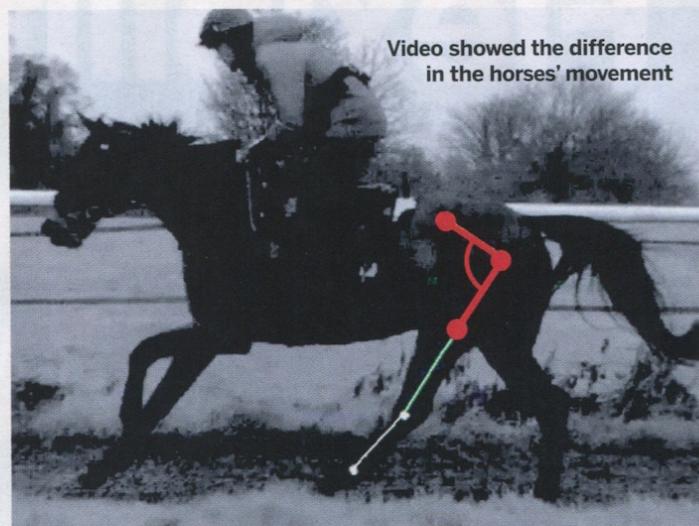
Dr Mackechnie-Guire said he found the results fascinating.

"Pressure alters gait in a negative way, and we've shown it in dressage horses, jumpers and now racehorses," he told *H&H*.

"We don't know if these pressures cause pain but we know horses alter gait to compensate, and that's key. They do so to alleviate discomfort."

Mr Mackechnie-Guire cited horses who become reluctant to go forward, or stiff on one rein.

"Horses will perform sub-optimally and develop strategies to manage their locomotion in



Video showed the difference in the horses' movement



light of this pressure," he said.

"We're not saying a saddle will turn a horse into Valegro, but remove that pressure and you've got a whole different experience."

Trainer Chris Bealby of North Lodge Racing, whose horses were used in the study, told *H&H* he could feel a difference in the modified saddle.

"They definitely move better and more freely," he said.

"I've been using them for a year

now, and horses who came back into work this autumn seem to be working and moving better, having had less pressure on their backs, and they're having less physio treatment, as back issues crop up less," he said.

"We had a great record last season — 16 runs with two horses, five wins and five seconds. Maybe I shouldn't be telling other people about this, but keeping it to myself."

PEOPLE IN THE NEWS



Eventer **James Sommerville** married Lucinda Cornes on 27 November. Shoes from horses

including James's 2019 Badminton ride Talent were used as guests' nameplates at the ceremony.



Racing talent spotter **David Minton** won the Federation of Bloodstock Agents lifetime

achievement award. He bought Ballabriggs, Hedgehunter, Many Clouds and Party Politics.



Flat jockey **Donnacha O'Brien**, 21, announced he is retiring. The Group One-

winning Irish reigning champion is to follow his father Aidan and brother Joseph into training.