Short backed horses
The effect of long or short saddles on the horse's back

Traditional opinion says that horses with short backs require short saddles, based on the simple logic that short horse = short saddle.

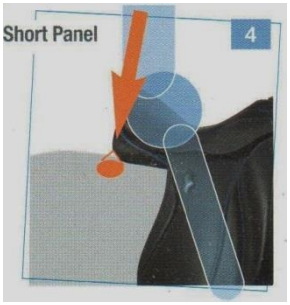
Sometimes short backed horses suffer back problems despite a 'short' saddle being used and this, as well as a desire to better understand the effects saddles have on the horse, led Zaldi Sillas de Montar S.A. in Salamanca, Spain to carry out significant research into this potential problem. Their findings have been interesting; endorsing their understanding of how the panels – these are the two long undersides of the saddle that sit on the horse – if made correctly can spread the load evenly along the horses back.

There is a theory that the horse's 18th rib, i.e. the first rib behind those connected to the rib cage, is vulnerable if the saddle rests on it and can give rise to back pain and possible long term problems. So if this theory is taken into account then the difficulty comes in trying to make a saddle that reaches no further back than the 17th because in most cases it need to be a very short saddle which may not be suitable for many riders. What is often neglected here is that the shorter the panel the more the rider's weight is concentrated over a smaller area, which means a greater pressure per square inch or cm on the horse. Critically, weight can be concentrated precisely where the intention is to relieve the horse, i.e. at the rear/end of the panel, directly over, or close to rib 18.

Obviously the longer the panel the better the weight can be distributed without localised pressure, however it is useful to understand how the panels should function on a well-designed saddle. Firstly consider a 'short' saddle and that it will inevitably have a 'short' panel – diagram 2.

The end of the short panel is more or less directly under the back of the saddle where the weight of the rider is concentrated and can create a pressure point at the end. This is accentuated when riders lean backwards, especially with the style adopted by many in modern dressage. See diagram 4.

The diagram shows where weight can be concentrated, especially when a rider leans back in the saddle



Not only is a pressure point in this region undesirable but could be over or close to the 18th rib

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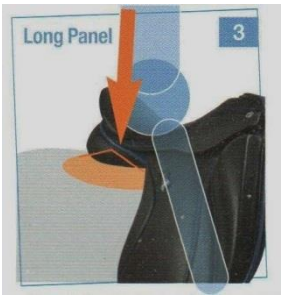
Saddles with short panels will usually make a complete contact along the horse's back when placed on the horse without the rider mounted, so they may appear correct, but the panels in this unloaded state should not have complete contact along all their length to the very end point because the function of the panel should be to soften and expand the rider's weight without creating any point of pressure. To make things worse this often fairly inflexible end of the panel can focus the weight of the rider onto that localised point at the back of the saddle.

Now consider a longer panel. On a well-designed and fitted saddle, placed on a horse without a rider, the panel will curve away from the horse's back at the end – see diagram 1

Then when the rider's weight is applied (especially if the rider leans backwards) the panel can soften and expand without creating a pressure point – see diagram 3.



There is no focal point right at the end of the saddle beneath the point of maximum load and so the load is spread and distributed over a greater area.

Technical research and saddle development has been one of Zaldi's key objectives and has led them to work with for example the CIDAUT Foundation, a technical research organisation with facilities in Germany, Latin America as well as Spain.
This has enabled them to evaluate the effects of saddle panels, saddle trees and related design aspects using modern technological methods, so they have reliable results not theories to take into consideration in new saddle design and the conclusion is that more harm may be done by trying to make an especially short saddle to fit a short backed horse.

Regardless of the horses back length the rider still needs the same space in which to sit on the saddle and the same weight has to be distributed, so obviously the saddle seat cannot be shortened as the rider will not fit and therefore the conclusion until now has been to shorten the panel and in doing so increasing localised pressure just where it needs to be avoided.

A typical request often heard by saddlers is from a rider wanting say an 18" seat but with very short panels because the horse has a short back. If such a saddle is made then it could harm the horse with a high pressure concentrated at the back of the panel right under the centre of the rider's weight, so what is the answer? Either a smaller rider or a longer backed horse, or a saddle that spreads the weight properly, for the horse's sake.

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Viva Iberica, January 2015