

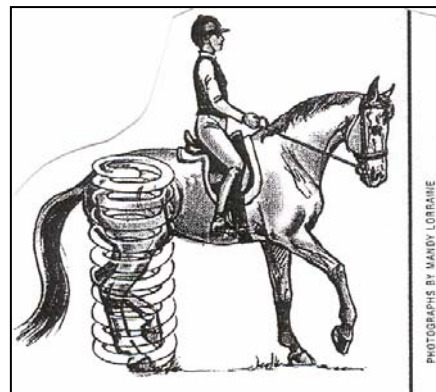
## LESSON # 7 FOR THE BIOMECHANICS OF THE HORSE

### THE HORSE'S HIND-LEGS

The horse needs to be able to coil his hind-legs like a spring to make his movements beautiful and swingy. The rider cannot think that loading the spring may come by pulling on the reins to set the spring. Because a horse doesn't have a solid front to back frame, like a car or boat, tension will arise because the chest will fall. Several portions of our vehicle (horse) are built to collapse or shift. There lies the challenge.

The goal is to figure out how to load that spring while balancing the chest up.

The rider must think in elevating the horse's chest and then the hind leg spring. The balance between the aids allows the hind-leg spring to work without collapsing the front end of the horse. The combination of aids happens so instantaneously. It's like juggling tennis balls and trying to keep them in the air at all times.

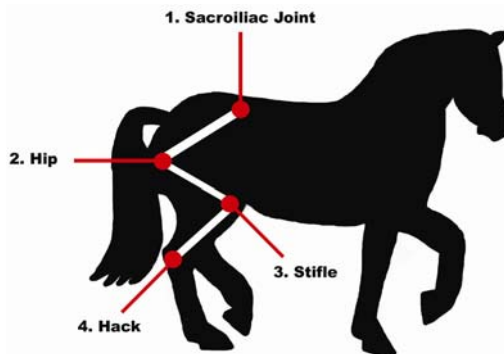


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There are four joints to the spring in the horse's hind leg.

1. The Sacroiliac joint connects the back of the spine to the pelvis. This allows the pelvis to tilt under the horse.
2. Next is the hip.
3. The stifle, which is like our knee.
4. Then the hock.

The fetlock isn't part of the spring, but it is also a joint. The gathering of this spring takes a long time for the horse to strengthen. If you were to do squats for an hour every day, that's what an upper-level dressage horse must do. It's important that we as riders are very considerate to the horse and this gathering that we ask for. The horse must know that never is this a front-to-back spring, but a back-to-front spring. Everything is in the forward momentum and everything is done in the swing of the stride to keep the balance.



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With the idea of helping Pony Clubbers understand the biomechanics of horse and rider better.  
Betsy finished as a Graduate B from North Star Pony Club.