

# **HARM OF RIDING STUDY**

**By Maksida Vogt**

## Preface

The horse is not made to be ridden.

The horse should not be ridden at the cost of his health. This is a daily practice performed by people who even claim to love their horses. Love which causes damage and pain to another creature is a sick love. Throughout the whole of human history, people have done horrible things to animals and to each other out of lack of education and lack of development. Now, in a time of abundant knowledge and developmental growth, it is time to show that this damage and pain is still happening with horses... through the people who ride and use them for their own pleasure or profit.

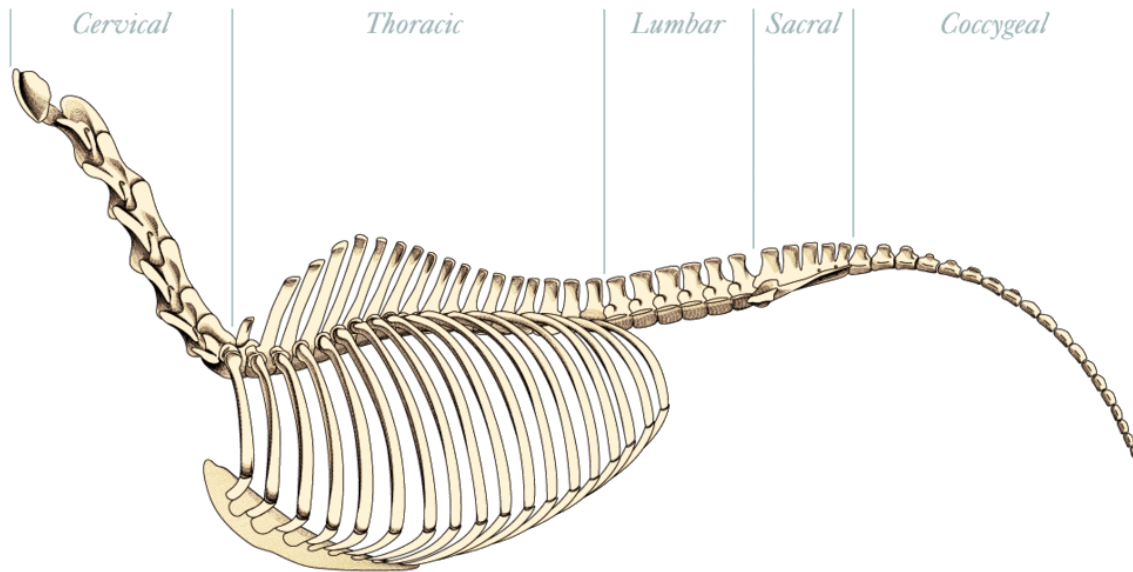
I state that there is no one, single horse who likes to be ridden. We would like to believe they like it, but that does not make it true. It is time to rethink tradition and to face the facts.

Horses usually suffer silently, but when one sees behaviors and actions such as these, the horse is suffering:

- Horse jerks or flinches while being groomed
- Horse dishes the back ventrally when touched
- Horse refuses to give a hoof for cleaning
- Particular body regions are very hot
- Horse prefers one body position, such as: holding head only on one side or the other, tail only on one side or the other, only one hind leg is exonerated, not the other, etc.
- Horse presses its head against solid objects
- Grinding of teeth, wind sucking, cribbing, chewing on ropes
- Horse does not want to move
- Head shaking
- Horse defends himself, raises (rears), bucks, kicks under or out behind, holds head extremely high
- Horse is lame

If your horse is lame, then you should know that your horse suffers pain.

There are many people who can see or feel what is going on in a horse's body and many of these people have nothing to do with horses, meaning that they do not have them or do not desire anything from them. This is a very interesting subject, as those people have no difficulties in understanding even the most complicated biomechanical mechanism just by feeling and common sense. It seems that only people who want to use the horse in some way need proof of this causing of damage and pain. I think bringing to light the ethical reasons one should not use another creature for one's own aims and desires should be enough, but I am aware that there are people who have no such attitude. So it is necessary that now, we must go deeper into this subject with scientific knowledge of anatomy and biomechanics.



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The skeletal system is the rigid framework of bones which gives the body shape and protects the internal organs.

In this section of the study I would like to focus on Columna Vertebralis (def. The series of vertebrae that extend from the cranium to the coccyx, providing support and forming a flexible bony case for the spinal cord), and back problems in general. The bones of the vertebral column are divided into five groups:

- Cervical: 7 vertebrae
- Thoracic: 12 (10 to 19) vertebrae
- Lumbar: 5 (5 to 7) vertebrae
- Sacral: 5 vertebrae (fused together to form the sacrum)
- Coccygeal: 4 to 5 vertebrae

**Cervical:** The flexible group of cervical vertebrae that supports the skull and neck. Holding the head erect develops and maintains the cervical curvature. The 1st and 2nd cervical vertebrae are unique, as is the 7th with its prominent spine. The formation of the transverse processes of C1-C6 transmit the vertebral arteries to the base of the brain. This series of vertebral foramina also form a canal for the spinal cord.

**Thoracic:** This rather rigid group of thoracic vertebrae, with which the ribs articulate, support the thorax. Its prominent curvature is developed during fetal growth. Thoracic vertebrae are characterized by long slender spines, heart-shaped bodies, and facets for rib articulation.

**Lumbar:** These stubby, quadrilateral lumbar vertebrae, carry a large share of the body weight, balancing the torso on the sacrum. The lumbar curvature develops by walking and

standing erect. This vertebral group is quite mobile; when lifting from the ground and flexing this group, great pressure is often put on the discs, which may induce their rupture if the body is compromised in some way. This may injure the spinal nerves which pass from the spinal cord through the intervertebral foramations.

Sacrum: Five sacral vertebrae fuse to form this single bone. It transmits the body weight to the hip joints via its articulation with the pelvic guide.

Intervertebral discs are located between the vertebrae. External fibres merge with the longitudinal, ventral and dorsal ligaments. There are distinct and very different short and long ligaments located along the Vertebral Column.

Short ligaments are:

- Ligamanta Flava
- Interspinal Ligamants
- Intertransverse Ligaments

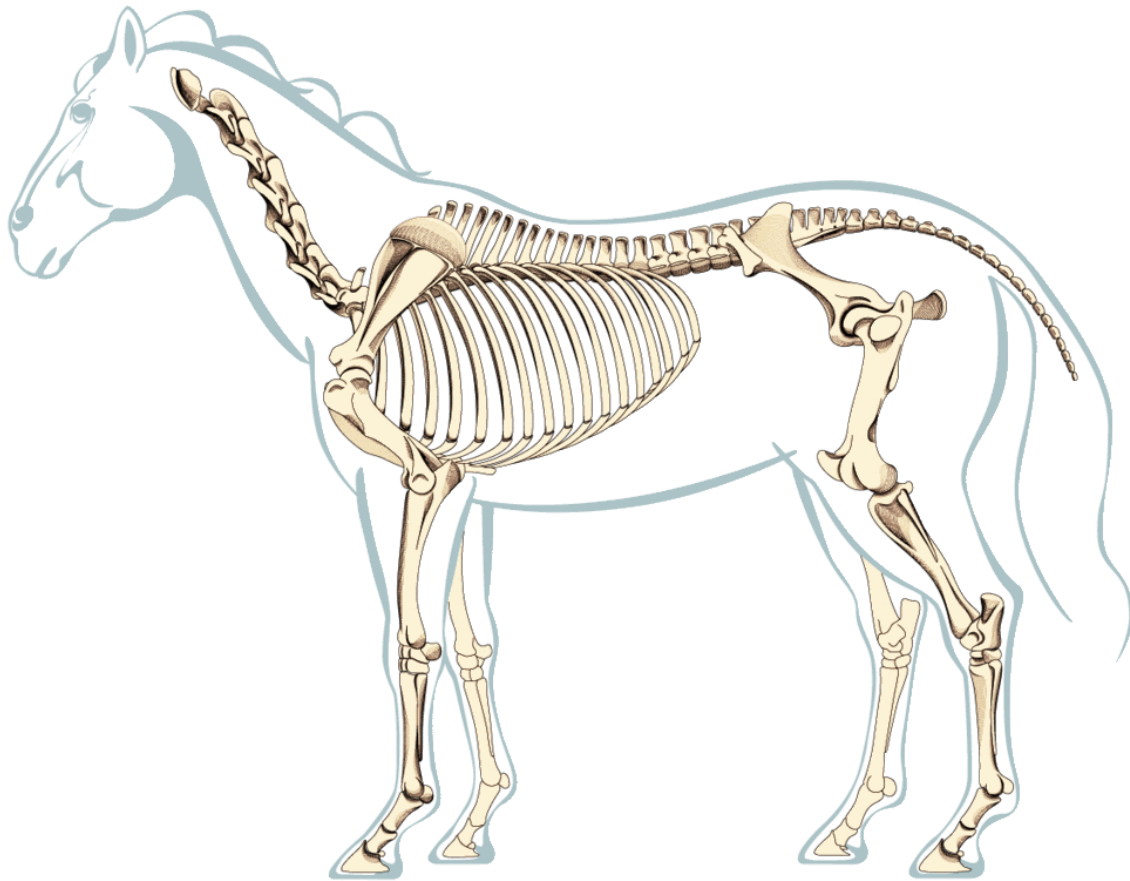
The long ligaments - placed over more vertebrae :

- Nuchal Ligament (Funiculus Nuchae, Lamina Nuchae)
- Supraspinal Ligament
- Longitudinal Ventral Ligament
- Longitudinal Dorsal Ligament

The Nuchal Ligament extends from the external occipital protuberance, runs above the cervical vertebrae and attaches to thoracic vertebrae 3, 4 and 5, where it then continues into the more rigid Supraspinal Ligament, which runs along the thoracic and lumbar vertebrae where it continues into the Longitudinal Ligament that attaches to the second sacral vertebrae. These ligaments together create one long continuous ligament of various strengths and densities from the skull to the sacrum, to support the entire vertebral column.

Knowledge about load capacity, kinematics, dynamic and biomechanic functions are necessary for the understanding of the complex functions of Columna Vertebralis, and of course the horses body in general.

Zschokke (1892) made the first exact investigations on the flexibility of the vertebral column. The Supraspinal Ligament is very important for the stability of the vertebral column and the spinous processes of the vertebrae. Removal of the first 5 spinous processes of vertebrae under a weight of 80 kg (176 lbs.) , caused the vertebrae to crack. By removal of all spinous processes of vertebrae, the vertebrae cracked under weight of only 8-10 kg (17-22 lbs.). **He discovered that in a back with intact spinous process of each vertebrae, the average sinking of the back under a weight of only 50-80 kg (110-176 lbs.) was 4 cm!!! Enough to cause the spinous process to touch and rub against one another under the weight.**



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EVERY horse ridden without natural free collection or longer than 15 minutes a day suffers pain. And some will still have back problems even if this parameter is considered. It is very logical, one does not need even comprehensive anatomy and biomechanic knowledge to understand this. What happens with human tissue under pressure? How long must there be pressure until it starts to become painful or numb? Horses and humans are both mammals, so it is the same feeling. What happens to such a delicate organ as the vertebral column under weight? What happens by dorsoflexion?

Why are people able to close their eyes in front of such obvious facts?

Back problems can be classified into three basic types of injuries involving either the muscles, tendons and ligaments (soft tissue injuries), bones and joints (osseous injuries) or nervous system (neurologic disorders). They all interact with each other. There is no single disorder in the body which does not affect the entire body as well. Primarily, back injuries affect the paraspinal musculature or vertebral articulations. Severe injuries may gradually improve but never totally resolve or subsequently develop debilitating arthritis or soft tissue fibrosis. Chronic overuse injuries (microtrauma), are caused due to poor saddle fit, riding in general, shoeing and other manipulations on or of the horse's body.

There is a direct link between biomechanic and pathological changes in the vertebral column. Townsend (1985) and Daemrich (1993) found out that osteophytes (bone spurs) on the ventral vertebrae usually appear between thoracic vertebrae 10 to thoracic vertebrae 17, and the biggest

osteophytes appear at thoracic vertebrae 11 to thoracic vertebrae 13, in the area where the human sits on the horse's back, making this area suffer maximum lateroflexion and axial rotation. The kissing spine syndrome is based on repeated imposed or forced ( NOT physiological) lowering of the vertebral column. This happens in such an excessive way by... riding.

All horses are affected by riding and the laws of biomechanics are clear. For the older horses it is even more dangerous as older horses, like elderly humans, are susceptible to loss of vertebral column flexibility, joint degeneration and loss of muscle strength. Aged horses also have increased healing times and increased chances of having chronic conditions or abnormal musculoskeletal compensations from prior injuries.

To be continued...

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