



Elemental Equine Services LLC

It's all connected...

The body follows the head. You can realign your entire body by moving your head. Just think about riding your horse to the next jump – look to the jump and your horse will go there. Or riding your bike around a curve – look where you want to go and your bike will go there. Turn your head and the weight and balance of your body move your horse or your bike. It's natural law. Your body follows your head. The same is true for your horse. Where his head goes, so goes his body. As for the rider, in addition to weight and balance, the most common way to direct your mount's head is through the use of a bit. A rider's gentle signals through the reins suggest the bit might distort the horse's temporomandibular joint (TMJ or jaw). The animal will avoid TMJ malpositioning by moving his head, which in turn, changes position of his body.

Why does this happen?

In the late 70's, early 80's, Casey Guzay, a student of physics and engineering, described The Quadrant Theorem which states that the muscle-controlled pivotal axis of the mandible (at the TMJ) occurs at the atlanto-axial joint (1st and 2nd cervical vertebrae, C1-C2).

Therefore, an imbalance at C1-C2* results in unbalanced movement of the mandible and asymmetric TMJ function. In the horse, asymmetric chewing patterns will result and, over time, dental malocclusion will occur.**

Conversely, TMJ dysfunction as a result of dental malocclusion causes unbalanced movement of the mandible and will result in a postural malpositioning at C1 and C2. So what came first, the chicken or the egg?

It doesn't matter -- it's all connected.

AND THEN... The imbalance at C1-C2 causes tension and torque in the dura mater (outermost membrane housing the brain and spinal cord) because of the dura's attachments at C1 and C2. In the horse, the caudal-most attachment of the dura is at S2 (2nd sacral segment). Torquing of the dura can cause various chiropractic abnormalities including stiff neck, roach back, sway back, sacro pelvic rotation, etc and can be performance-inhibiting. Dural torque can also create head tilt, cranial faults, sensory distortion and abnormal dental wear based on dural attachments at foramen magnum and within the cranial vault.

So what came first?

It doesn't matter -- it's all connected.

How can we help correct this?

Once the dental malocclusion has been addressed with balanced dentistry, the postural faults at C1-C2, sacral base (and elsewhere) should be addressed with acupuncture, chiropractic, craniosacral therapy or other postural corrective techniques in order to “reset” the system.

In addition, potential causes of postural imbalances should be researched and corrected, such as hoof trimming/shoeing, saddle fit, biting, turnout, training techniques, etc

Good luck and happy trails!

*Imbalance at C1-C2 may occur secondary to a horse pulling back while tied, getting head caught between fence panels, slipping/ falling, hitting his head, experiencing restrictive training techniques, etc.

**Remember that a horse has continually-erupting (hypsodont) teeth which are kept in check by occlusal abrasion with a high forage diet. So an asymmetric chewing pattern will wear asymmetric angles in the chewing surfaces of the teeth.

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