

HIND END IRREGULARITIES. PREDISPOSING CAUSES OF FORELIMB LAMENESS?

To objectively prove that many forehand lamenesses and back problems result from improper hind end movement patterns. It is well documented that rotational stresses and concussion forces, trauma, age and conformation lead to osteo-arthritis (1). I would like to add that muscle fatigue or muscle misuse is added to possible causes of osteo-arthritis.

Improper longeing techniques, over training, tight circles, rider imbalances, improper posture habits leading to muscle misuse. This causes overuse of the loin and groin muscles which causes a mechanical strain in the gluteal muscles. This strain causes a pain reflex that holds the muscles rigid leading again to fixation or blockage of the sacral lumbar joint. This joint flexes the pelvis forward and allows the propelling muscles to increase the articulation of the joints.

The hypotheses is based on the fact that 80% of the horses that I have filmed in a 12 metre circle on the lunge, and also under saddle have one asymmetrical side that shows excessive lateralisation of the inner hind leg in lead to medial forward movement of the inner hind leg. This causes a rotational concussion stress on both the iliac sacral joint and undo stresses on the medial patella ligament (29) knees. This strain will cause ligament and capsular pain that again causes secondary muscle compensation in the back with rotational stresses on T12-T9, which are the vertebrae that will cause second muscle hypertension in the brachiocephalic and the thoracic serratus. These conditions result in a decreased blood supply to the lower leg, the spring mechanics of the serratus muscles will be less efficient and due to the horse falling in on the inner foreleg in compensation for lateralisation movement pattern of the inner hind leg results in overloading of the inner foreleg. This condition will lead to multiple problems:

- Strain on the inner knee
- Sacral iliac strain
- Kissing spine syndrome
- Back pains, fore leg suspensory strain, sesamoids.

We have a reduced blood supply due to hypertension around C5, 6 and 7, a reduced brachial nerve supply that regulates the blood flow, acupuncture point C7- Li 16 stress, a hypertonic condition of the intrinsic muscles of the axial system loading to vertebrae blockages of T9-12, predisposing cause of Kissing Spine Syndrome.

The asymmetrical pattern of the longissimus dorsi muscles of the back are leading to rotational stresses on the vertebrae and acupuncture association points for lung and circulation. Excessive stress on the T12 nerve innervation point diaphragm. Excessive hypertension in the serratus thoracic that also restricts the thoracic from expanding for efficient breathing. This also restricts the spring mechanism of the forehand. The overall profile of this condition is a lordic curvature of T9-14 and a kyphotic curve of L2-5, excessive hypertension of biceps femoris, poses serratus thoracic and brachiocephalis.

It is documented in the paper "Compensatory movements of horses with a stance phase lameness": Horses with a true supporting limb lameness in one hind limb show a false supporting limb lameness in the ipsilateral forelimb. (2) In conclusion, there is a great need to prove scientifically that hind end lameness (rein lame!) is a predisposing cause for ipsilateral forehand lameness research. These horses tend to have multiple lameness problems, all depending what hurts the most at that time.

Facts: 70% of horse tend to deviate on the right circle more than on the left, more riders are stronger with the right hand.

Laser therapy, acupuncture and physical therapy modalities will give temporary relief but can never restructure the muscular imbalances. They can increase the blood supply, relieve pain, reduce healing time. But only a well constructed muscle training program can lead to successful changes.

1: W.McIlwraith The pathogenesis of equine arthrosis.p26 Orthopadie bei Hufund Klautentieren

2: C. Uhlir, T Licka, P.Kubber. C. Prham. M Scheidl, D. Girtler Compensatory movements of horses with a stance phase lameness.

29: McIlwraith CW, Foerner JJ Davis DM. Osteochondritis dissecans of the tarsocrural joint: Results of treatment with arthroscopic surgery. Equine Journal Vt 1991;23:155-162 (see Orthopedic bei Huf- und Klautentieren p26)

3 . Baxter : Axial evaluation Muscle Segmental Therapy and Muscle Re-Education for Rehabilitation & Prevention of DJD and Assessment of Back Pathologies. Pferdeheilkunde 1996 Bonn Germany

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Swinging Hip Syndrome



Subluxation C2/3

Kissing Spines



Iliac Sacral Strain

instability of the knee bands

Chips

DJD Disease

Spavin