

CONFORMATION & LAMENESS

Discuss lameness which might be associated with conformation faults, to include:

BASE WIDE: front legs outside the plumb line

(usually combined with toe-out)

- a. Medial splints
- b. Medial ring bone
- c. Medial side bone
- d. Brushing (winging)
- e. Windpuffs

* everything is concentrated on the inside of the foot

BASE NARROW: front legs inside the plumb line

(toe-out is more dangerous/ quarter horse with a large chest)

- a. Same injuries as above, but on lateral side
- b. Articular windpuffs
- c. Lateral ring bone
- d. Lateral side bone
- e. Occasional fracture of medial sesmoid from interfering
- f. Fracture of medial splint bone
- g. Brushing

COW HOCKS: hocks point towards each other, and toe out

- a. Excessive strain on medial side of hock joint
- b. Bone & bog spavin

SICKLE HOCKS: hocks stand under from the joint down

- a. Great stress on plantar ligament
- b. Curb & Through pin

TOE IN: hooves point in (on front & back)

- a. Paddling (out)
- b. See base narrow

TOE OUT: toes point out

- a. Winging (in)
- b. See base wide

CONTRACTED HEELS: narrow foot with heels coming together- front

- a. Unilateral & bilateral (one foot/ two feet)
- b. More in Ten. Walking horses and Saddlebreds

c. Bilateral-

1. Result from already lame horse
 2. Too dry feet (after being wet for a long time)
- d. Press against coffin bone, which deforms it & could hurt the distal cushion
- e. After long time, lead to navicular

CAMPED OUT IN FRONT: leg in front of plumb line

- a. Bowed tendons
- b. Longer break over & lands on heels
- c. Bilateral navicular and laminitis

LONG, SLOPING PASTERNS:

- a. Navicular
- b. Bowed tendons
 - stretches from the sesmoid bones to navicular bones
- c. Sesmoid fracture
- d. Stress of suspensory ligament

STRAIGHT UPRIGHT PASTERNS:

- a. Both sides side bone
- b. “ “ ring bone in pastern
- c. Navicular
- d. Splints
- e. Increased concussion on all joints and leg bones
- f. Osselets

STANDING UNDER: front legs back, behind plumb line

- a. Stumbling problems
- b. Excessive wear and fatigue on bones, tendons, & lig.
- c. Osselets (cont. Bending of fetlock and pastern joints)
- d. Low arc of foot flight, hurried steps, on the forehand
- e. Predisposed to falling

BENCH (OFFSET) KNEES: cannon bone offset to lateral side

- a. Medial splints
- b. Not severe ring bone or side bone

KNOCK KNEES: knees come in and go back out

- a. Medial splints
- b. Ring & side bone
- c. Stretching & pulling of medial lig (inferior check and susp.) combined with crushing of outside carpal bones

CALF KNEES (SHEEP KNEES): carpal joint is deviated back

- a. Pulling lig. Behind & crushing bones in front

- b. Very weak!
- c. Chip fractures in carpal bones & radius

OVER AT THE KNEE: knee comes forward

- a. Constantly almost buckling
- b. Strain on sesmoids
- c. Strain on suspensory lig and superficial flexor tendon
- d. Varying degrees of outward rotation of cannon bone, fetlock, & foot
- e. Fetlock could buckle

BOW LEG: knees go out and then return back to the plumb line

- a. Crushing on inside (medial carpal bones) and stretching on outside
- b. Strain on outside of foot

STRAIGHT STIFLE: very little angle in tibia, femur, and hock joint

- a. Increased concussion on all joints
- b. Spavins, ringbone, sidebone, navicular
- c. Locked hocks
- d. Pasterns also usually too straight

Observe a horse in action and assess his athletic ability as it may be affected by any of the conf. Faults listed above and below:

STRAIGHT SHOULDER:

- a. Not free gaits
- b. Can get feet up for jumping
- c. Not much shock absorption

LONG BACK:

- a. Hard to engage hind end
- b. Weaker & sore, harder to bear rider's weight
- c. Not likely to over-reach

PARROT MOUTH

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TOO LONG NECK

- a. More likely to be ewed and/or penciled
- b. Heavier on forehand
- c. Depends on set (low is worse, high could be ok)

NECK TOO SHORT

- a. A tendency to be too thick

- b. Not easy to get horse to stretch or bend (neck of iron)

MUTTON WITHERS

- a. Not as free in gaits
- b. Associated with straight shoulder, gaits choppy

HIGH WITHERS

- a. (Thoroughbreds)
- b. Not too horrible
- c. Tack fitting problems

SLOPES OF CROUP

- a. Low- not much engagement
- b. High- hind legs don't come under body as easily

SLAB SIDED

- a. Not much lung and heart room
- b. Harder to put leg on

OVERSHOT JAW

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EWY NECK:

- a. Not able to stretch down and pick up shoulders
- b. Causes engagement problems

SHORTNESS OF STRIDE

- a. Work harder and wear out faster
- b. Probably has conformation faults which cause more concussion

Observe a horse's motion & identify front and hind end leg soundness and unsoundness:

FRONT LEG:

- a. Horse puts weight down on sound leg & pulls it up & off hurt leg
- b. Limited movement in painful leg

BACK LEG

- a. Horse tries to put weight on front legs

Front & Hind leg bones

* see anatomy section!!!!!!

Tendons & ligaments:

MAIN EXTENSOR TENDON: extends the leg

- a. Passes down front of leg (slightly to the outside)
- b. Attaches to long pastern, short pastern, and coffin bone (widest part)
- c. Joined on each side of pastern by branches of suspensory. Lig.

LATERAL EXTENSOR TENDON: assists main extensor in extending leg

FRONT:

- a. Runs separately, but parallel to main extensor
- b. Attaches to upper end and outside of long pastern bone

HIND:

- a. Joins main extensor just below the hock

SUSPENSORY LIGAMENT: relieves stress from flexor tendons, supports the fetlock joint allows horse to sleep standing up

- a. Largest ligament in the leg
- b. Originates from upper end of the cannon bone, runs down back
- c. It divides just above the nodules on splint bones
- d. Attach to top and side of sesmoid
- e. Then branches join main extensor at pastern joint

CHECK LIGAMENTS: really part of tendons

I. Radial Check Ligament

- a. Located above knee
- b. Connects superficial flexor tendon to radius about 1/3 up bone

II. Subcarpal Check Ligament

- a. Located below knee
- b. Connects deep flexor tendon to the bottom carpal bones
- c. Thickest & most pronounced of check ligaments

III. Subtarsal Check Ligament

- a. Located below the hock
- b. Connects deep flexor and bottom tarsal bones
- c. Thinnest of check ligaments, sometimes absent

DEEP FLEXOR TENDON: flexes the joint of the coffin bone and short pastern

- a. Runs down the back of the leg
- b. Passes under navicular bone
- c. Attaches to semilunar crest of coffin bone (lower side)

SUPERFICIAL FLEXOR TENDON: flexes the leg back

- a. Passes down the back of the leg
- b. Divides below the fetlock
- c. Attaches to bottom end of long pastern & upper end of short pastern
- d. Forms a ring around deep flexor tendon at sesmoids

HIND:

- a. Runs through muscle mass from back of femur and attaches to point of hock (plantar ligament)

