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How can Twin shoes aid in prevention and treatment of certain pathologies?

- Transitioning from and into barefoot
  - ⇒ The Hoof act like it is barefoot, while being protected by a shoe (Research and Clinically proven). By freeing up the toe and allowing the hoof mechanism to function naturally we can condition the hoof to become strong again like a barefoot hoof while protecting it during this transition period of +/- 8 months.
  - ⇒ We need to keep in mind that the hoof adapts to its environment and surface it spends most of the time on which is often very different from the surface it needs to perform on. For this reason shoeing is often necessary. So when we start with a barefoot hoof. We can keep the health benefits of the barefoot concept while protecting the hoof so the horse can work/perform on a surface it is not adapted to.

- Injuries/Diseases
  - Osteoarthritis (especially of lower limb: coffin, pastern, and fetlock joint)
  - Suspensory injury and Degenerative suspensory ligament disease
  - Collateral ligament injury
  - Navicular symdrome/Caudal heel pain
    - Navicular bone
    - Deep digital flexor tendon

NOTE: Same explanation for all the above:

- ⇒ Twin shoe allows for lateral flexibility, reducing excess asymmetrical load on uneven footing and turns. Generally, on turns or uneven footing we will cause compression of the joints on one side and tension of the ligaments and tendons on the opposite side (e.g., when the horse is circling to the left (counter clockwise), the left front coffin joint will be compressed more laterally (on the outside)). With the Twin shoe the joint space will stay more parallel to the ground on turns and uneven footing as it allows the hoof capsule to flex and as such compensate for this uneven surface/load.
- ⇒ Twin shoe does not restrict heel movement. Heel movement together with proper development of frog and digital cushion plays a major role in shock absorption, as such reducing the stress on the joints and navicular bone.

⇒ Twin shoes allow the horse to land, load and breakover where it wants, this is seen through gait analysis and shoe wear pattern at the ground surface of the shoe. Minimal and symmetrical wear pattern especially at the toe indicate less stress during breakover and as such less stress on the deep digital flexor and navicular bone.

⇒ As the Twin shoe moves with the hoof instead of the hoof moving over the shoe (which is the case with a one-piece shoe), there is minimal and a more even wear pattern from heel to toe on the support surface of the shoe which in turn keeps the coffin bone angle and hoof wall angle more consistent during the shoeing-interval reducing the stresses on the internal structure of the hoof (tendons, joints)

- Hoof capsule distortions
  - Low underrun heels (negative palmar/plantar angle of the coffin bone)
    ⇒ As the Twin shoe moves with the hoof instead of the hoof moving over the shoe (which is the case with a one-piece shoe), there is minimal and a more even wear pattern from heel to toe on the support surface of the shoe which in turn keeps the coffin bone angle and hoof wall angle more consistent during the shoeing-interval. As a farrier you are not fighting the fact that you have to trim toe and no heel because the heels are worn down through friction with the shoe.

  - Contracted heels (rolled under heels, narrow receded frog)
    ⇒ By freeing up the toe we allow normal unrestricted heel movement like in barefoot, whereas a one-piece shoe limits heel movement up to 40-50%. This allows the heel bulbs and coronet band to relax and the heels to open up.
    ⇒ By allowing heel movement and using a thinner shoe (7 mm) we start activating and engaging the frog, creating a healther frog ratio (width/length ratio)
  - Sheared heels and Quarter cracks
    ⇒ The two branches of the Twin shoe can move independently and as such the Twin shoe does not bind the hoof capsule (fixate a 3-dimensional structure in a 1-dimensional plane like a one-piece steel shoe does). The freedom the Twin shoe gives to the hoof capsule allows the coronet band to settle down, distribute the load over the hoof more symmetrical (especially during movement) and as such help resolve or prevent sheared heels and quarter cracks.
  - Flares

⇒ As with any other hoof capsule distortion, besides from the hoof wall being too long or weak, flares are often a consequence of the hoof being bound in one plane. So, the hoof capsule fights the way it is bound by the shoe leading to a hoof capsule distortion. As the two branches of the Twin shoe can move independently, the Twin shoe does not bind the hoof capsule (fixate a 3-dimensional structure in a 1-dimensional plane like a one-piece steel shoe does). The freedom the Twin shoe gives to the hoof capsule allows the hoof capsule to be where it wants to be, distribute the load over the hoof more symmetrical (especially during movement) and strengthen the hoof capsule through exercise, creating a stronger hoof wall with less flares.

- Poor Gait Quality
  - Short strided horses that do not like the tightness of a shoe/nails
    ⇒ As we shoe the hoof in a neutral (semi-contracted) state (hoof flexed of the ground), when we shoe a horse with a one-piece shoe, the shoe is basically too small as soon as the horse puts the foot on the ground and the hoof expands. This feeling of too tight of a shoe leads in some horses to short/choppy gait. With Twin shoes you will not have this problem. The two branches of the Twin shoe can move independently and as such the Twin shoe does not bind the hoof capsule (fixate a 3-dimensional structure in a 1-dimensional plane like a one-piece steel shoe does). Furthermore, the Twin shoe moves with the hoof instead of the hoof moving over the shoe.