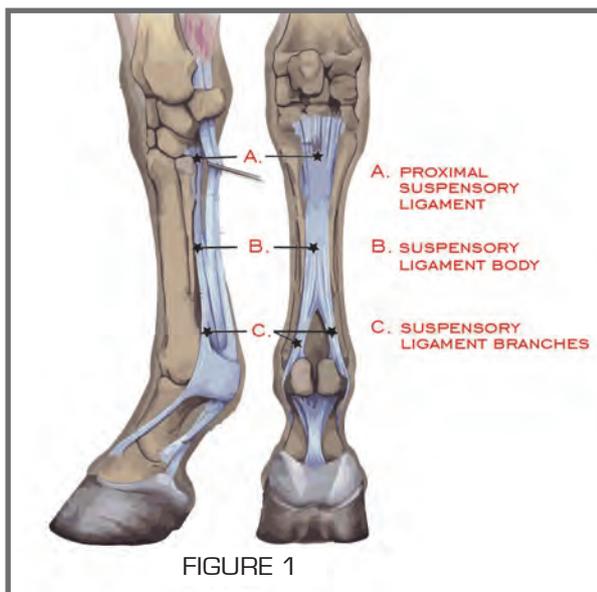


Equine Health:

Understanding Suspensory Ligament Injuries

Written by Dr. Brad Hill, DVM of Equine Athlete Veterinary Services

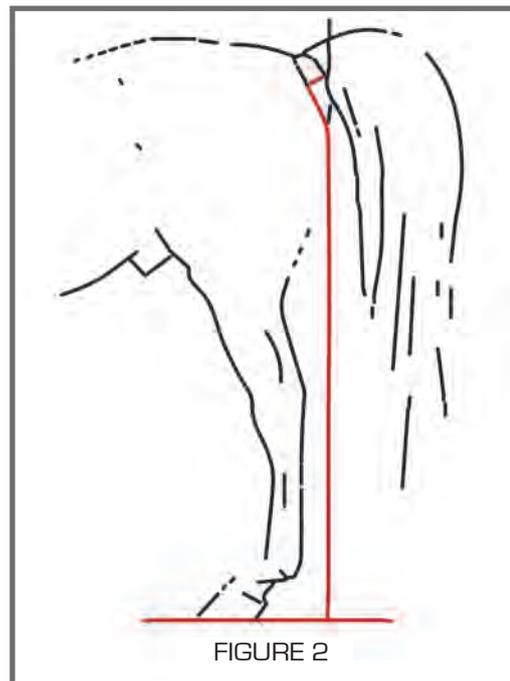
Suspensory ligament injuries are one of the most common soft tissue injuries to plague today's equine athlete. Deriving from the proximal cannon bone, it extends distally down the back of the cannon bone and branches at the distal 1/3 of the cannon bone and ties in on the medial and lateral sesamoid of the fetlock. **See figure 1.**



Essentially, the suspensory ligament is the horses' "shock absorber." Suspensory ligament injuries are typically related to one of three scenarios:

1. Conformation.

Horses with a long, low pastern angle are more predisposed to overloading of the suspensory and chronic repetitive stress, which causes degeneration of the suspensory ligament over time. In the hind limb, this long, low pastern angle can be further exacerbated by a straight hock conformation, putting further stress on the suspensory ligament of the hind limb. **See figure 2.**



2. Fatigue.

As the muscles supporting the leg become fatigued, the leg relies more heavily on the suspensory ligament to keep the fetlock from dropping completely to the ground. Remember, the role of the suspensory is to help keep the fetlock suspended in the air.

3. Taking a "bad step."

No different than playing a game and "rolling" your ankle, this same thing can happen in horses. One clumsy step can lead to weeks or even months of rehabilitation.

Understanding what leads to these injuries can go a long way toward preventing them from occurring. When buying a performance horse, I always recommend having a **pre-purchase examination** performed with an experienced veterinarian,

preferably specializing in sports medicine. This will not only help get you reliable insight as to your prospective horse's capability, but they will also be able to identify any faults the horse may have in relationship to your overall goals, if it is manageable, and to what degree.

Subtle suspensory issues can be difficult to detect and take the experience of a skilled practitioner to diagnose. The right kind of veterinarian will utilize many resources when tasked with conducting a thorough pre-purchase examination – i.e. connecting with professional horse trainers, farriers, etc. Together, they may be able to detect subtle symptoms that show a horse may have a preexisting condition or conformation that may lend itself to possible future suspensory problems or other orthopedic issues.

Good horsemanship is truly the backbone of preventing musculoskeletal issues and injuries in your horse. I believe this is worth mentioning, as this concept can oftentimes be taken for granted.

Having a **skilled farrier** is very important, as is having farrier work done on a consistent basis. Regular trimming and shoeing is a fundamental key to preventing orthopedic injuries in your horse, as many orthopedic issues occur when horses are long in their shoeing interval.

Nutrition is also something that should never be overlooked, as it is directly related to your horses' musculoskeletal health. Understandably, good nutrition helps prevent GI problems, however making sure your horse has good nutrition helps to ensure that they have the energy and nutrients necessary to support strong musculature of their limbs while performing at a high level.

Last, but certainly not least, **training**. When you or I go to the gym and work out, especially the older we get, we need a **warm up** period with stretching before we are ready to go at full speed. Horses are the exact same. This warm up will be different for different types of horses, however it involves a slow build up in work at the beginning before building up to more intense work. **Breaks** are important in a

horses' workout so they can regain their wind and get oxygen to their muscles. A slow **cool down** is just as important after a hard exercise. If your horse has had a length of time off, you will need to implement a 60 - 90 day plan for increasing your horses' fitness, and the same goes for training young horses. Keep in mind the amount of time could easily increase depending on the reason for the time off. Essentially, before asking these animals to perform at their peak, you must build a solid foundation of physical fitness or your horse will injure itself – this is especially true in older horses.

As an extra level of precaution, when horses are training at a high level, in peak condition, I strongly recommend **icing** suspensories for at least 20 minutes after working – this will help subside any inflammation that may have occurred. There are also support wraps and bandages available that can be used during work to help prevent hyperextension of the fetlock.

As long time horse owners know, horses seem to have a knack for getting into trouble and having problems. This is a list of some basic things horse owners can do to minimize suspensory injuries in their horse. I believe this can be summarized in one word - **horsemanship**.

Make excellent horsemanship a lifelong goal and your horse will be the one that benefits!

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