

Navicular Disease

General Information

Navicular disease, also called navicular syndrome or podotrochleosis, describes a number of problems affecting the distal sesamoid or navicular bone in the foot. Navicular disease is responsible for approximately one-third of all chronic lameness in horses, especially Quarter Horses. The condition comprises a complex of problems. Some of these problems are completely reversible, some can be improved with appropriate long-term management, and some are irreversible.

Conditions related to navicular disease include coffin joint arthritis, deep flexor bursitis and/or tendonitis, inflammation of the ligaments of the navicular bone, and problems relating to the navicular bone itself (bone spurs, fractures, cysts), its blood supply, and hoof changes.

The boat-shaped (“navy”) navicular bone is located behind the juncture of the pastern bone (P2) and the coffin bone (P1), at about the level of the coronet: it is thus part of the coffin joint. The navicular bone acts as a fulcrum over which the deep flexor tendon moves. The bone is embedded in and surrounded by ligaments, and is almost impossible to expose during surgery. It is difficult to place a needle into the navicular bursa (fluid pouch surrounding the bone), and can be difficult to obtain high-quality radiographs (x-rays) of the area.

Factors Affecting Development of Navicular Disease

Numerous factors affect the health of the navicular bone and related coffin joint:

- ___ *Abnormal conformation:* A small foot attached to an upright pastern; a long-toed, low-heeled foot; mismatched feet that become more of a problem as the horse ages.
- ___ *Foot carriage:* The way the foot lands puts unequal pressure on the navicular area; loading one side of the foot more than the other; landing more toward the toe or heel.
- ___ *Shoeing:* This may cause more weight to be carried on one leg than on another; shoe size, type and position and the shoeing schedule influence navicular bone health; a shoe must be large enough to provide adequate support, especially in the heel area; irregular shoeing creates different foot angles to which the coffin joint must adjust with exercise. This stresses the joint.
- ___ *Hoof wall quality, compliance and conformation:* A hoof wall that is too hard, too soft, too thin, crumbly or cracked.
- ___ *Exercise:* Lack of daily regular exercise; irregular exercise; work beyond the horse’s state of conditioning; exercise on hard, unforgiving surfaces; speed at which the horse travels; weight of the rider, tack and the horse’s body itself.

Important Points in Treatment

___*Diagnosis and management:* Navicular disease can be very frustrating to diagnose and treat, both for the veterinarian and the owner. Your patience as an owner is very important for successful management of the problem. We may need to try various treatments, such as different shoeing, medication and exercise programs to observe your horse's response to diagnose navicular disease. Diagnostic methods include a thorough orthopedic examination (probably more than one), local anesthesia (nerve blocks), radiographs (x-rays) and other diagnostic tests.

___*Shoeing:* Specific shoeing recommendations are usually done on a case by case basis, but common types of shoes for ND are aluminum wedges, egg bars and special pads in conjunction with different types of keg shoes.

___*Medication:* Medications are rarely effective in treating this disease, though some think Isoxsuprine seems to help a little there is no clinical evidence of its effectiveness. Coffin joint injections with combinations of hyaluronic acid and anti-inflammatories are sometimes helpful.

Call Our Office If:

- You have any questions concerning navicular disease.
- Your horse's condition worsens or does not improve.
- You become frustrated and wish to reconsider the present treatment program.