

THE SUSPENSORY LIGAMENT

Definition

The Suspensory Ligament is sometimes referred to as a Tendon because of the muscle fibres found in the foal, these gradually become overwhelmed by collagen fibres as the animal develops.

It is an extremely strong elastic structure.

The Sessamoid bones form an important attachment area for the Suspensory.

Position

The proximal attachment (origin) of the Suspensory is to the proximal extremity of the Metacarpal bone and the distal row of carpal bones. At this point the carpal joint capsule and ligaments become involved also.

Running in the groove formed by the splint bones the Suspensory divides to make firm attachment to the abaxial surfaces of the proximal sesamoids, the attachment to each sessamoid is sufficiently extensive that the bone is considered to be intercalated into the ligament.

Directly from the attachment at the sessamoid bones the greatly reduced medial and lateral branches extend obliquely in a dorsal direction to merge with the Common Digital Extensor Tendon just above the Proximal Inter-phalangeal Joint. It is from this point the Tendon increases greatly in width to make a firm insertion onto the extensor process of the distal phalanx.

Function

The major function of the Suspensory is to support the fetlock joint along with the distal sesamoidian ligaments.

Because of its elasticity, the Suspensory also helps to prevent damage due to hyper-extension of the joint, plays an important part in the Anti-Concussion function of the limb and forms part of the stay apparatus.

THE SUSPENSORY

The list below indicates Origin, Attachments and Insertion areas you should include in your diagrams.

This may also be used as reference when compiling your answer in written form.

ORIGIN: Distal Row of carpal bones Proximal Extremity of the Third Metacarpal Bone, roughened area.

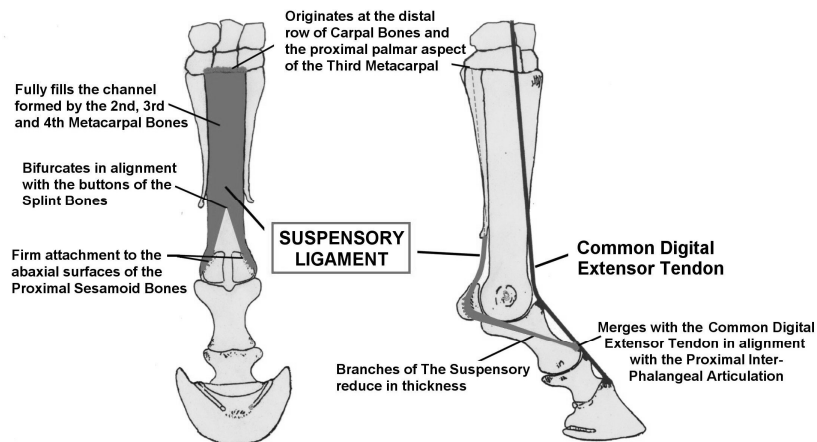
POSITION: Palmar/Plantar aspects Third Metacarpal bone, occupying the space between the splint bones, underlying the check ligament.

ATTACHMENTS: Bifurcates (splits) 2/3rds the way down the cannon bone. Abaxial branches make firm attachment to the abaxial surfaces of the Proximal Sesamoids. Medial & Lateral branches extend dorsally (Oblique angle)

INSERTION: Abaxial branches (M & L) blend/join with the fibres of the Common Digital Extensor Tendon just above the Proximal Inter-phalangeal joint. The final insertion is along with the C.D.E.T. to the Extensor process of the Distal Phalanx. This final insertion is very broad.

It is also important to make a note of the variation in the width of the Suspensory above and below the Sesamoids.

POSITION OF THE SUSPENSORY LIGAMENT (Forelimb)



Tendon Accessory Structures

Check Ligaments

- Accessory ligament of the Deep Digital Flexor Tendon. Sub Carpal (Tarsal) Check Ligament. Inferior Check Ligament (This ligament is generally smaller and sometimes absent in the hind leg.)
- Accessory ligament of the Superficial Digital Flexor Tendon. Radial Check Ligament. Superior Check Ligament. (Fore leg only.)

These ligaments form part of the stay apparatus connecting the tendon to bone, which allows the animal to rest (some say sleep) while standing.

The sub carpal check ligament originates from the distal carpal bones and extends distally, overlying the suspensory ligament to unite with the tendon approximately $\frac{1}{3}$ of the way down the metacarpal.

The ligament possesses muscle fibres which account for some of its strength.

The function of the check ligaments is to prevent over extension of the joints and to protect the muscle. Weight is taken by the check ligament rather than causing strain on the muscle itself.