

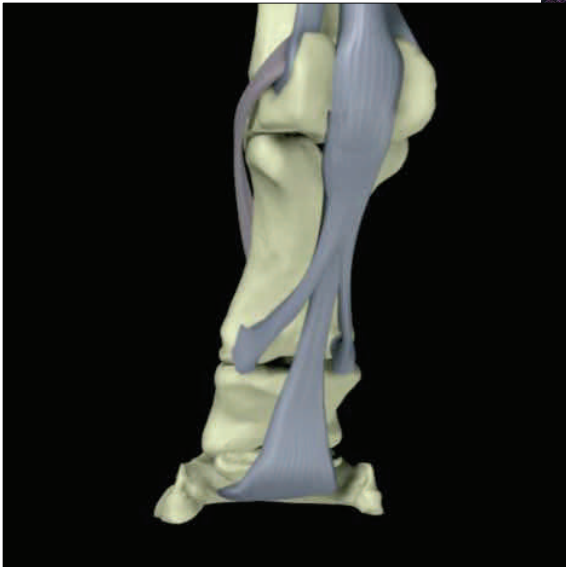
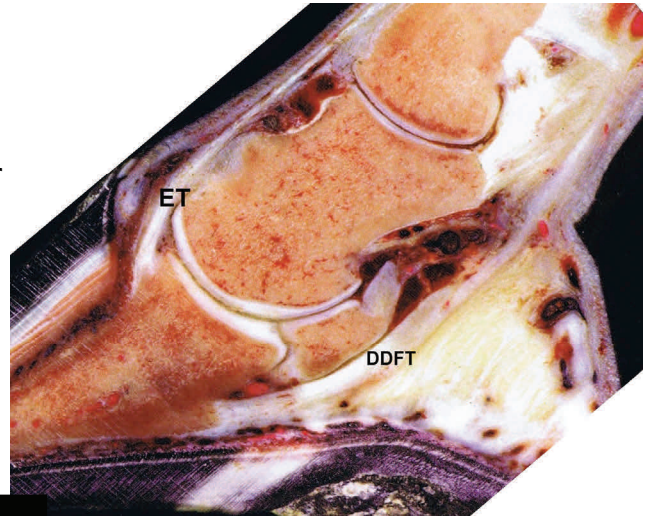


Tendons and Ligaments

Tendons connect bone to muscle
Ligaments usually connect bone to bone

Deep Digital Flexor Tendon

The deep flexor tendon, (DFT or DDFT) originates at the deep flexor muscle of the leg, and inserts (attaches to) at the semi lunar crest of the coffin bone after passing over the fulcrum points formed by the navicular and sesamoid bones. It flexes (folds) the leg when the deep flexor muscle contracts. It is running over the back

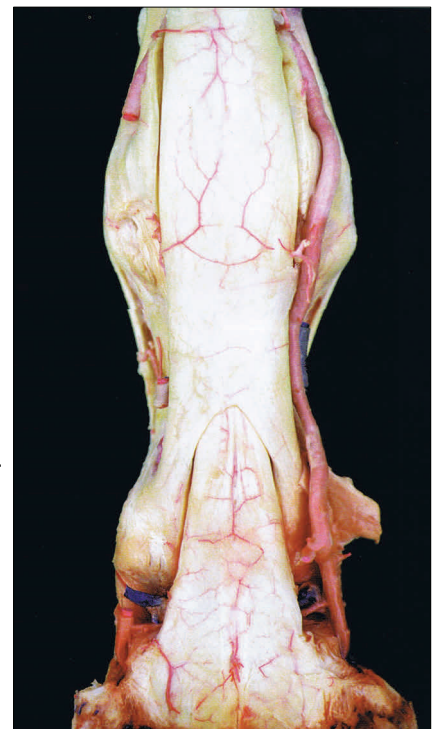


of the knee in the carpal canal and held in position by a carpal check ligament. It then extends down the back of the cannon bone between the superficial digital flexor tendon and the suspensory ligament. In the middle of the cannon bone the deep digital flexor tendon is joined by the carpal check ligament, known as the inferior check ligament. The tendon then passes over the sesamoid bones, before passing between the two extensions of the superficial digital flexor tendon. When entering the hoof capsule, the deep digi-

tal flexor tendon becomes broad and fanlike, passing over the navicular bone before inserting into the lower surface of the pedal (coffin) bone. This takes some of the strain from the muscles situated above the knee in the forearm or above the hock in the gaskin.

Superficial Digital Flexor Tendon

Running down the back of the humerus over the back of the knee (carpus) then down the back of the cannon bone, completely covering the deep digital flexor tendon. At the lower end of the cannon bone the superficial digital flexor tendon widens and encircles the deep digital flexor tendon, forming a ring known as the annular ligament of the fetlock joint, extensions from which then attach to the short and long pastern bones. Their other chief function, when the horse is in motion, is to flex the joints of the lower leg.



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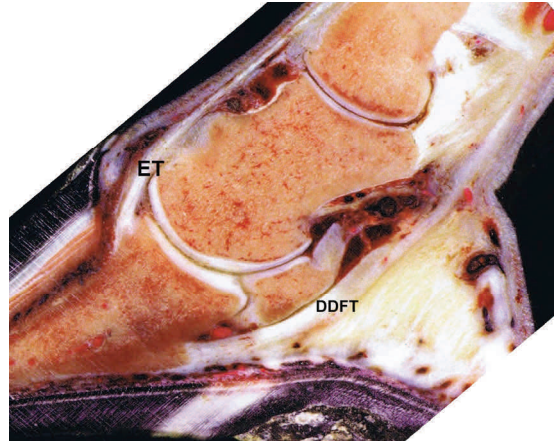


Branches of the Superficial Digital Flexor Tendon

The superficial and deep flexor tendons extend down from their muscles in the forearm/gaskin through to the foot, providing weight-bearing support and preventing the over-extension of the fetlock joint, (a role in which they are helped by their check ligaments). The function of the check ligament is to prevent undue strain being applied to the flexor tendons and to assist in supporting the horse, thus allowing him to sleep whilst standing. This ligament is connected to the deep flexor tendon and attached to the cannon bone, at the back, and angles downward and backward.

Extensor Tendon

This tendon is attached to all the bones in the foot except the Navicular bone. It bears no weight and is therefore slim and generally trouble-free. At the lower end of the long pastern bone it receives reinforcement on either side from the branches of the suspensory ligament,



which increase its width. The function for the extensor tendon is to extend the bones of the foot and lift the toe.



Suspensory Ligament

The suspensory ligament lies between the two splint bones close to the back of the cannon bone, starts close to the knee and going down to the fetlock joint, where it divides into two branches. Each branch attaches to the corresponding sesamoid bone while some fibers combine with the common digital extensor tendon. The suspensory ligament provides support for the fetlock joint,

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preventing it from extending down too far towards the ground, which would increase the risk of strains.

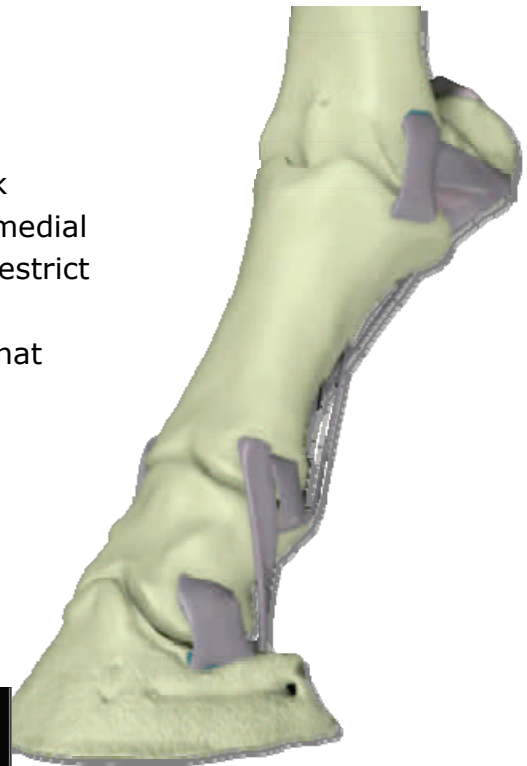
Branches of the Suspensory Ligament

Branches of the Suspensory Ligament leave the Annular Ligament either side of the sesamoid bones and join onto the extensor tendon at the front of the distal end of the long pastern bone, therefore joining ligament to tendon. Particularly in the front leg, they take all the strain on landing from a jump and which is normally about 60% of the horse's weight.



Collateral Ligaments

The collateral ligaments of a joint are thick bands of collagen that are located on the medial and lateral sides of the joint. They act to restrict medial and lateral bending (adduction and abduction) and rotational movements so that the joint is mainly limited to movement within a sagittal plane (i.e. flexion and extension).



Axial and Abaxial Palmar Ligaments

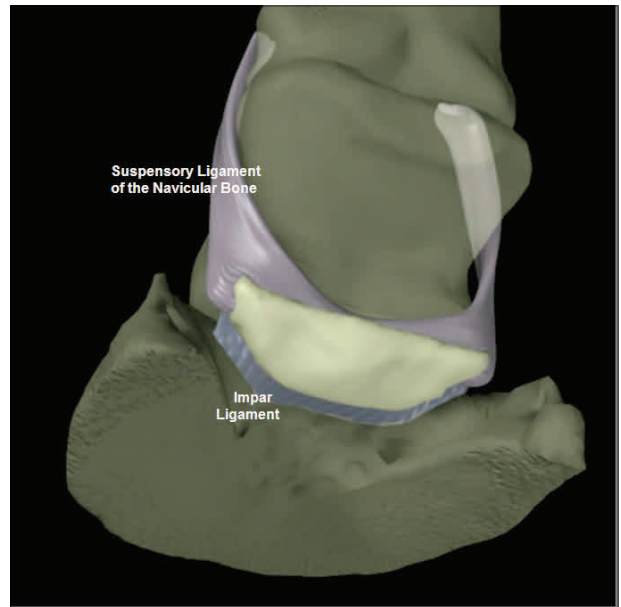
The connection between P1 and P2 is further strengthened and stiffened by two extra pairs of ligaments called the axial and abaxial palmar ligaments. They reduce the range of movement in the pastern joint even more.

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Impar Ligament

The impar ligament is a short, strong, broad ligament (also called the distal sesamoidean or navicular impar ligament) that attaches the distal margin of the navicular bone to P3 across the entire width of the joint surface at this level.

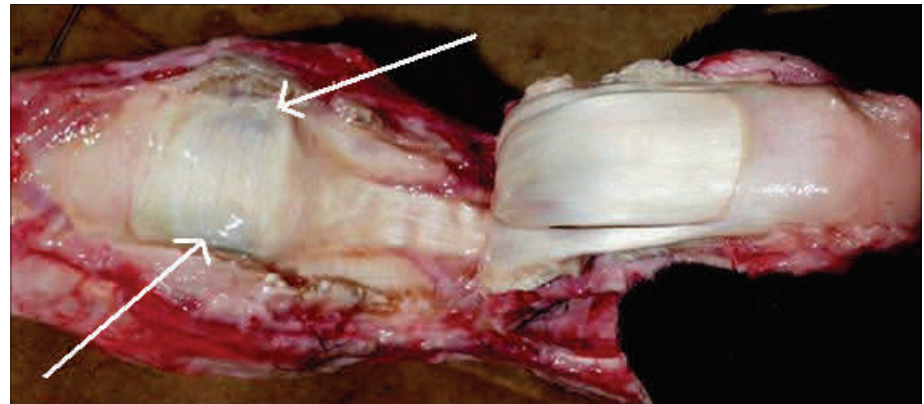


Annular ligaments

Annular ligaments are thin sheets of collagen that partially or completely encircle the limb and help to hold tendons and other structures down against the bone. Three annular ligaments surround the structures that lie along the palmar surface of the digit:

- The palmar annular ligament
- The proximal digital annular ligament
- The distal digital annular ligament

Pictured right:
The palmar annular ligament. It helps to keep the flexor tendon in place



These annular ligaments that hold the tendons close to the bone.



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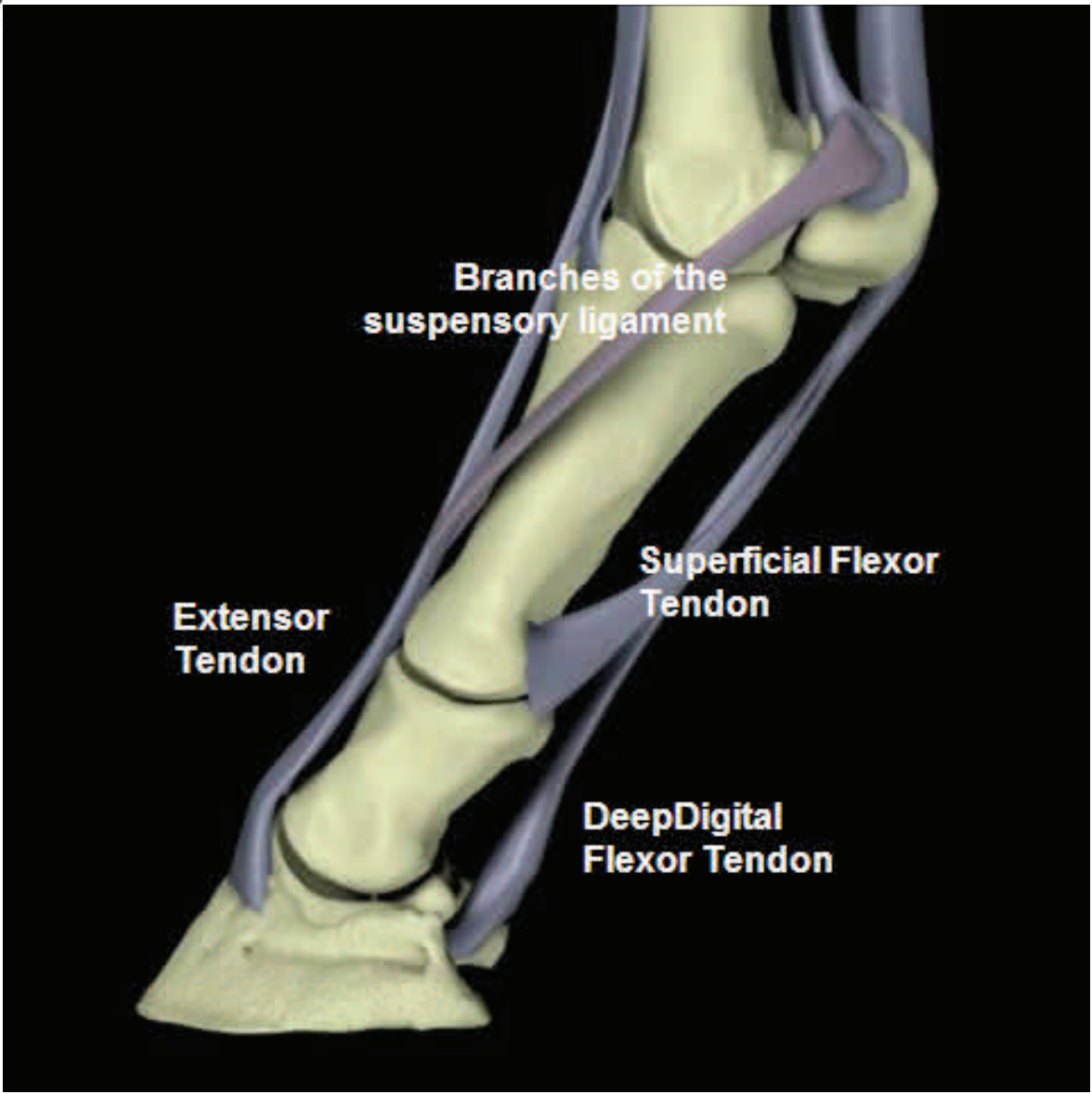
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Pictures courtesy of Dr. Andrew Parks, University of Georgia and HoofCareUnLtd.