Topography of foot

Structures behind the medial ankle

The region behind the medial ankle (also called canalis malleolaris or tarsal canal) is bounded by **retinaculum musculorum flexorum** (medially), **malleolus medialis** (ventrally) and **tuber calcanei** (dorsally).

The region includes **tendon of m. tibialis posterior**, **tendon of m. flexor digitorum longus**, **a. tibialis posterior** together with **v. tibialis posterior**, **n. tibialis** and **tendon of m. flexor hallucis longus**, which is the only tendon that does not rest on the ankle and passes through the processus posterior tali.

For learning you can use memory aids:

TIDIAVENEH – tendon of m. **TI**bialis posterior, tendon of m. flexor **DI**gitorum longus, **A**rteria et **VE**na tibialis posterior, **NE**rvus tibialis and tendon of m. flexor **H**allucis longus

TIDIVANHA - tendon of m. **TI**bialis posterior, tendon m. flexor **DI**gitorum longus, **V**. tibialis posterior, **A**. tibialis posterior, **N**. tibialis, m. flexor **HA**llucis longus

Structures in front of the medial ankle

The regio in front of the medial ankle is bounded by ***retinaculum musculorum extensorum superius et inferius*** (ventrally) and ***malleolus medialis*** (dorsally).
Above both retinacula passes *v. saphena magna* and *n. saphenus*, under retinacula passes the **tendon *of m. tibialis anterior***.

For learning you can use a memory aid **SAMANTA** – vena **SA**phena **M**agna, **N**ervus saphenus, tendon of musculus **T**ibialis **A**nterior.

The region behind the lateral ankle is bounded by **retinaculum musculorum fibularium superius et inferius** (laterally), **malleolus lateralis** (ventrally) and **tuber calcanei** (dorsally).
Above both retinacula is **v. saphena parva** and **n. suralis**, under both retinacula are **tendons of m. fibularis longus et brevis** in the same tendon sheath for both.

For learning you can use a memory aid **SAPASUFI** – vena **SA**phena **PA**rva, nervus **SU**ralis and tendon of musculus **FI**bularis longus et brevis.

Template:Infobox - joint

Chopart joint

Chopart joint also called *articulatio tarsi transversa*, is the articulation among *talus*,*calcaneus* and *tarsals bones*.

Francois Chopart

It is named after the French surgeon Francois Chopart. He performed amputations in the area of the metatarsal joint in the 18th century. He himself did not write a publication about amputation, but other authors mention him in their works, making him famous.

Basic description of the joint and its line

The Chopart joint is a functional unit. It is an compound joint. *Os naviculare* and *talus* are articulated with *Os cuboideum* and *calcaneus* are articulated as *articulatio calcaneocuboidea*. The articular line is formed by the *talonavicular* fissure in the tibial part, which is convex distally, and the *calcaneocuboidea*, which is convex proximally. It resembles the letter S and is important both in terms of flexibility of the entire leg and in terms of surgical interventions. Forms a line during amputation of the distal part of the leg *(surgical exarticulation)*.

Joint capsule and ligaments

Joint capsules are short and stiff and are reinforced by longitudinal, transverse and interosseous ligaments.

Dorsally there are:

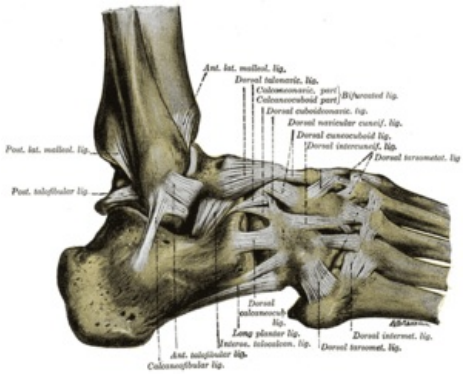
- ***lig. talonaviculare*** (dorsale);
- ***lig. bifurcatum*** – starts from the calcaneus and splits distally into two ligaments;

- *lig. calcaneonaviculare*;
- *lig. calcaneocuboideum*.

After cutting the leagues. bifurcatum is a possible opening of the Chopart joint, among surgeons it is also called *the key of the Chopart joint (clavis articulationis Choparti)*.

On the plantary side are:

- ***lig. calcaneonaviculare plantare*** – a cartilaginous disk is caught in it *fibrocartilago navicularis* (it catches the head of the talus, supported from below by a tendon of *m. tibialis posterior*);
- ***lig. calcaneocuboideum plantare***;
- ***lig. plantare longum*** – a strong longitudinal ligament running from the plantar surface of the calcaneus, up to *articulationes tarsometatarsales*;
- ***lig. cuboideonaviculare dorsale et plantare*** – ligaments strengthening the transverse foot arch.



Ligamenti – facies dorsalis

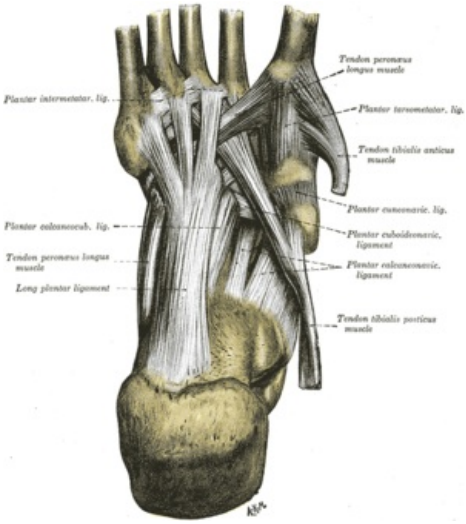
Basic and intermediate position

Basic position – uses the lower metatarsal joint while standing;

Intermediate position – is the same as the basic position.

Lisfrank joint

Lisfrank joint is an articulation among *tarsal* and *metatarsal bones*. Includes *articulationes tarsometatarsales a articulationes intermetatarsales*.



Ligamenti – facies plantaris

Basic description of the joint

Lisfrank joint is compound and flat. It forms a functional connection that is involved in the suspension movements of the leg. The fourth and fifth metatarsals are the most mobile, thanks to which this part of the foot adapts better to the surface. The other joints are very little movable. *surgical exarticulation. is performed in the cleft of this joint.*

Joint capsule and ligaments

The joint capsules are short and stiff but flexible. During strengthening, the ligaments that run dorsally, plantarly and between the bones are used. For longitudinal strengthening, the *ligamenta tarsometatarsalia dorsalia, plantaria and interossea* are applied. In case of transverse strengthening of the "ligamenta metatarsalia dorsalia, plantaria and interossea". The ligaments on the plantar side are of great importance in maintaining the foot arch.


Lisfrank jiont (red line)

Vessels and nerves

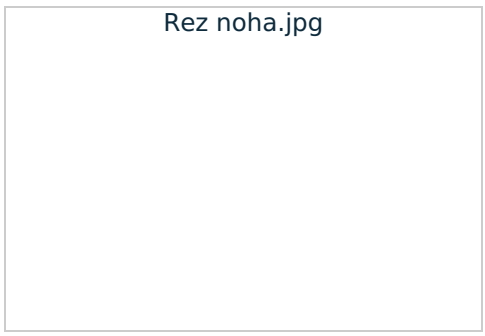
Vessels and nerves enter this joint from the same trunk as for the lower metatarsal joint. Furthermore, small vessels enter it from *musculi interossei.*

Movements

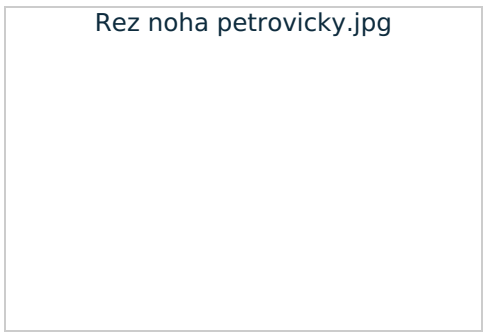
Mobility in the joint is limited only among *os cuneiforme* and the base of the first metatarsal bone. Plantar flexion, extension and rotation are possible.

Basic position of the joint is on the standing foot. **Intermediate position** is the same as the basic position.

Muscles of the foot – *musculi pedis*



Transversal section of the foot



Scheme of the transversal section of the foot

References

Related articles

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- Joint of the lower limb
- Foot joints
- Ossa tarsi
- Ossa metatarsi
- Chopart joint
- Lisfrank joint

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