

# Topographic formations of DK

Topographical areas include places and openings through which important nerves, blood vessels and veins pass. For each area, it is important to know the boundaries and structures that we find there.

## Belt formations

### Foramen sciaticum majus

It is bordered ventrolaterally by the incisura ischiadica major, dorsomedially by the sacrotuberale ligament and caudally by the sacrospinale ligament. Through this opening passes the piriformis muscle, which starts on the front surface of the os sacrum and attaches to the greater trochanter. It divides the sciatic foramen into the suprapiriform and infrapiriform foramen.

#### Suprapiriform foramen

- The superior gluteal nerve and superior gluteal artery pass through it together with the vein of the same name.

#### Infrapiriform foramen

- The sciatic nerve, pudendus nerve, gluteus inferior nerve, and cutaneus femoris posterior nerve pass through the infrapiriform foramen. Then the arteria et venae gluteae inferiores and vasa pudendae interna.

### Foramen sciaticum minus

It is bounded ventrolaterally by the ischiatic notch minor, dorsomedially by the sacrotuberale ligament and cranially by the sacrospinale ligament. The bodies passing through this opening are: nervus pudendus, arteria et venae pudendae internae (from the foramen infrapiriforme) and tendo musculi obturatorii internii.

### Obturator canal

It arises in the place of the sulcus obturatorius (in the foramen obturatum) and the opening in the membrana obturatoria. The obturator nerve and arteria et vena obturatoria pass through it.

### Canalis pudendalis

Also called *Alcock's canal*, it is located dorsal to the iliococcygeus muscle and on the medial side of the obturatorius internus muscle. A nerve runs through the channel, after which the topographical place is named - nervus pudendus. We will also mention it in the topographic formations of the basin.

### Hiatus subinguinalis

#### Lacuna musculorum

- Located laterally, bordered by the ligamentum inguinale Pouparti, os ilium and arcus iliopectineus. As the name suggests, the iliopsoas muscle, the femoral nerve and, most laterally, the cutaneus femoris lateralis nerve run through it.

#### Lacuna vasorum

- It is located medially from the arcus iliopectineus, then it is bounded by the ligamentum lacunare Gimbernati and the ligamentum pectineum ventrally from the pecten ossis pubis, its division. The contents of the lacuna vasorum are (mediolaterally) the node lymphoideus inguinalis profundus Cloqueti, vena aa arteria femoralis, ramus femoralis nervi genitofemoralis.

#### Femoral canal

- Located on the medial part of the lacuna vasorum, the nodi inguinales profundi Cloqueti run through it.

## Free limb formations

### Trigonum femorale

Bounded by Pouparti's ligamentum inguinale, adductor longus muscle and sartorius muscle - they form a triangular "window". All structures from the hiatus subinguinalis pass through it - nervus cutaneus femoris lateralis, musculus iliopsoas, nervus femoralis, ramus femoralis nervi genitofemoralis, arteria et vena femoralis and nodi lymphoidei inguinale profundi Cloqueti, sometimes also called *fossa Scarpae major*.

## **Fossa iliopectinea**

- Sometimes also *the fossa Scarpae minor* , is located in the depth of the trigonum femorale , has a smaller circumference and is bounded by: the pectineus muscle and the iliopsoas muscle. There is a passage for the great saphenous vein in the fascia lata - hiatus saphenus.

## **Saphenous hiatus**

- Located superficially above the trigonum femorale . It is an opening in the fascia lata, the great saphenous vein passes through it, which subsequently flows into the femoral vein, which lies in the trigonum femorale.

## **Adductor canal**

Also called *Hunter's canal* , it connects the trigonum femorale to the fossa poplitea. The femoral artery and vein pass through it, as well as the saphenous nerve

## **Adductor hiatus**

The distal opening of the adductor canalis, the femoral artery and vein changes into the popliteal artery and vein after passing through. The saphenous nerve does not pass through it, but the rami posterior nervi obturatorii do. It arises in the place between the attachments of the adductor magnus muscle.

## **Fossa poplitea**

The knee fossa is bordered medioproximally by the semimembranosus and semitendinosus muscles, and lateroproximally by the biceps femoris muscle. Distally, its border is formed by the two heads of the gastrocnemius muscle, and the bottom becomes the popliteus muscle. The sciatic nerve splits into the tibial nerve and the fibularis nerve. The popliteal vein runs laterally, the popliteal artery runs medially. Further in the fossa there are nodi lymphoidei popliteales (superficiales and profundi).

## **Fibular canal**

The channel through which the fibular nerve passes to the front of the lower leg. Its entrance is formed by the hiatus fibularis - an opening between the fibularis longus muscle and the soleus muscle. In it, the fibular nerve turns into the fibular nerve superficialis and profundus, which goes to the front of the lower leg.

## **Arcus tendineus musculi solei**

It arises between the beginnings of the soleus muscle. The tibial nerve passes through it, the popliteal artery changing into the posterior tibial artery; vena poplitea changing into vena tibialis posterior.

## **Canalis musculofibularis**

Also called Hyrtl's canal, it is a canal through which the arteria et venae fibulares pass, branching off from the arteria et vena tibialis posterior. It is bounded by the body of the fibula and the flexor hallucis longus muscle.

## **Formations behind the medial ankle**

Located behind the medial ankle. It is bounded by: retinaculum musculorum flexorum, malleolus medialis and tuber calcanei. The contents are the tibialis posterior tendon, the flexor digitorum longus tendon, the tibialis posterior artery together with the tibialis posterior vein, the tibialis nerve and the flexor hallucis longus tendon. We use the mnemonic TIDIAVNH(A) or TIDIAVENEH here.

## **Formations in front of the medial ankle**

It is located in front of the medial malleolus. The border consists of: retinaculum musculorum extensorum superius et inferius and malleolus medialis. The saphenous vein and the saphenous nerve run superficially, and the tendon of the tibialis anterior muscle runs deep. We use the SAMANTA mnemonic.

## **Formations behind the lateral ankle**

Located behind the lateral ankle. The limiting structures are: retinaculum musculorum fibularium superius et inferius, malleolus lateralis and tuber calcanei. The saphenous vein and nervus suralis are located on the surface, and in the depth of the tendon of the fibularis longus et brevis muscle.