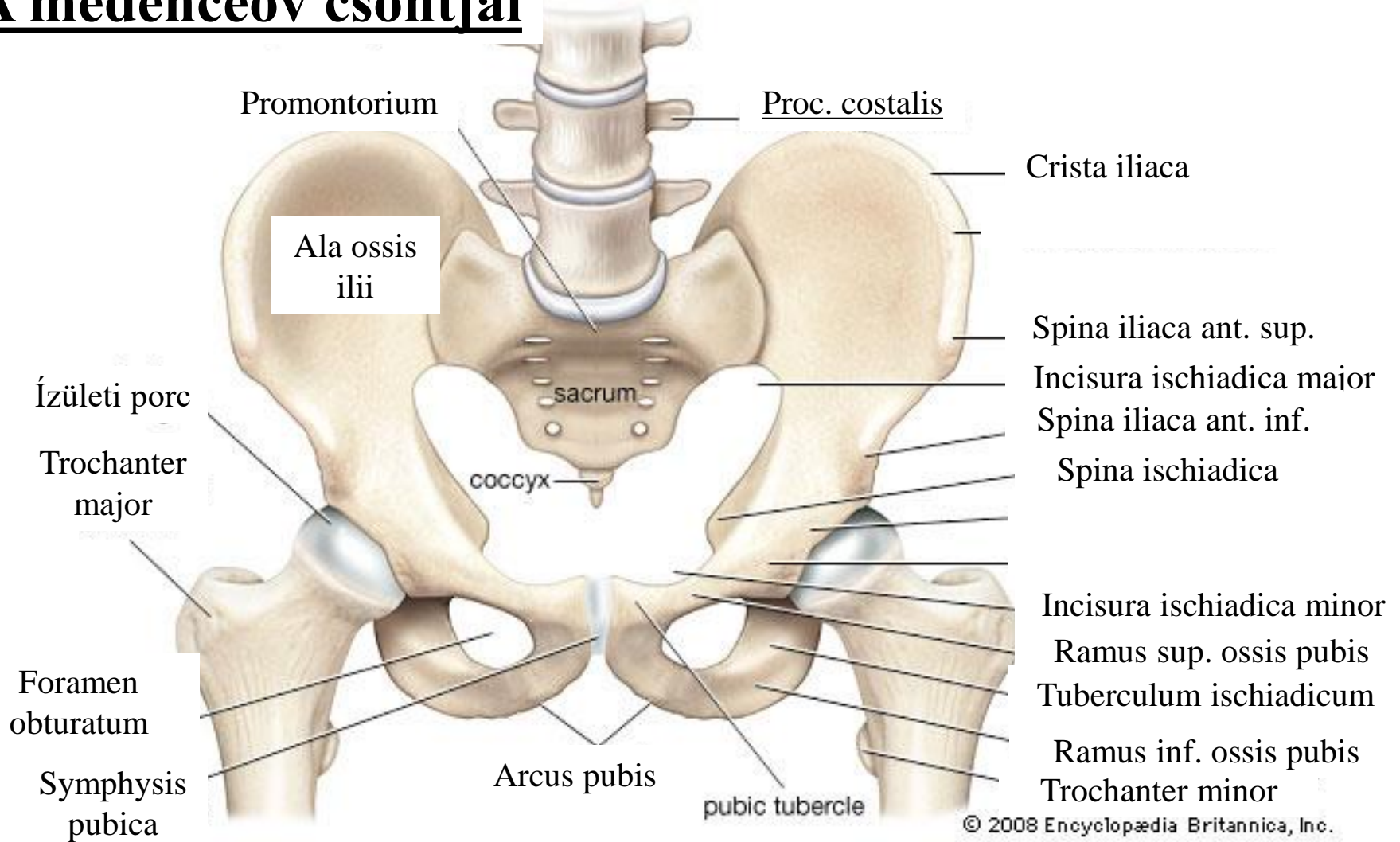


Medence csontjai, ízületei, felépítése
és mechanikája.

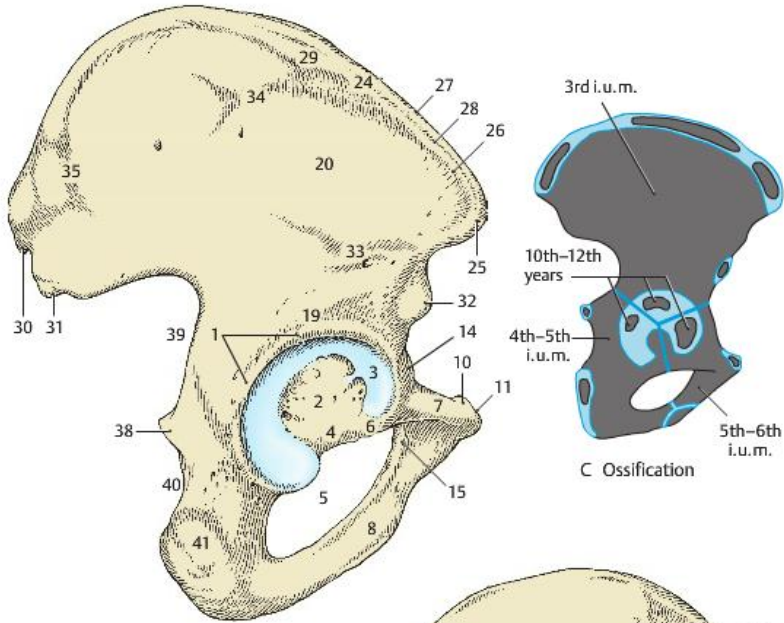
A csípőízület felépítése és ráható
izmok.

Dr. Hanics János

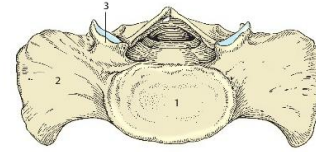
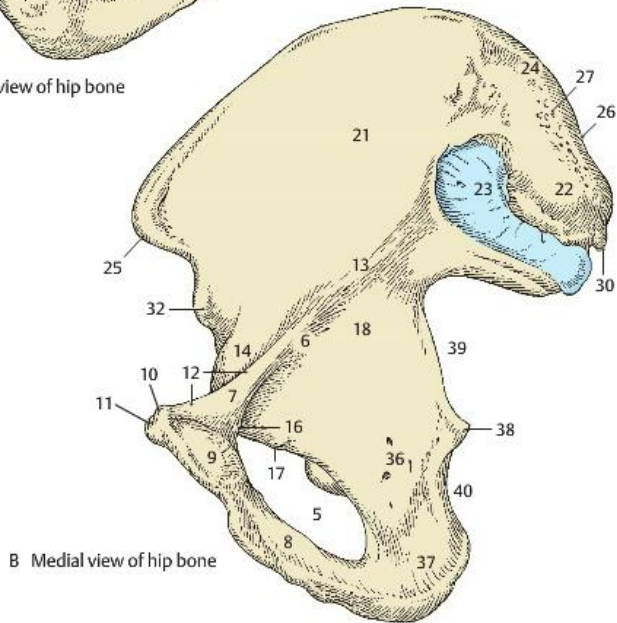
A medenceöv csontjai



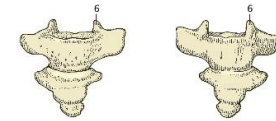
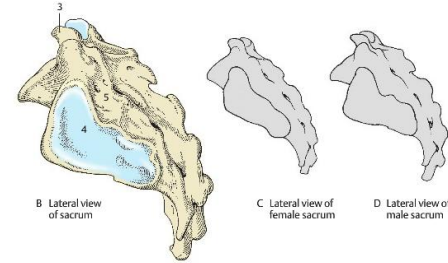
CSONTOK



A Lateral view of hip bone

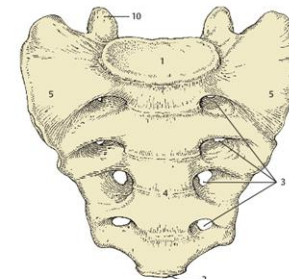


A Superior view of sacrum

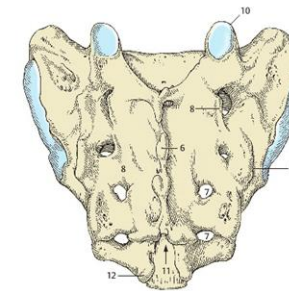


E Anterior view of coccyx

F Posterior view of coccyx



A Sacrum from front

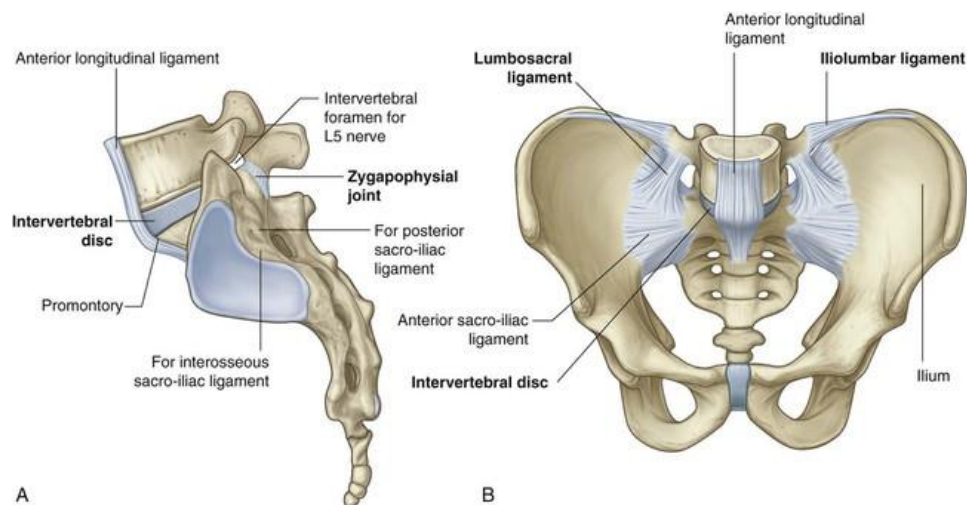


B Sacrum from back

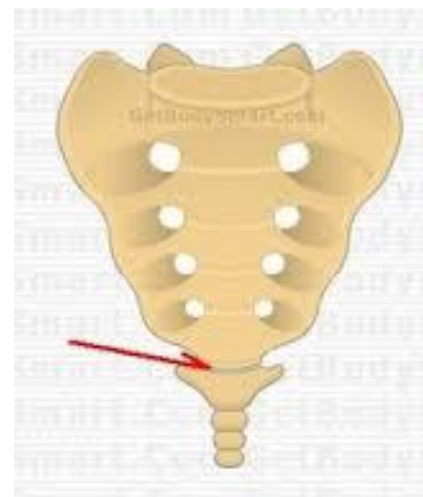
SACRALIS összeköttetések

LUMBOSACRALIS összeköttetések (synchondrosis, syndesmosis)

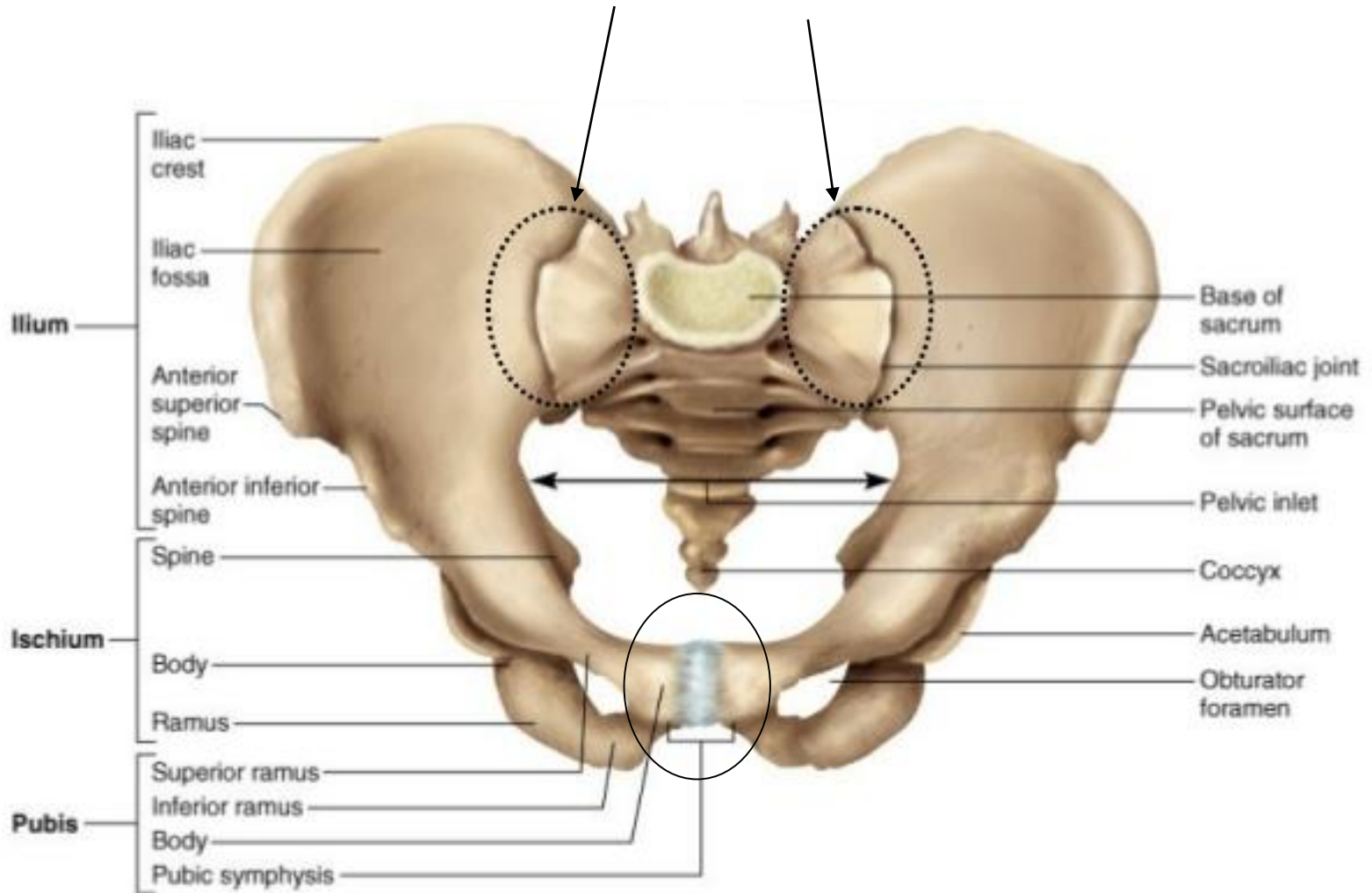
- Discus intervertebralis
- Ligg. long. anterior et posterior
- Ligg. flava
- Ligg. interspinalia and supraspinalia
- Lig. Iliolumbale
- Art. zygapophysealis** (feszés ízület L5 csigolya és a sacrum processus articularisai között)



SACROCOCCYGEALIS összeköttetés (SYNCHONDROSIS)



ART. SACROILIACA



(a) Anterosuperior view

Symphysis pubica

1. Art. sacroiliaca: ossa coxae + sacrum

facies auricularis ossis sacri et ilii

a felszíneket: felszínesen üvegporc, mélyen rostos porc borítja!

Ízületi tok:

feszés, tömött, szűk ízületi üreg.

Szalagok:

- ventralis (gyenge)
- dorsalis (erős)
- interosseus (erős)

2. Symphysis pubica

- facies symphysealis ossi pubis et discus interpubicus
- synchondrosis, rostos porc (lehetséges „üreg” a porcon belül)

Szalagok: superior

(inf.!) lig. arcuatum pubis

ART. SACROILIACA

Ligg. sacroiliaca

Dorsalia

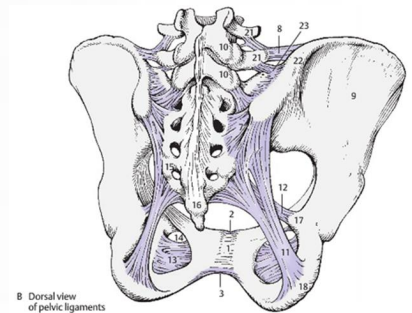
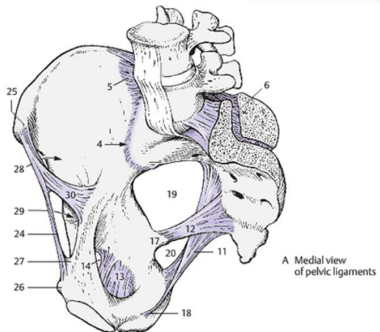
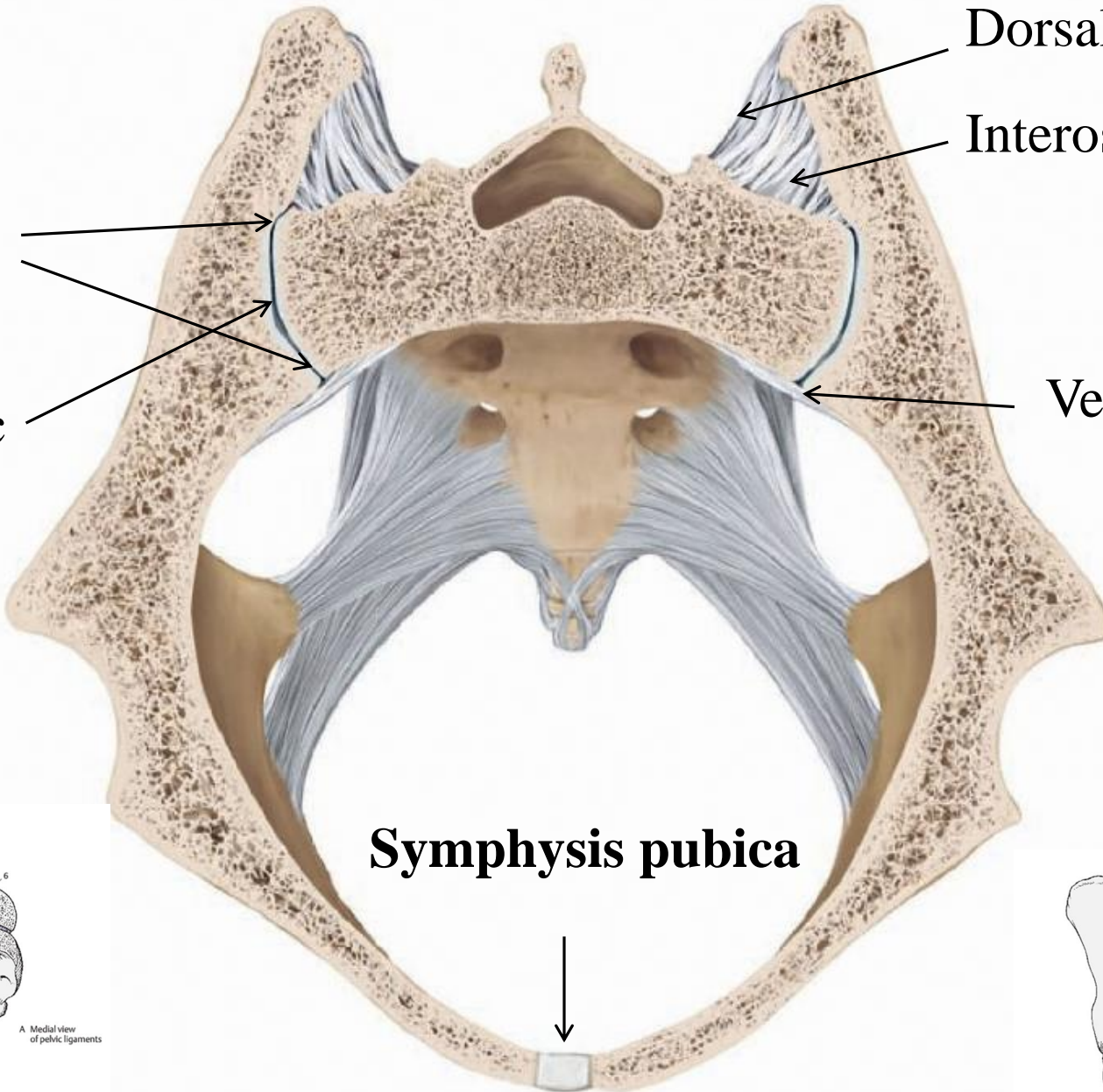
Interossea

Ventralia

Symphysis pubica

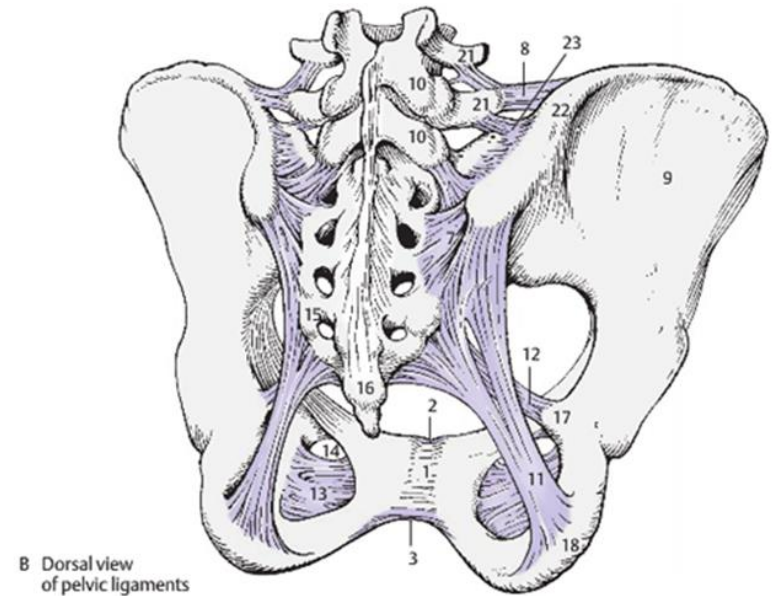
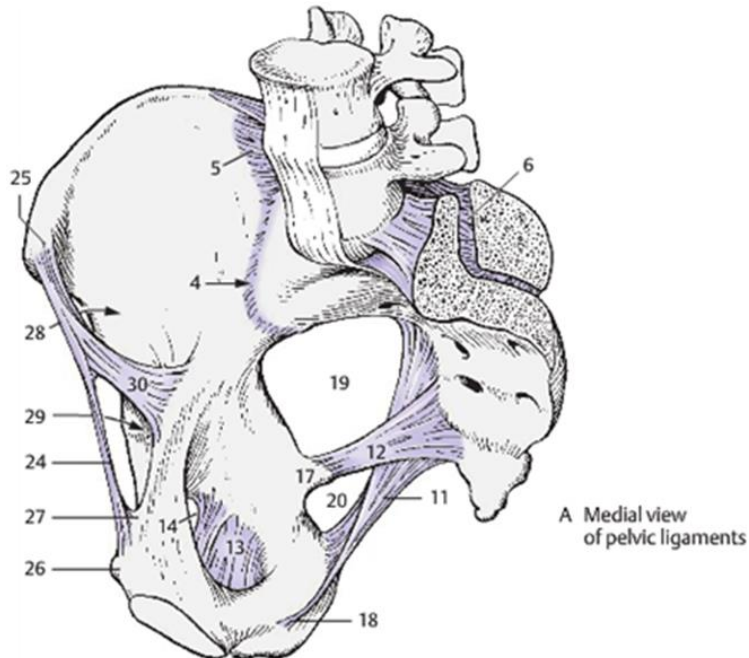
Üvegporc

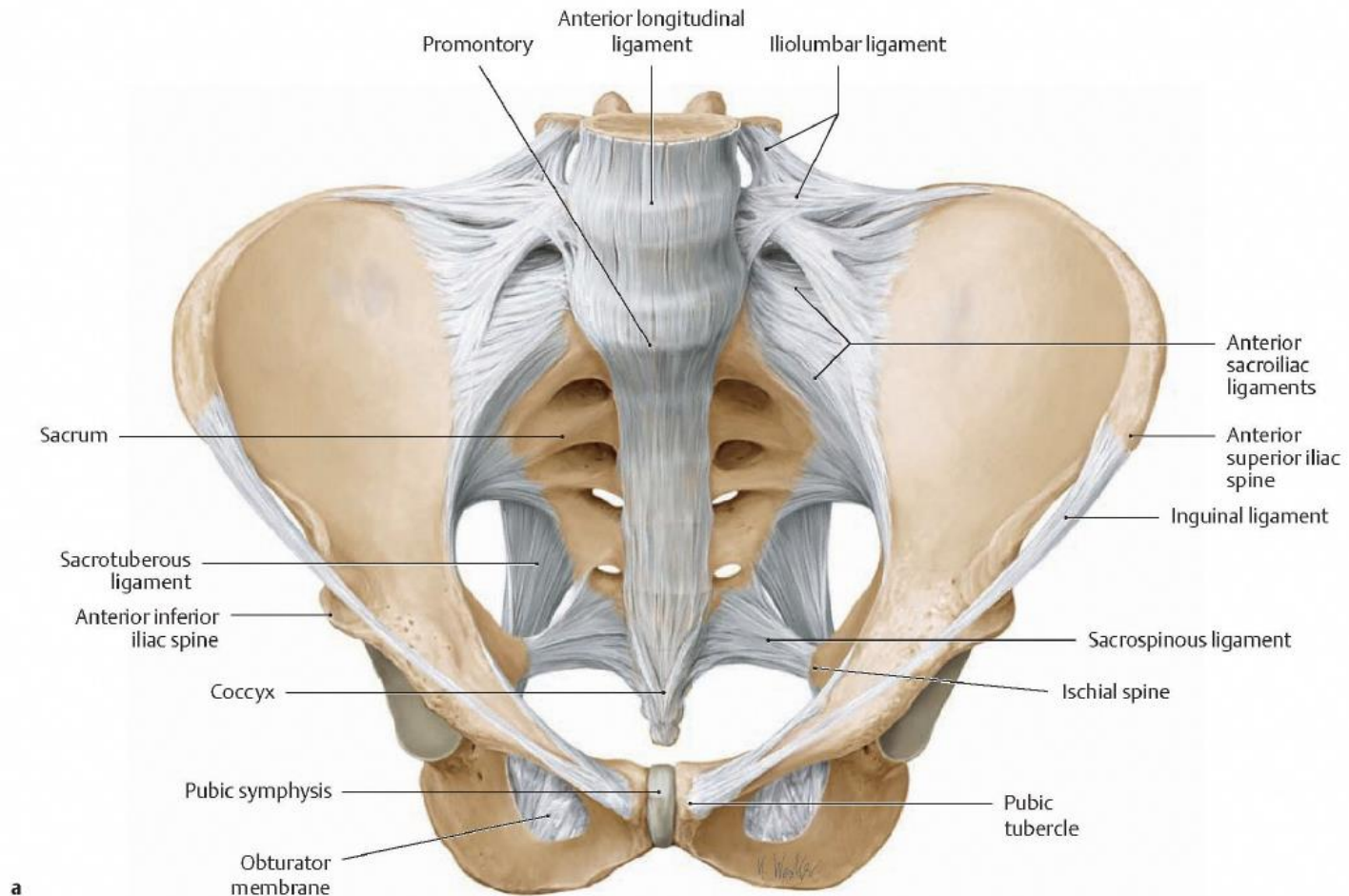
Rostos porc



A MEDENCE SZALAGOS ÖSSZEKÖTTETÉSEI

- *lig. sacrospinale* (2db)
- *lig. sacrotuberale* (2db)
- *membrana obturatoria*
- *ligamentum inguinale*
(*m. obliquus ext. abdominis* aponeurosisából!!!)





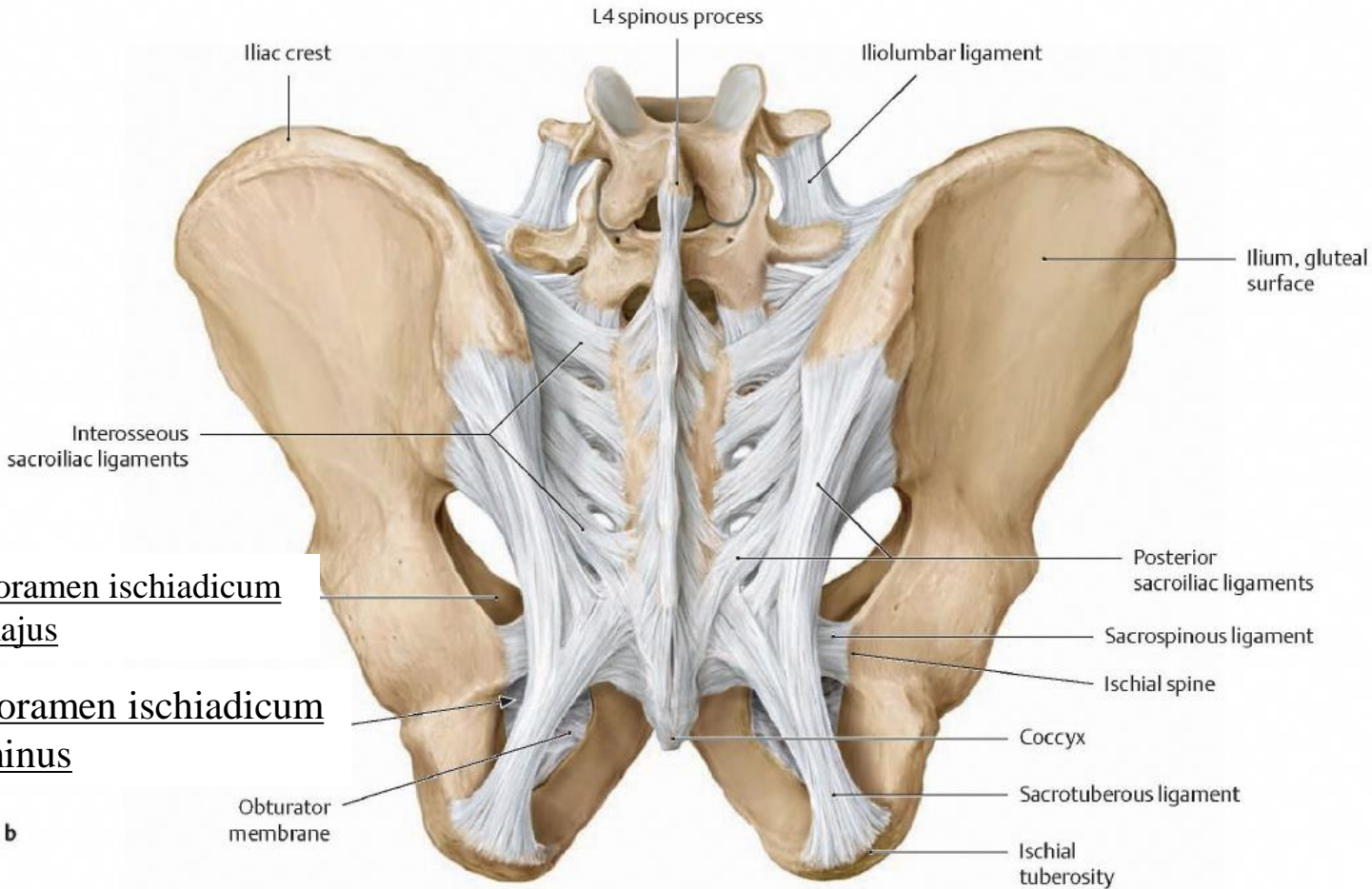
A Ligaments of the male pelvis

a Anterosuperior view.

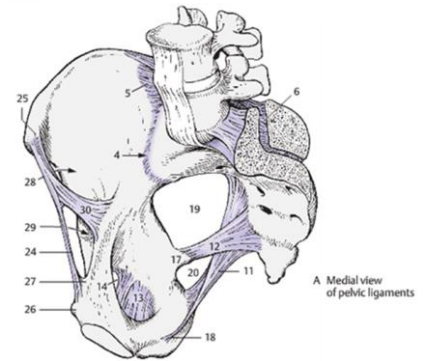
Illustrator: Karl Wesker

pp. 114-115

Schuenke et al. THIEME Atlas of Anatomy • General Anatomy and Musculoskeletal System
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b



A Medial view of pelvic ligaments

A Ligaments of the male pelvis

b Posterior view.

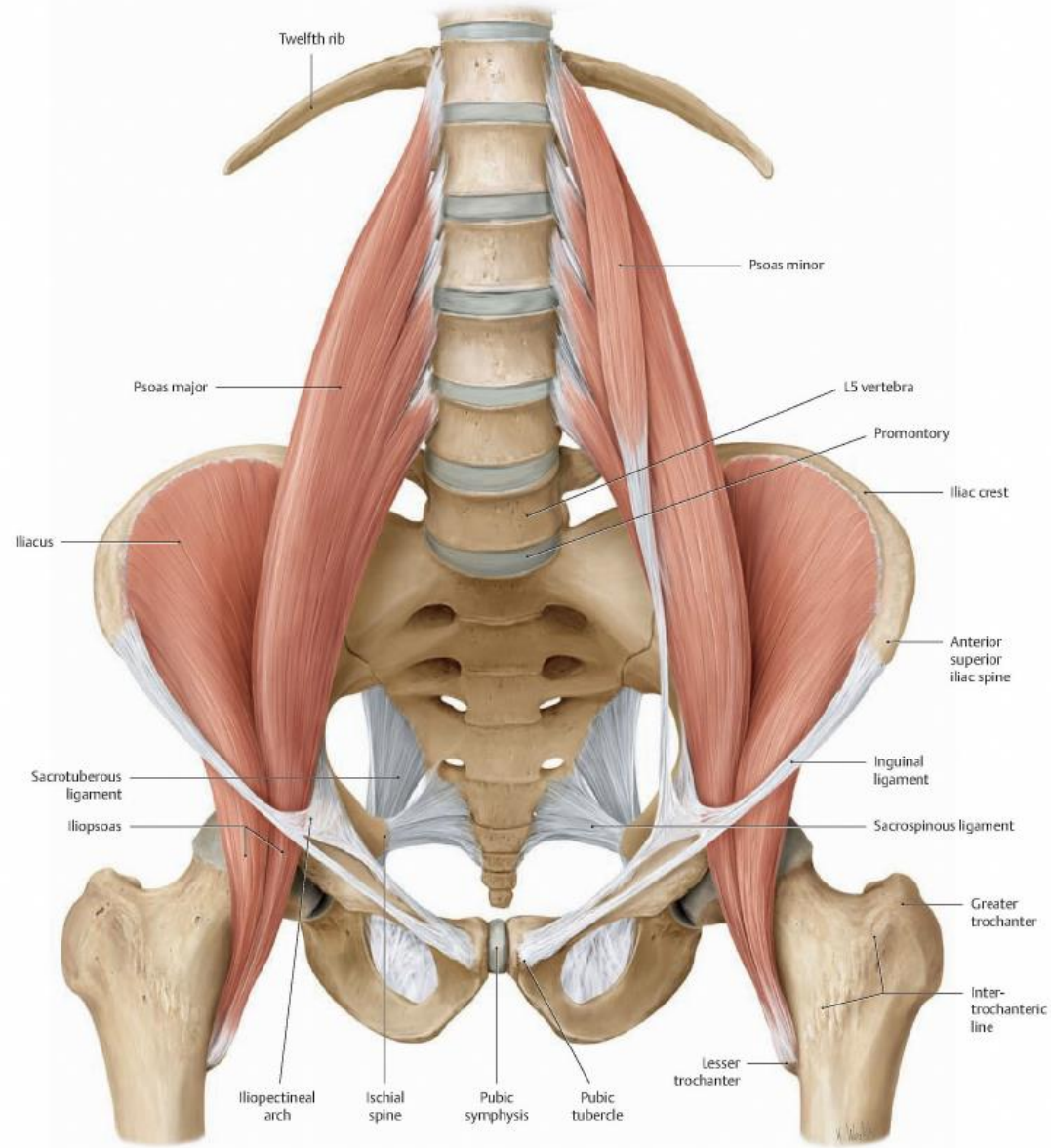
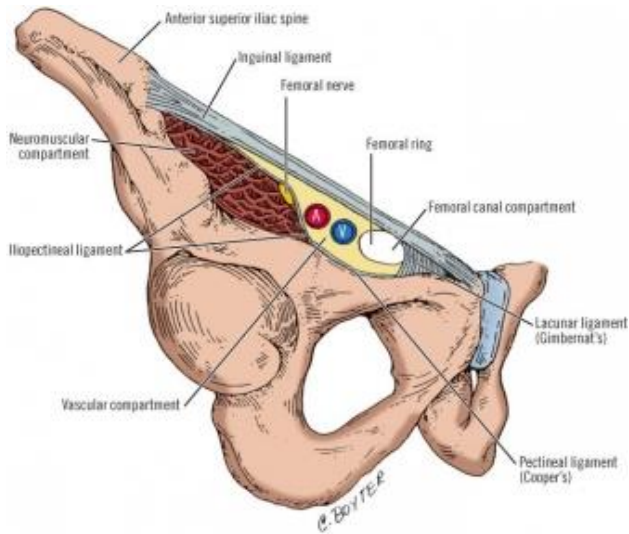
Illustrator: Karl Wesker

pp. 114-115

Lig. inguinale

Hiatus subinguinalis

- m. psoas major
- m. iliacus

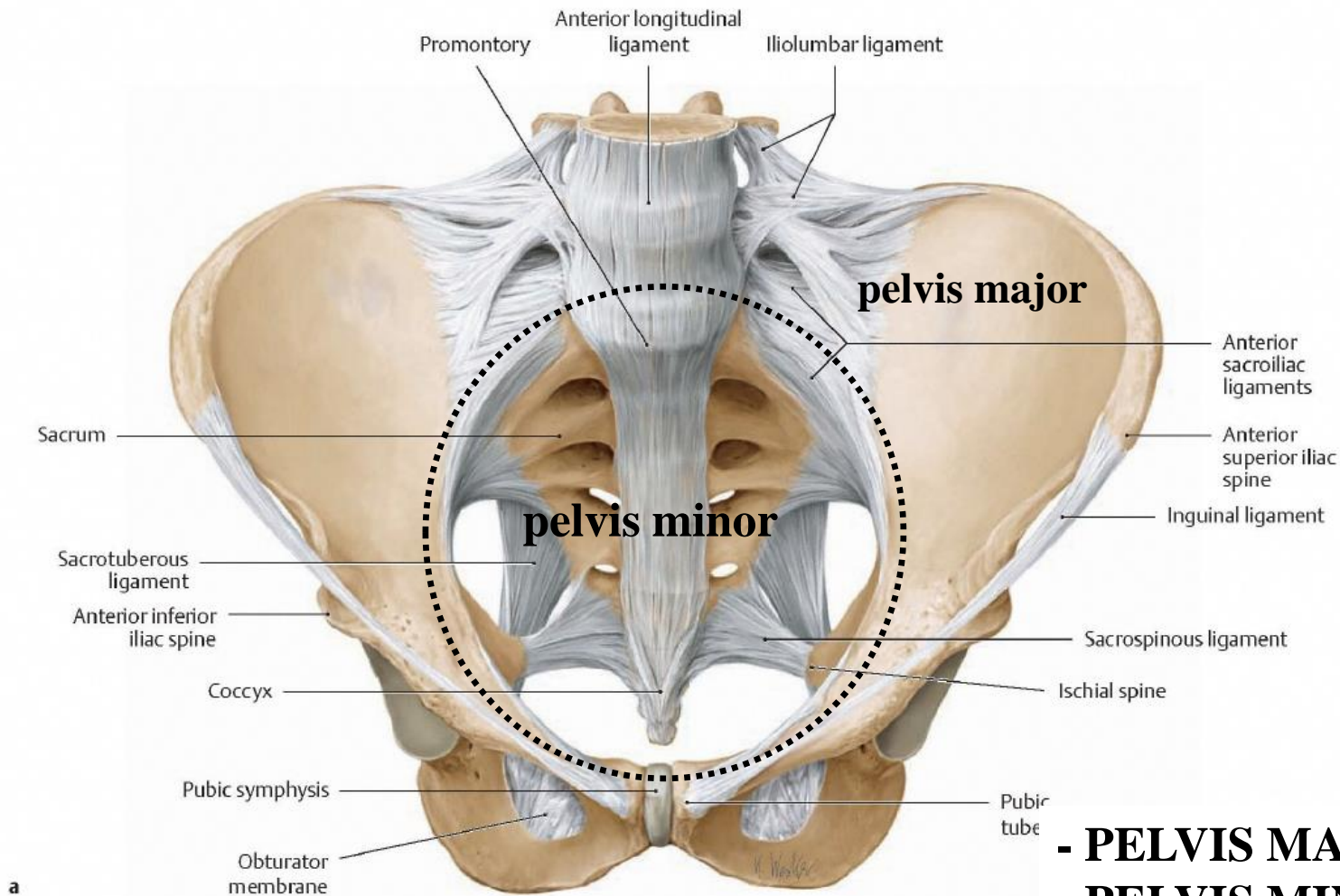


B The inner hip muscles

Anterior view.

Illustrator: Karl Wesker

pp. 422-423



- PELVIS MAJOR
- PELVIS MINOR
Határvonal:
LINEA TERMINALIS

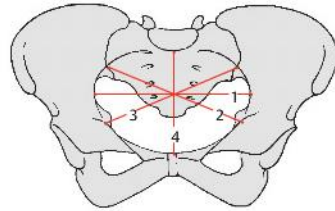
A Ligaments of the male pelvis

a Anterosuperior view.

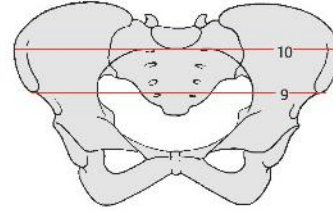
Illustrator: Karl Wesker

pp. 114-115

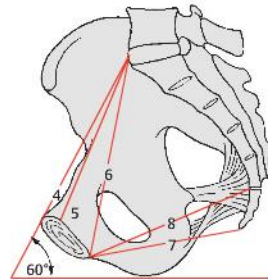
NEMEK KÖZÖTTI ELTÉRÉSEK



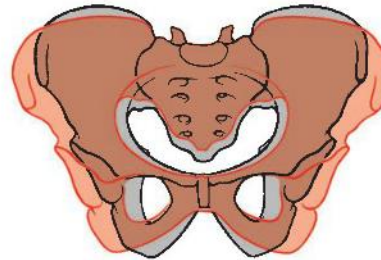
B Pelvic diameters



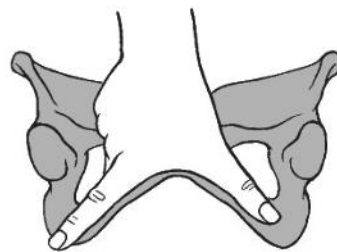
C External pelvic dimensions



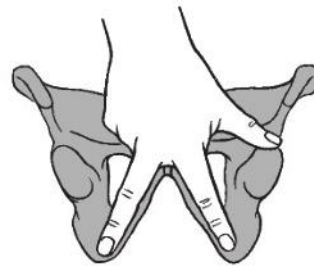
A Pelvic inclination



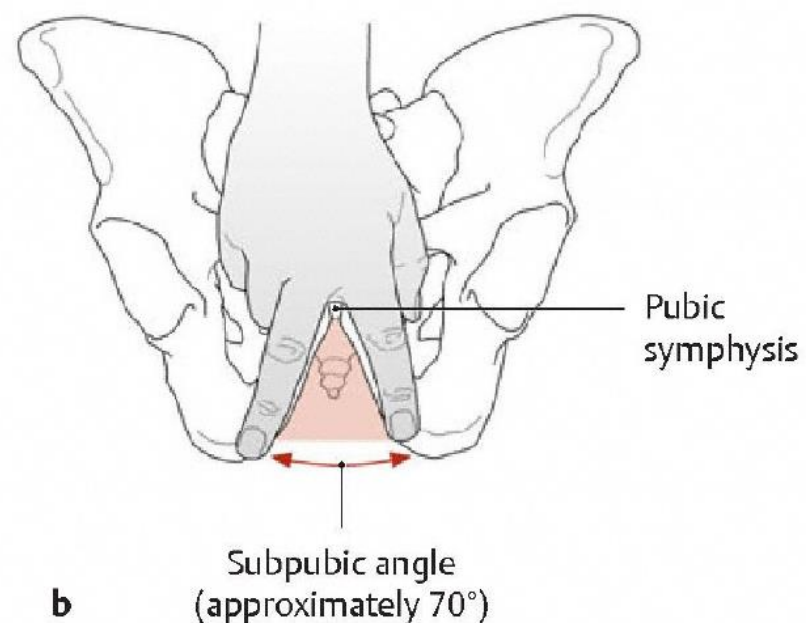
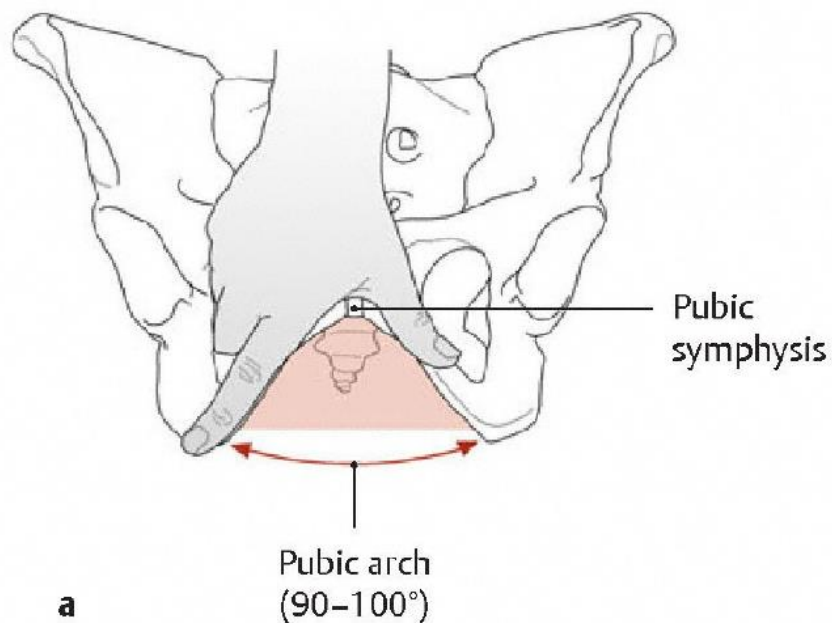
D Comparison of a male pelvis and female pelvis



E Pubic arch



F Subpubic angle



D Lower pubic angle

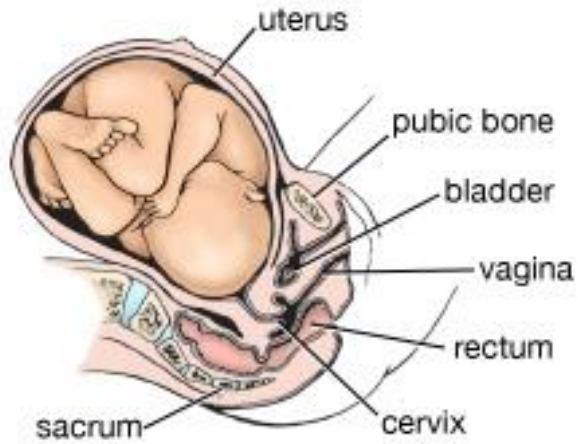
Anterior view.

a Female pelvis: pubic arch.

b Male pelvis: subpubic angle.

	NÓI	FÉRFI
Bemenet		
Kimenet		
Üreg		
Arcus pubis		

Onset of labour



Flexion



Internal rotation of head



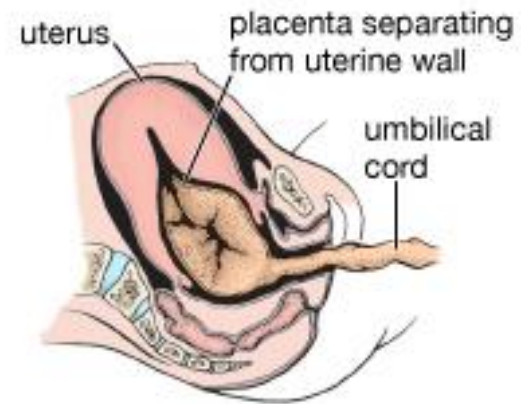
Extension



External rotation of head

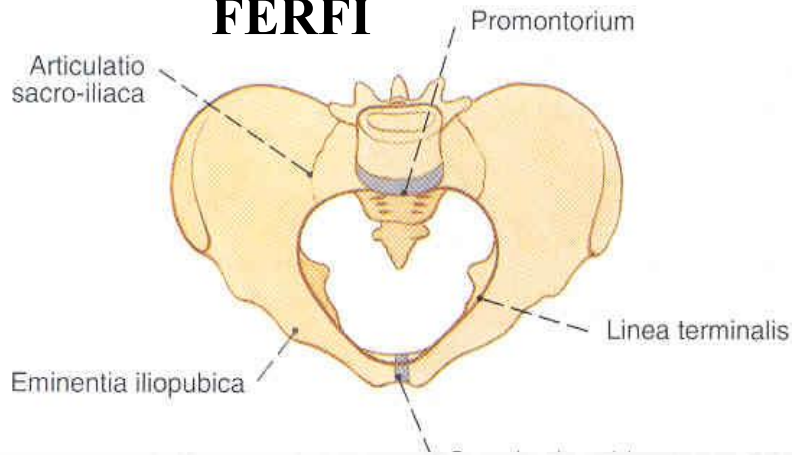


Uterus immediately after birth

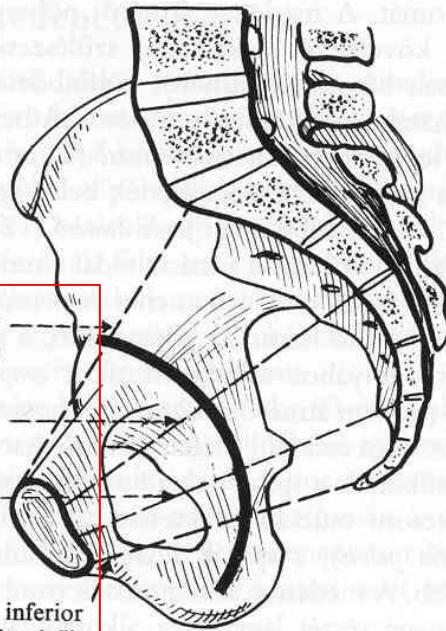
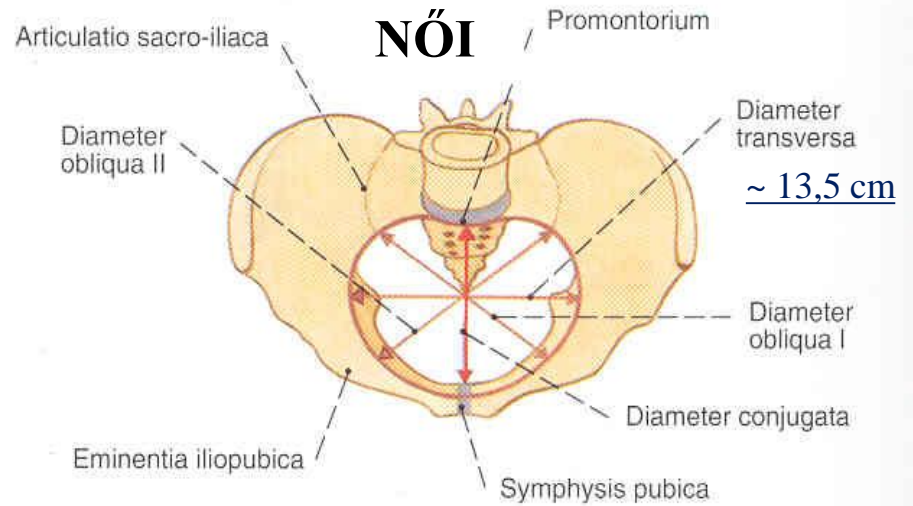


KISMEDENCEI ÁTMÉRŐK 1/2

FÉRFI



NŐI

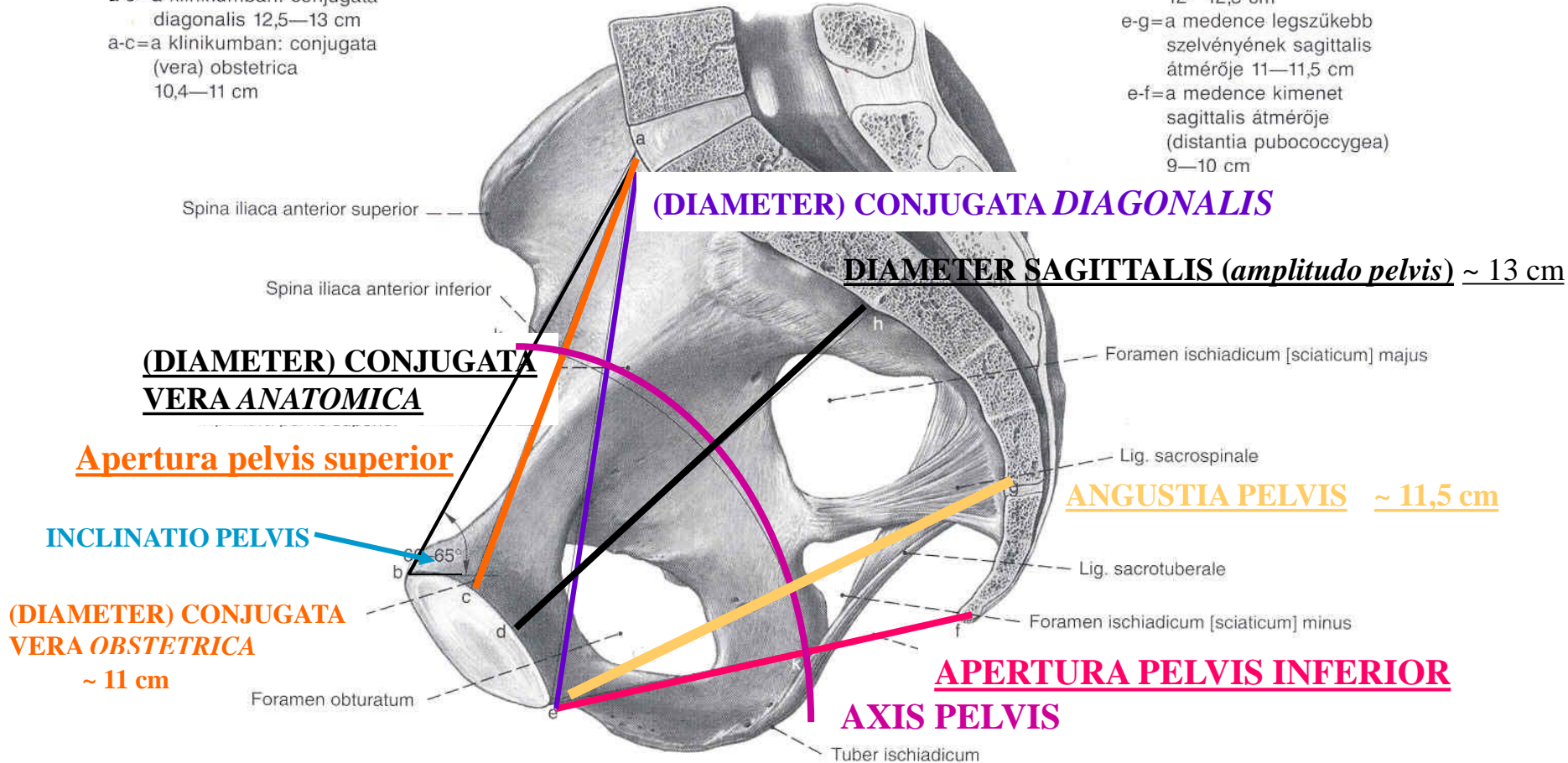


KISMEDENCEI ÁTMÉRŐK 2/2

PELVIS FEMININA ASPECTUS MEDIALIS

k-k=axis pelvis
 a-b=a klinikumban: conjugata (vera) anatomica
 a-e=a klinikumban: conjugata diagonalis 12,5—13 cm
 a-c=a klinikumban: conjugata (vera) obstetrica 10,4—11 cm

h-d=a klinikumban:
 a medence üreg sagittalis átmérője 12—12,5 cm
 e-g=a medence legszűkebb szelvényének sagittalis átmérője 11—11,5 cm
 e-f=a medence kimenet sagittalis átmérője (distantia pubococcygea) 9—10 cm



1140. ábra A női medence átmérőinek bemutatása, median metszés medial felől (jobb oldal).

* Az apertura pelvis superiorit a linea terminalis határolja. Az a-c vonal adja a medence bemenetének síkját. A farokcsont csúcsa, az ülőcsont gumója, az ülőcsont szára és a szeméremcsont alsó szára határolják az apertura pelvis inferiorit



1. Head floating, before engagement



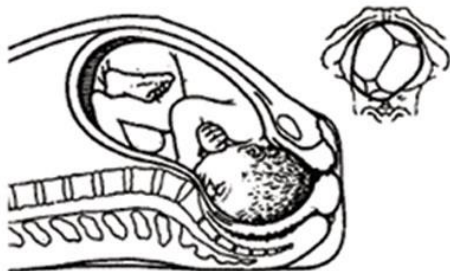
5. Complete extension



2. Engagement; descent, flexion



6. Restitution (external rotation)



3. Further descent, internal rotation



7. Delivery of anterior shoulder



4. Complete rotation, beginning extension



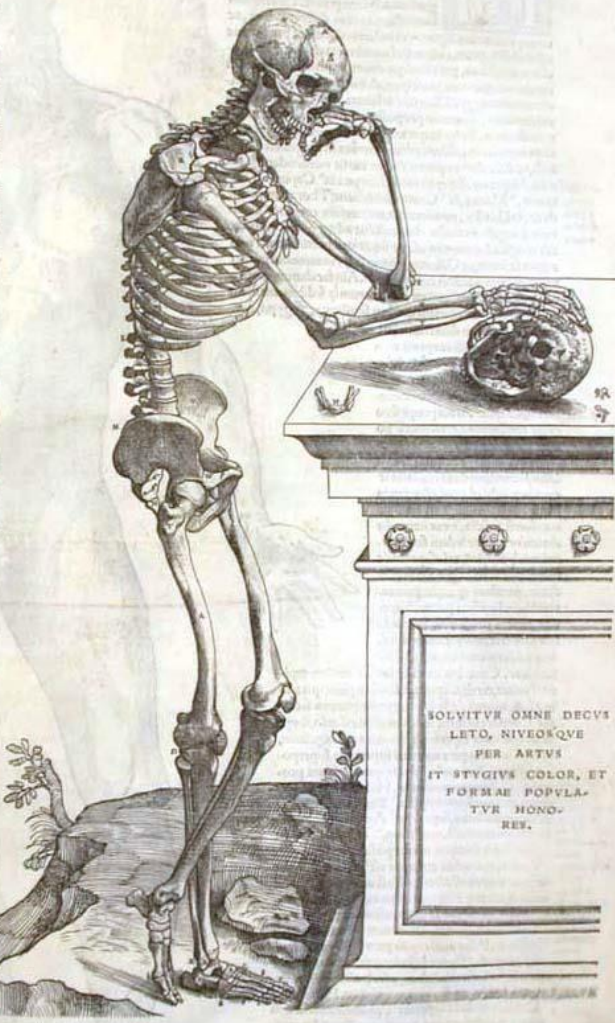
8. Delivery of posterior shoulder

CHARACTERVM HVIVS OMNIUM
 ceterum imaginem ostendens figura Index.

E T N I In figura aut proferuntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

- A. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- B. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- C. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- D. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- E. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- F. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- G. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- H. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- I. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- K. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- L. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- M. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- N. Quatuordecim sunt ossa quae in thorace sunt, et in costis.

- O. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- P. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- Q. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- R. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- S. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- T. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- U. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- V. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- W. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- X. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- Y. Quatuordecim sunt ossa quae in thorace sunt, et in costis.
- Z. Quatuordecim sunt ossa quae in thorace sunt, et in costis.



A. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

B. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

C. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

D. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

E. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

F. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

G. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

H. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

I. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

K. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

L. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

M. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

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O. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

P. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

Q. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

R. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

S. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

T. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

U. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

V. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

W. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

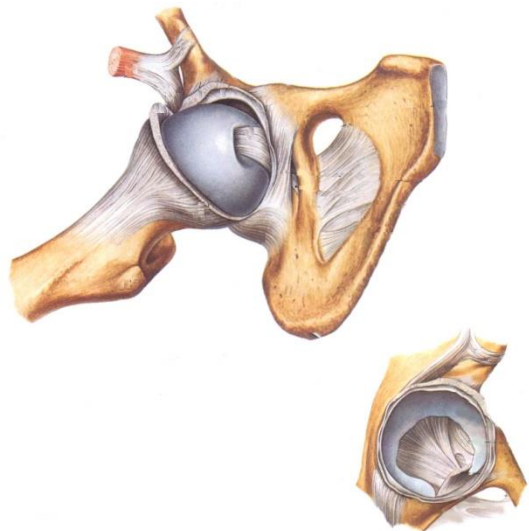
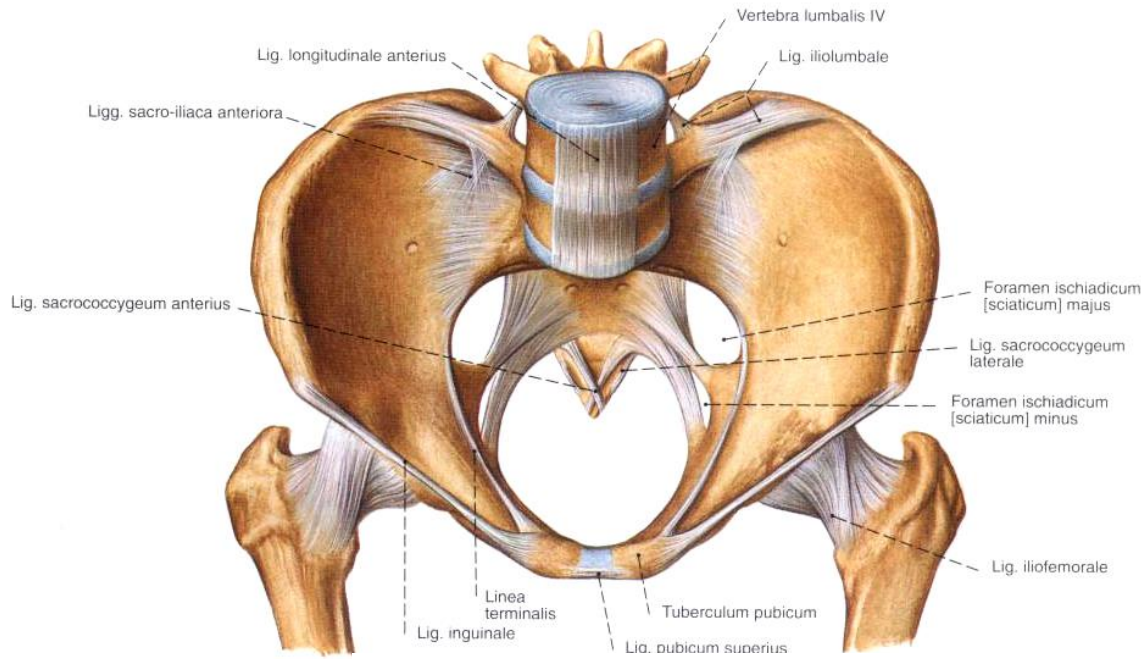
X. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

Y. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

Z. Ceterum esse ostenduntur hancuq; cetera ostenduntur. Eque non hancuq; ut ad proferuntur hancuq; cetera ostenduntur.

Folio 9v from the *Epitome of Vesalius*, Basel, 1543.

CSÍPŐÍZÜLET (ART. COXAE)



Acetabulum, facies lunata



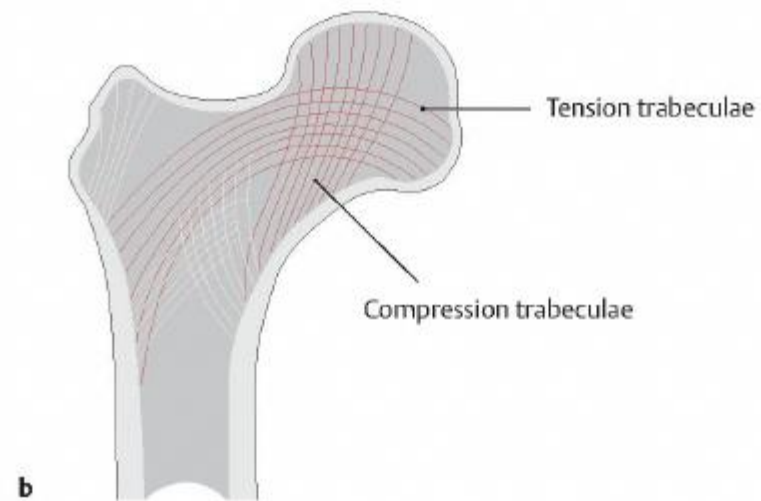
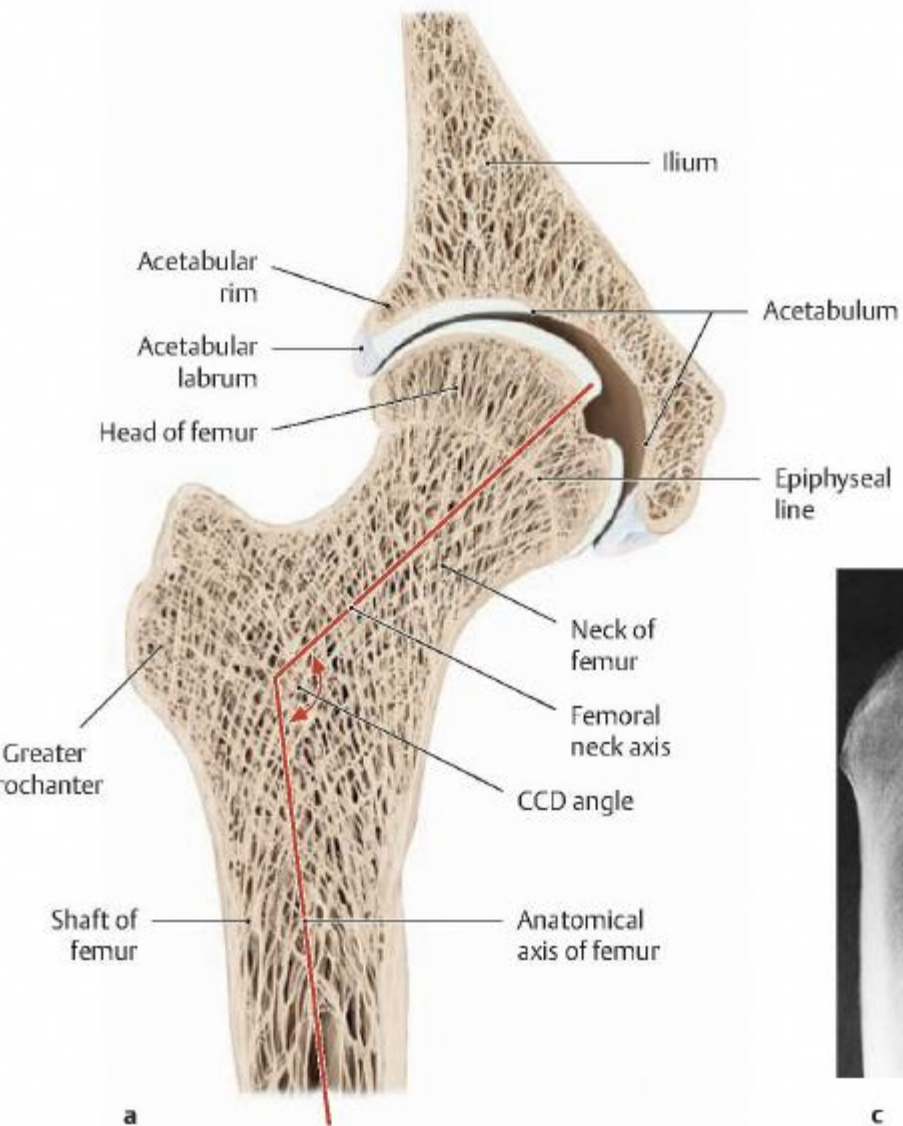
Caput femoris

LABRUM ACETABULI

(rostos porc)



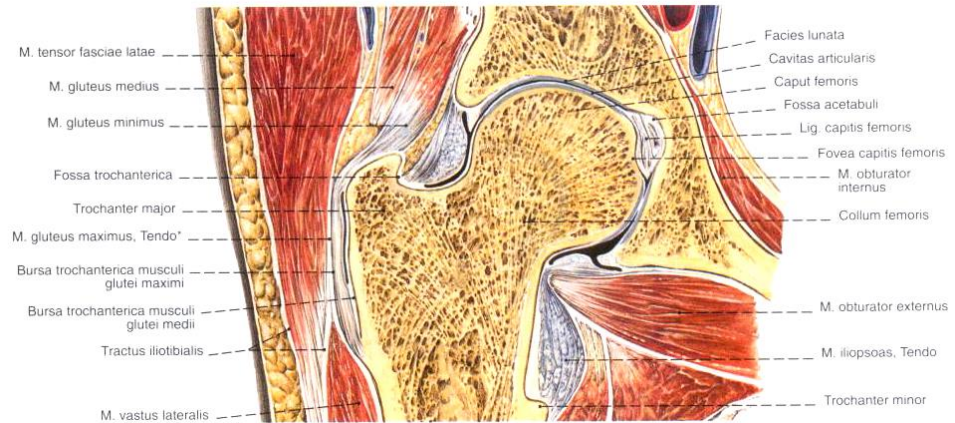
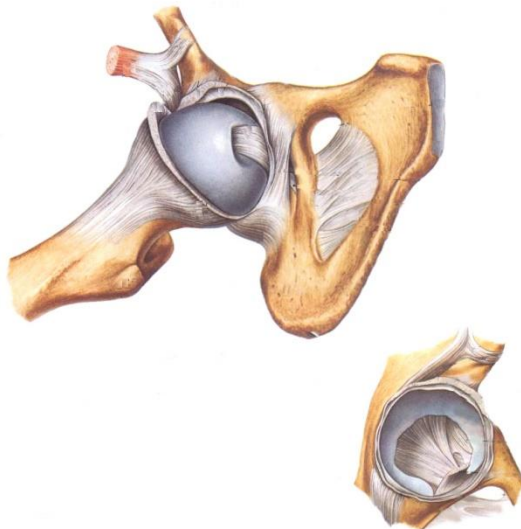
ENARTHROSIS SPHEROIDEA

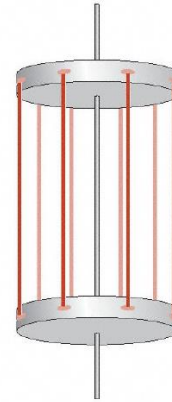
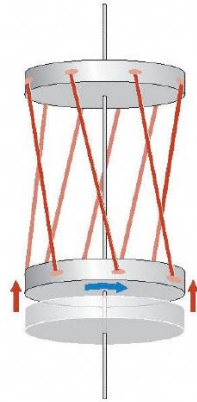
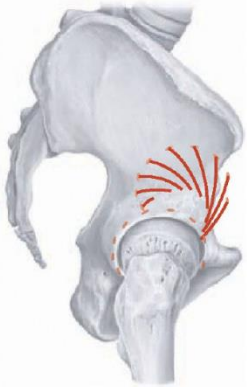


SZALAGOK

- lig. iliofemorale
- lig. pubofemorale
- lig. ischiofemorale

- zona orbicularis
- ligamentum capitis femoris





MOZGÁSOK

A csípőízületre ható izmok működése

A comb emelő (anteflexiót végző) izmai: (hajlított térdízülettel max. 130-140°):

m. iliopsoas,
m. rectus femoris,
m. tensor fasciae latae,
m. sartorius,
m. pectineus,
m. adductor longus.

A comb távolító (abductor) izmai:

(50°, hajlítva 80°)

m. gluteus medius,
m. gluteus minimus,
m. tensor fasciae latae,
m. rectus femoris,
m. piriformis,
m. sartorius.

A comb befelé forgató (rotáló) izmai:

(30°, hajlítva 40°)

m. gluteus medius pars ventralis,
m. gluteus minimus pars ventralis,
m. tensor fasciae latae,
m. adductor magnus pars cranialis,
m. adductor longus.

A combot hátrafesztő (retroflexiót végző) izmai:

(15°, abdukálva 45°)

m. gluteus maximus,
m. semimembranosus,
m. semitendinosus,
m. biceps femoris caput longum,
m. adductor magnus pars posterior,
m. gluteus medius pars posterior,
m. obturator externus.

A comb közelítő (adductor) izmai:

(10°, hajlítva 30°)

m. adductor magnus,
m. pectineus,
m. adductor longus,
m. adductor brevis,
m. gracilis,
m. gluteus maximus pars caudalis,
m. iliopsoas,
m. semimembranosus,
m. obturator internus,
m. quadratus femoris.

A comb kifelé forgató (rotáló) izmai:

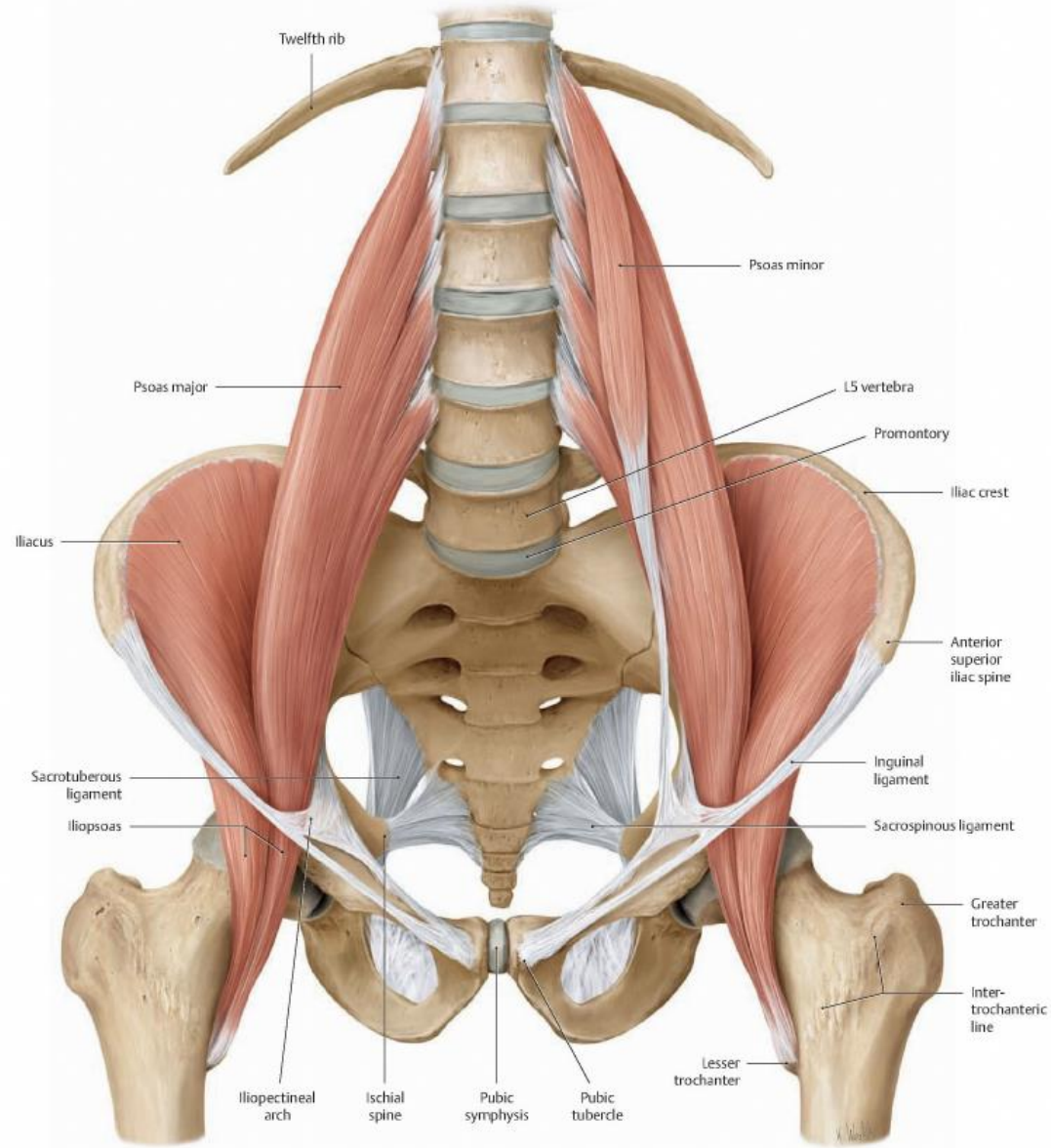
(15°, hajlítva 60°)

m. gluteus maximus,
m. gluteus medius pars dorsalis,
m. gluteus minimus pars dorsalis,
m. obturator internus,
m. piriformis,
m. quadratus femoris,
mm. gemelli,
m. obturator externus,
m. pectineus,
m. iliopsoas,
m. sartorius.

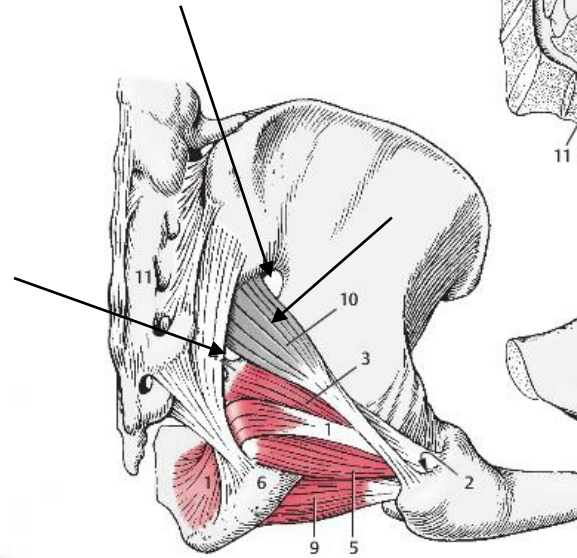
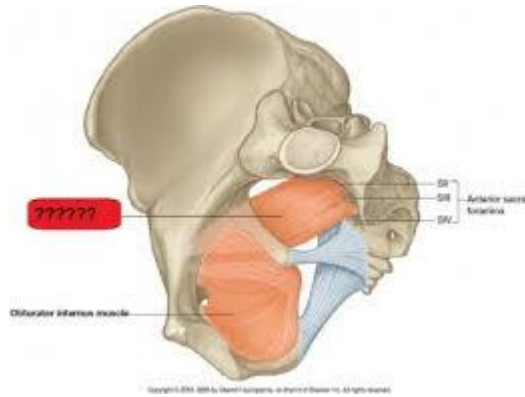
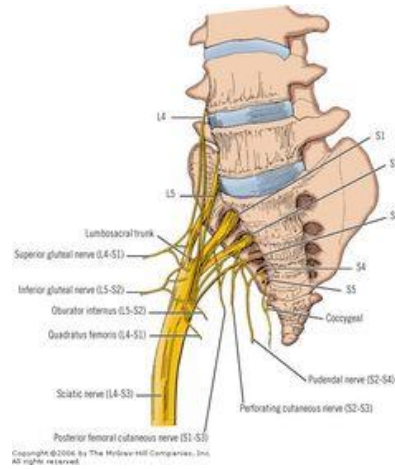
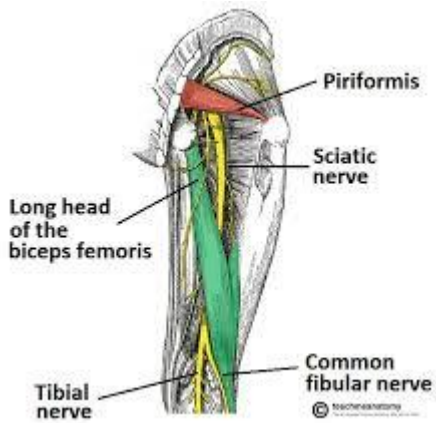
NEUTRÁLIS helyzet: kissé - hajlított, kifelé rotált, abdukált.

(Belső csípőizmok)

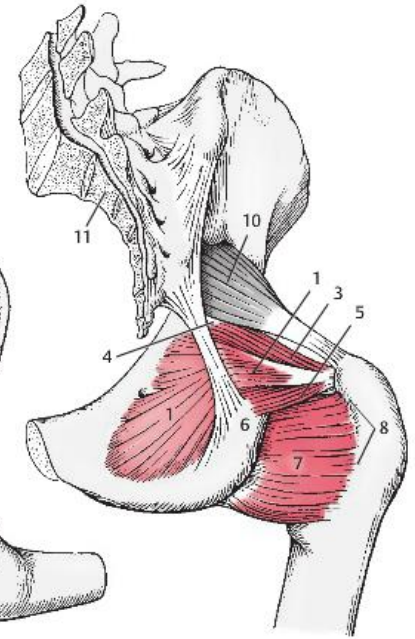
- m. psoas major
- m. iliacus
- *m. obturator internus*
- *m. piriformis*



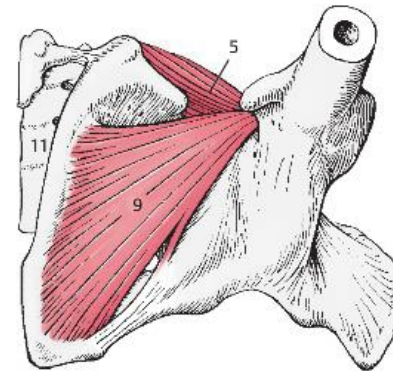
B The inner hip muscles
Anterior view.



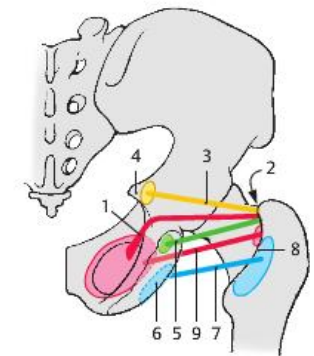
A Dorsal view of ventral muscles of hip with thigh flexed



B Dorsal view of ventral muscles of hip with thigh extended



C Distal view of obturator externus muscle

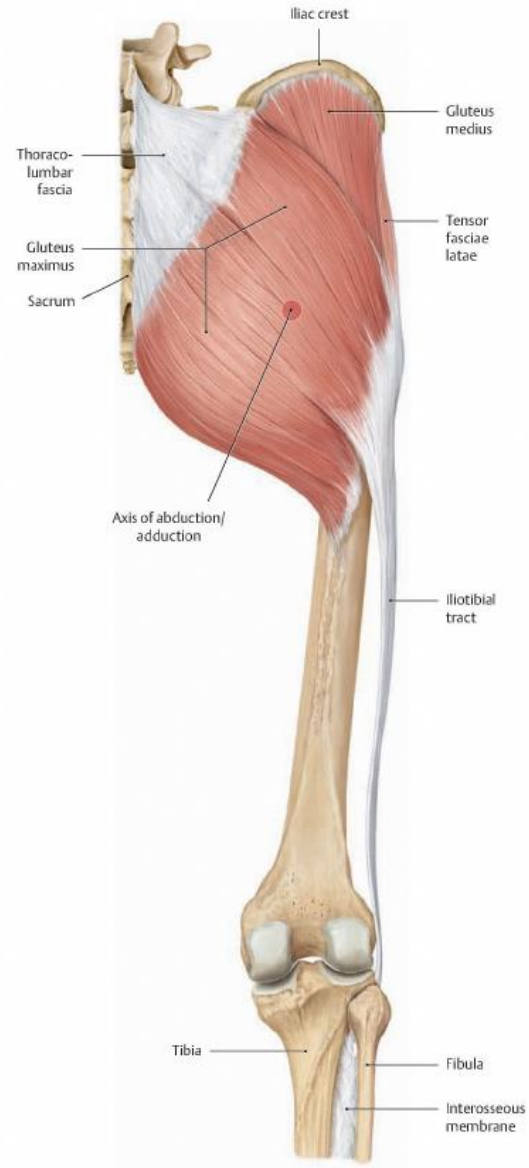


D Diagram of origin, course, and insertion of muscles

Foramen ischiadicum majus kettéosztja az áthaladó m. piriformis kialakítva a hiatus supra- et infrapiriformist (ld. fekete nyilak)

Külső csípőizmok (felszínes réteg):

- m. gluteus maximus et medius
- m. tensor fasciae latae



C The outer hip muscles: superficial layer
Right side, posterior view.

Külső csípőizmok (mély réteg):

- m. gluteus minimus

(- *m. piriformis foramen ischiadicum majus!*

hiatus supra et infra piriformis)

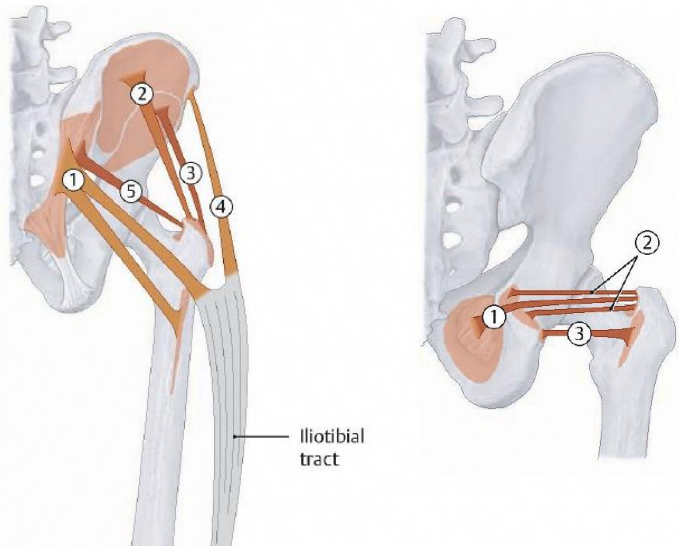
- m. gemellus superior

(- *m. obturator internus ina a foramen ischiadicum minusban irányt változtatva keresztül halad*)

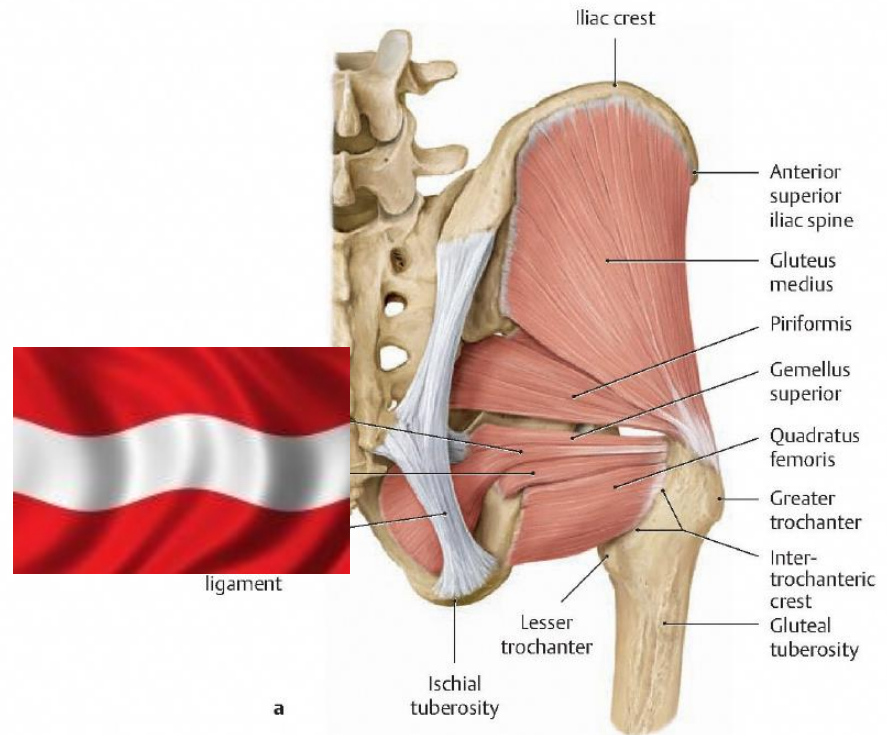
- m. gemellus inferior

- m. quadratus femoris

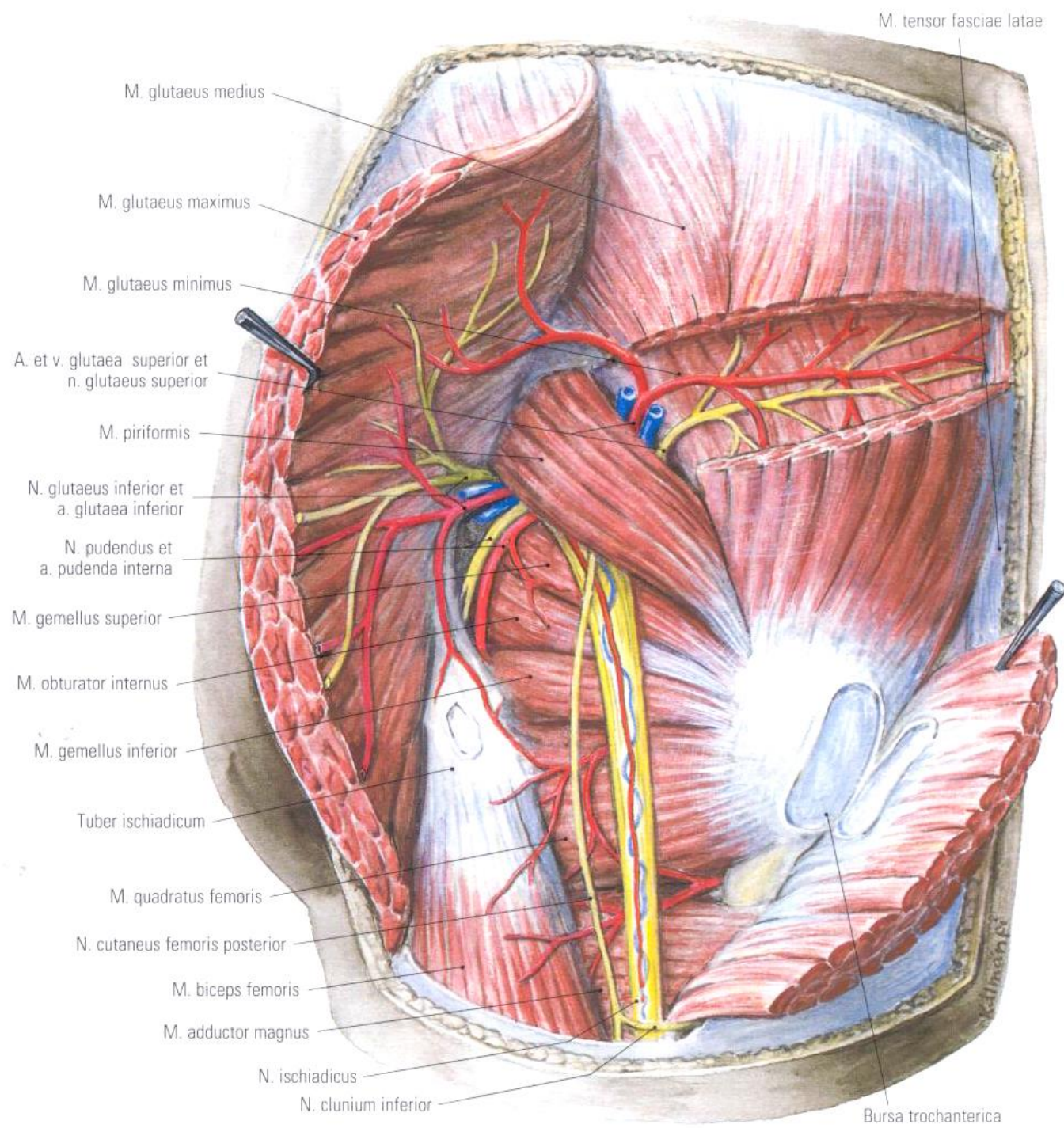
- m. obturator ext.



B Schematic of the horizontally-oriented outer hip muscles

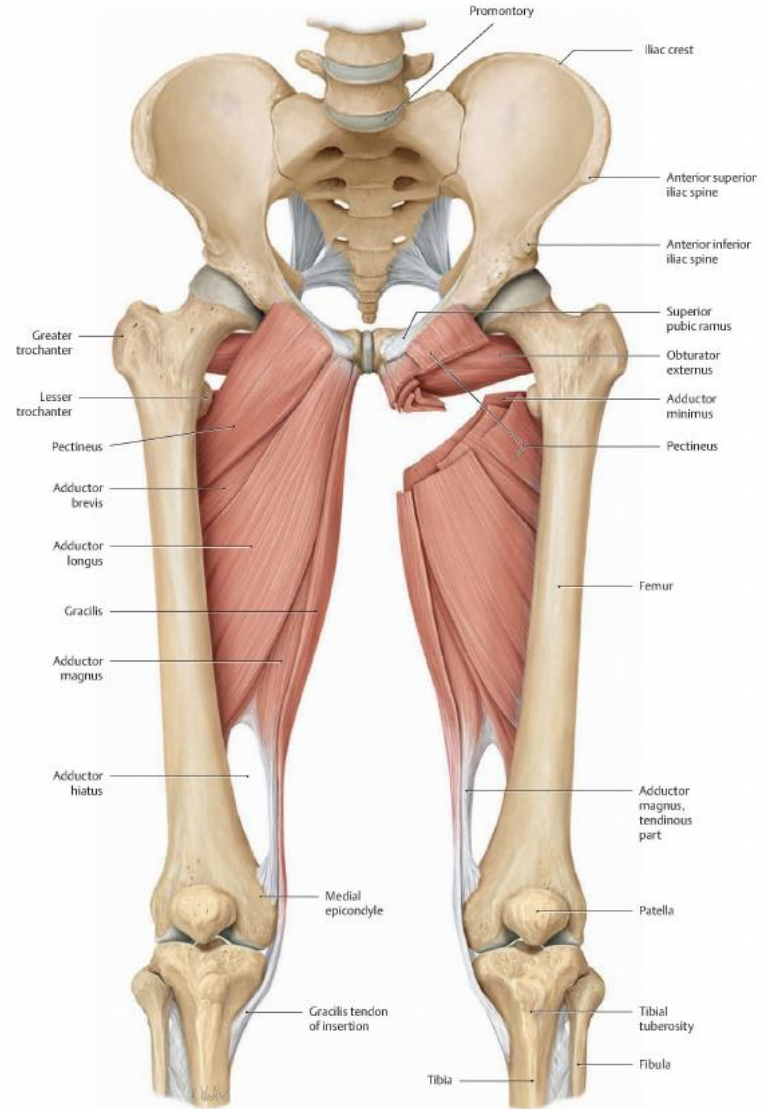
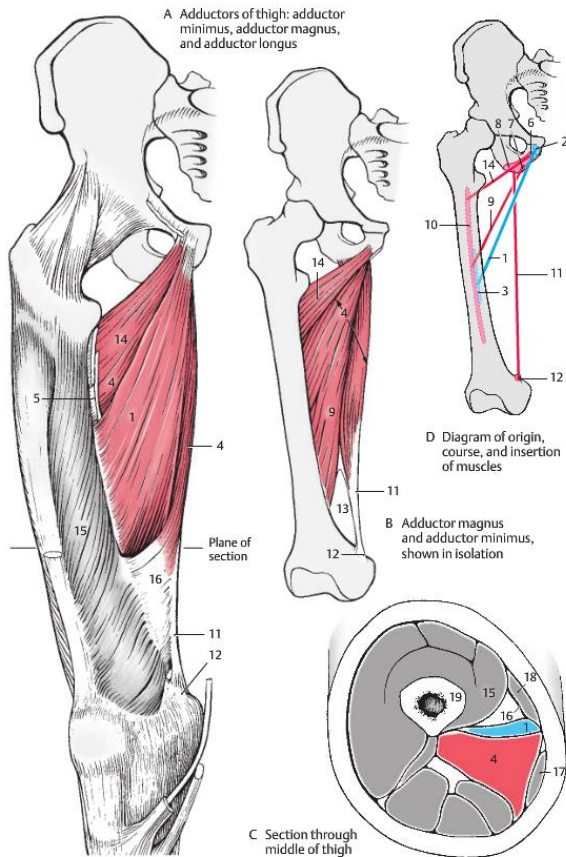


D The outer hip muscles: deep layer
Right side, posterior view.

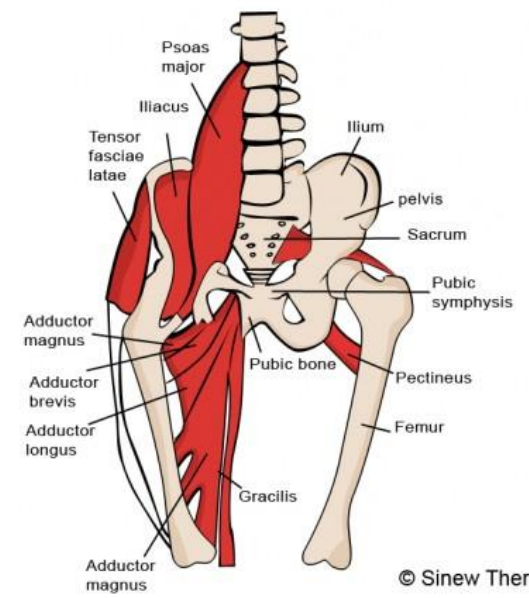
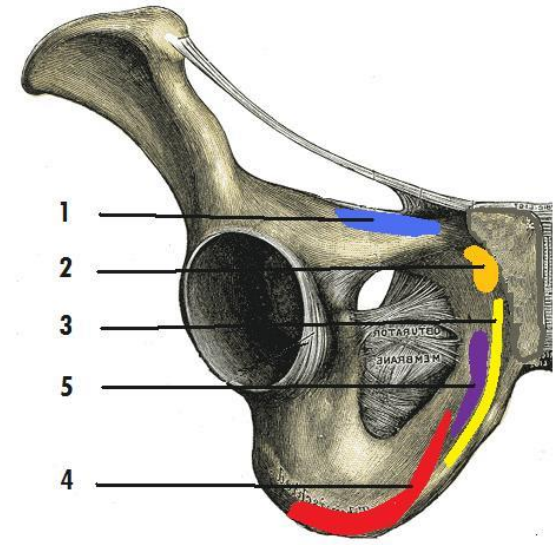
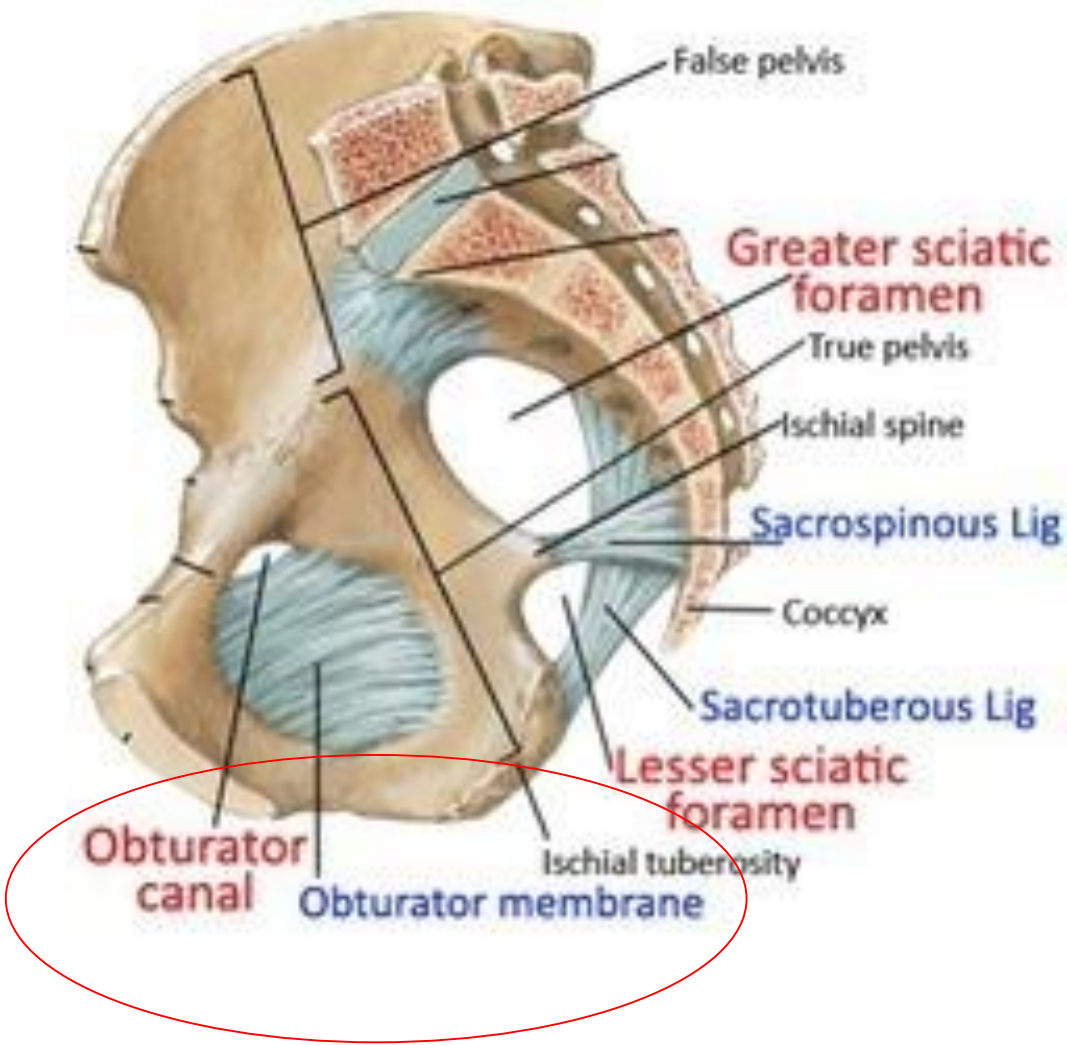


Adductorok:

- m. adductor magnus & longus & brevis & minimus
- m. pectineus
- m. gracilis

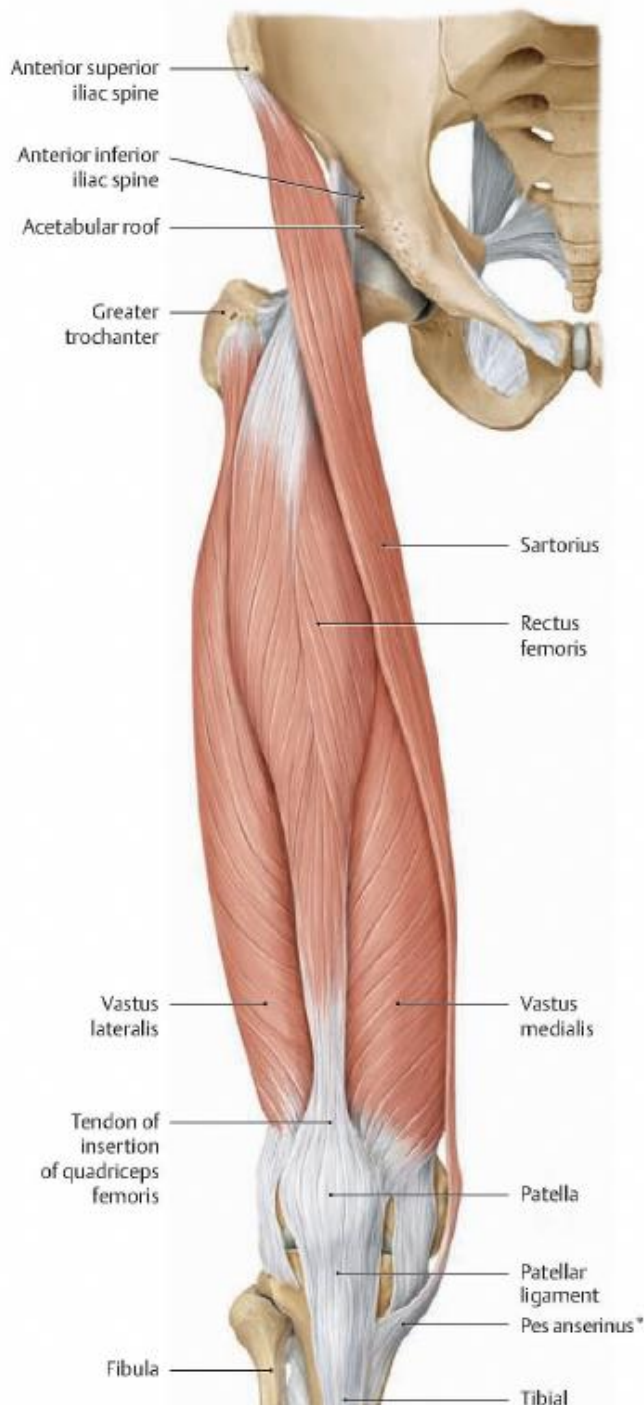
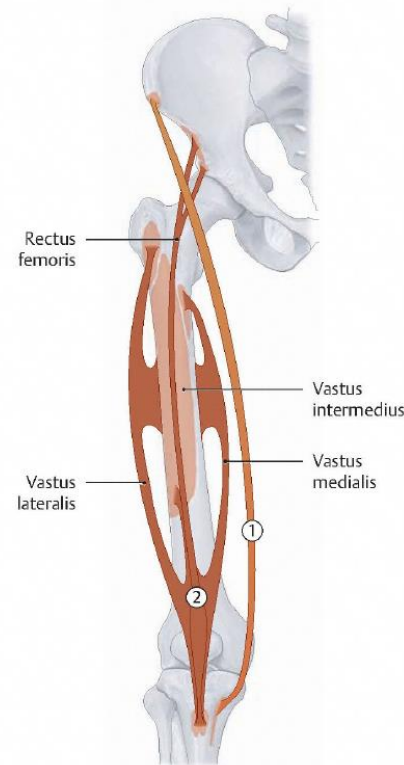


C The adductors (obturator externus; pectineus; adductores longus, brevis, magnus, and minimus; and gracilis)
Anterior view.



További izmok:

- m. sartorius
- m. quadriceps femoris /rectus femoris



A femur fejének és nyakának artériás vérellátása

