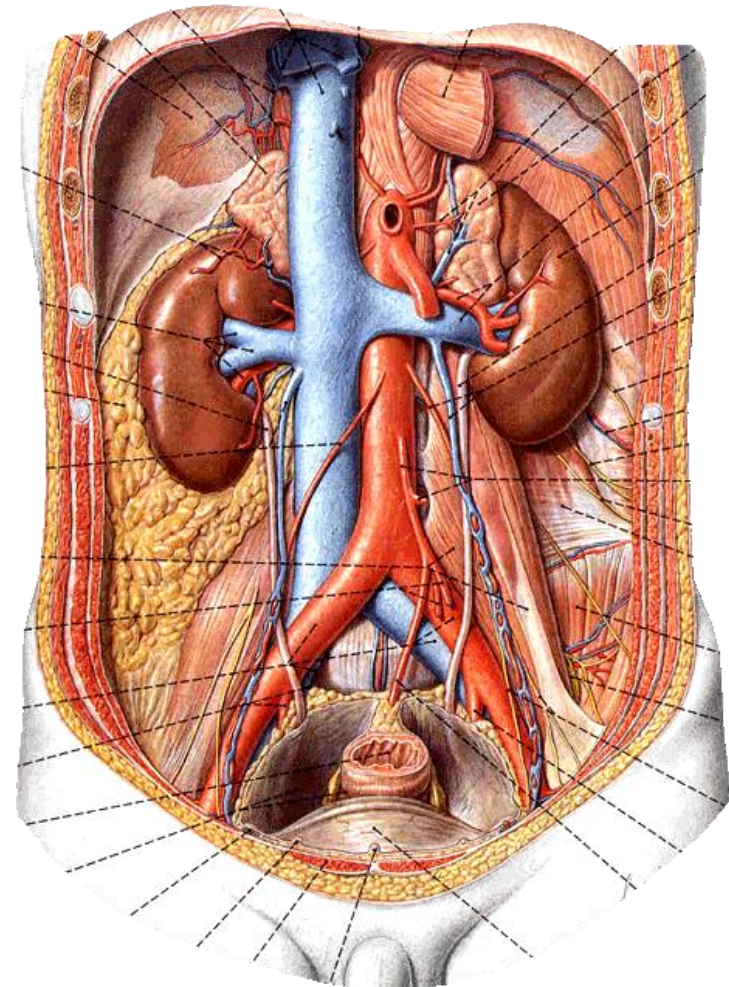


Blood supply of the pelvis

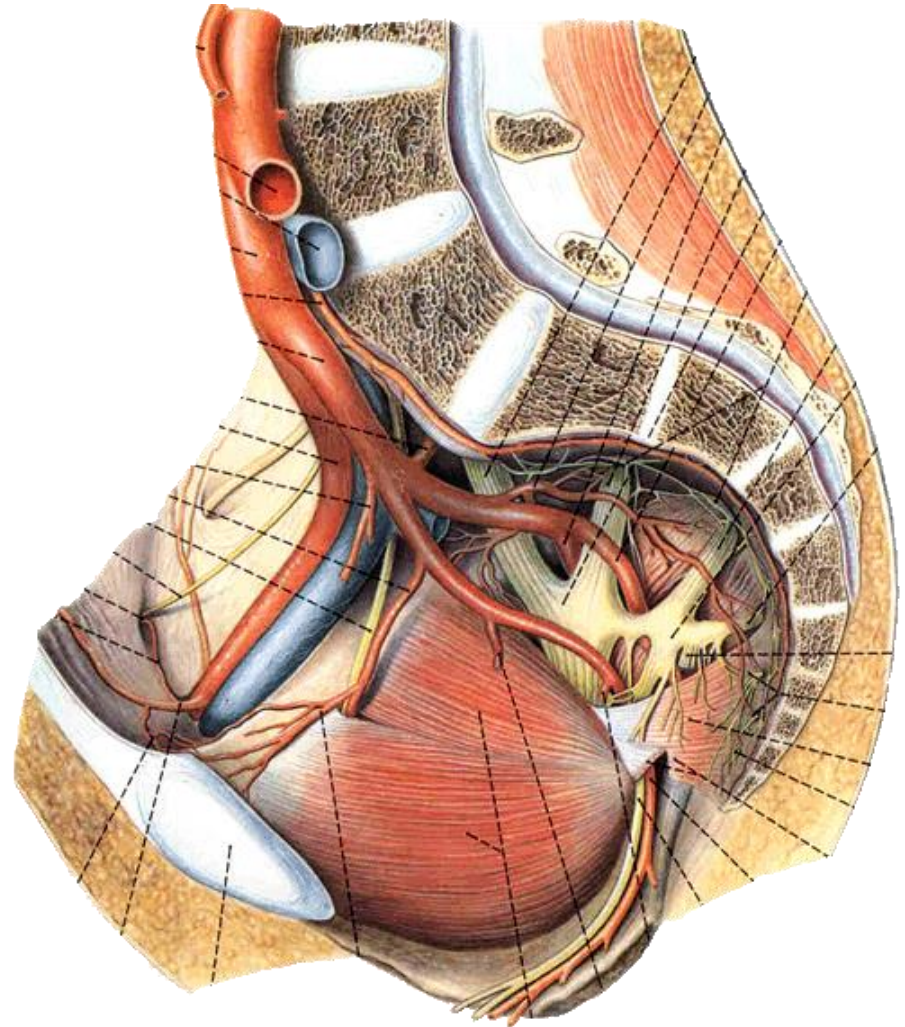
- Common iliac artery
- Continuation of abdominal aorta at level of L4 vertebra
- Terminates in front of sacroiliac joint by dividing into internal and external iliac arteries



Internal iliac artery

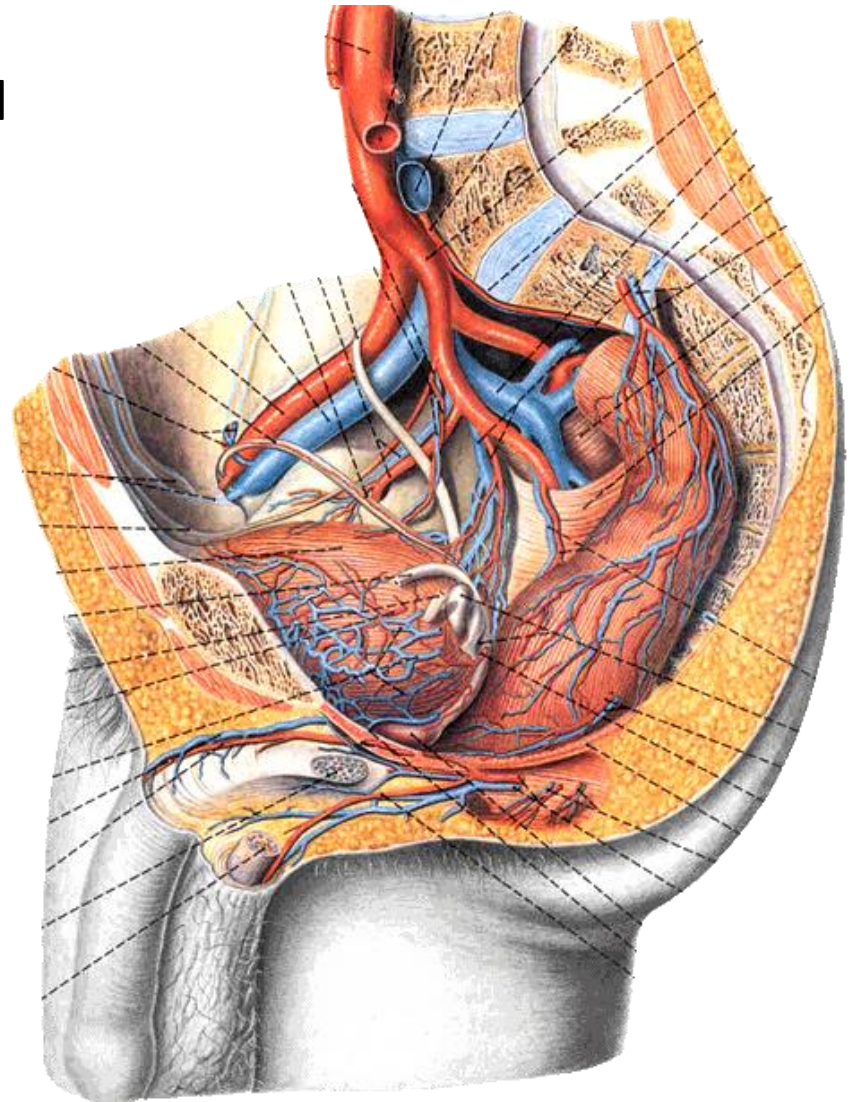
Parietal iliac artery

- Obturator a.
- Iliolumbar a.
- Lateral sacral a.
- Superior gluteal a.
- Inferior gluteal a.

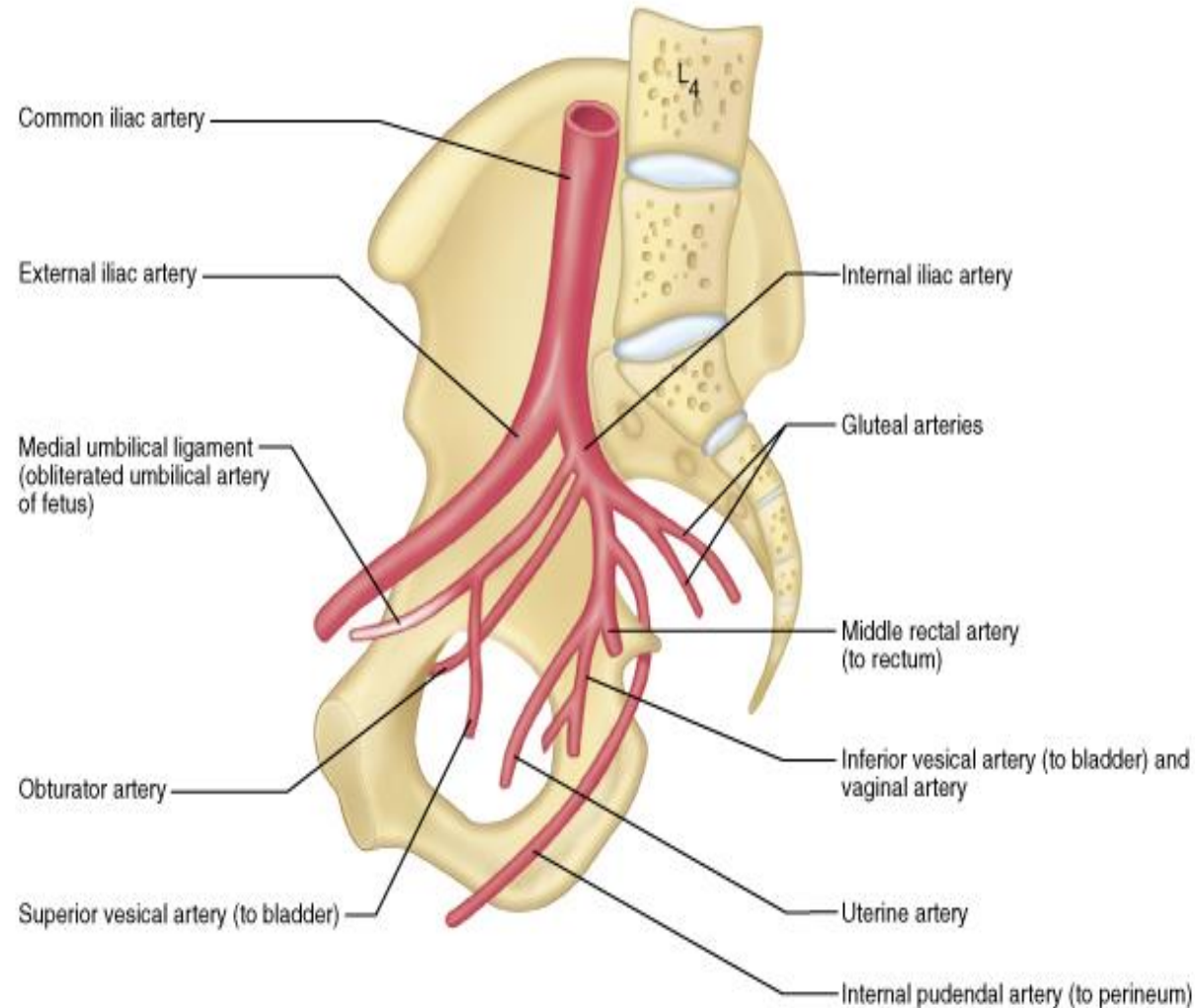


Visceral branches

- Umbilical a. → superior vesical a.
- Inferior vesical a
- **Uterine a**
- Inferior rectal a
- **Internal pudendal a.**



Branches of internal iliac a.



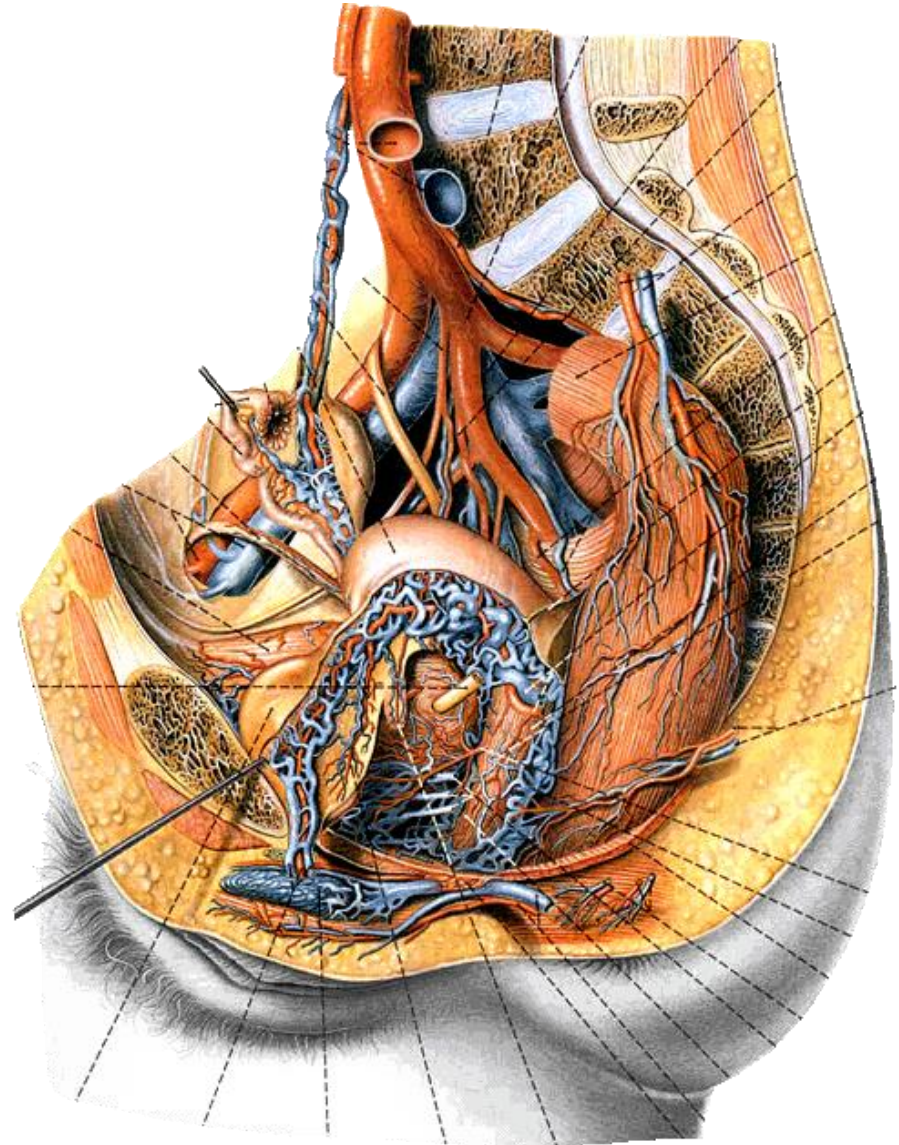
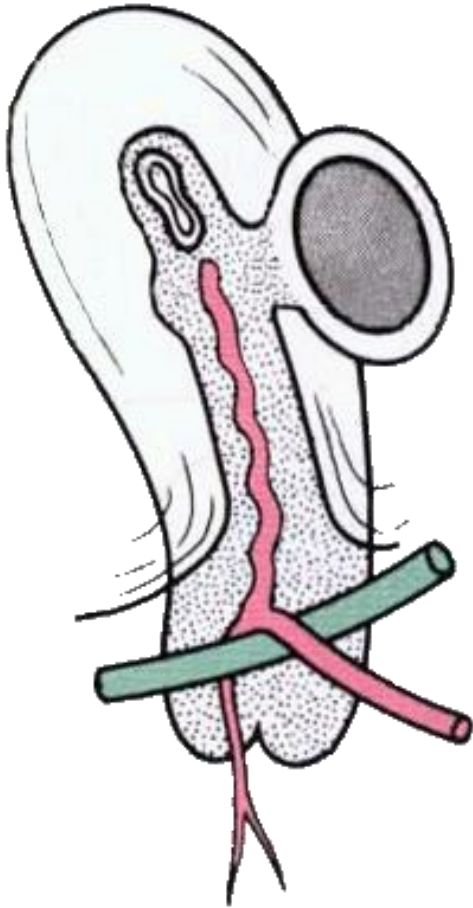
SOMATIC BRANCHES-- TO MUSCLES

- Gluteal a. (to gluteal mm.)
- Internal pudendal (to pelvic floor, external genitalia)

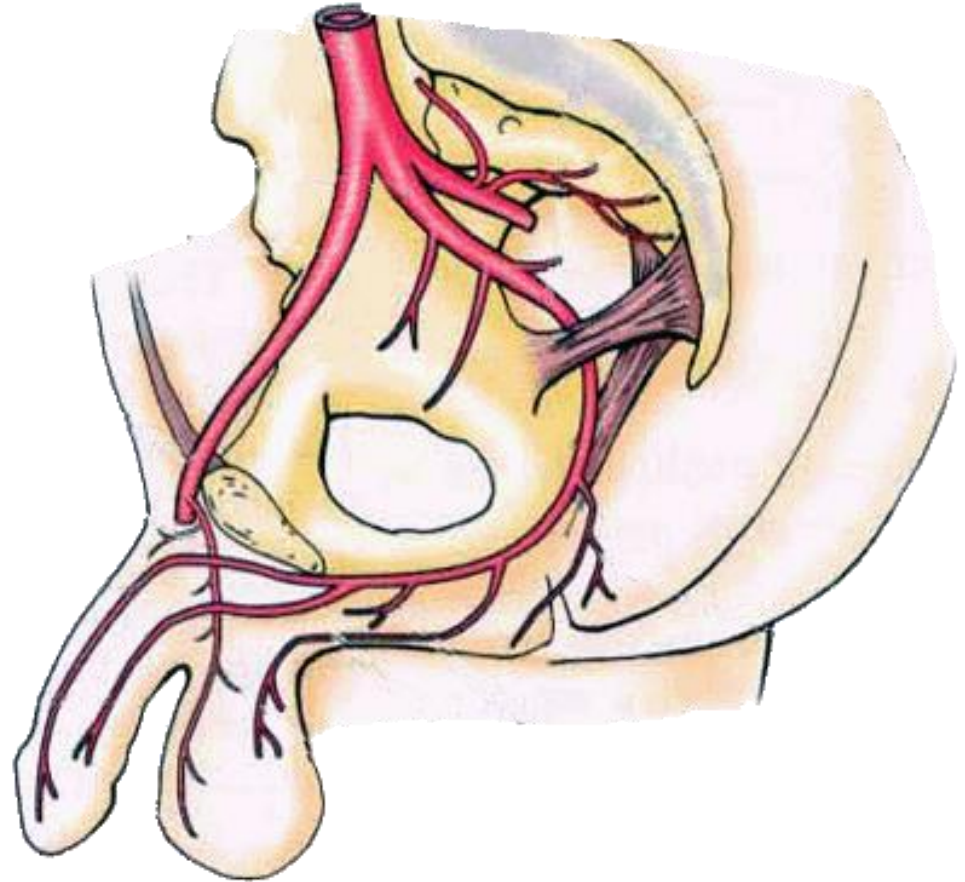
VISCERAL BRANCHES

- Vesical a. (to bladder)
- Uterine (to uterus)
- Middle rectal (to rectum)

- **Uterine a.** about 2cm from neck of uterus it crosses above and in front of ureter

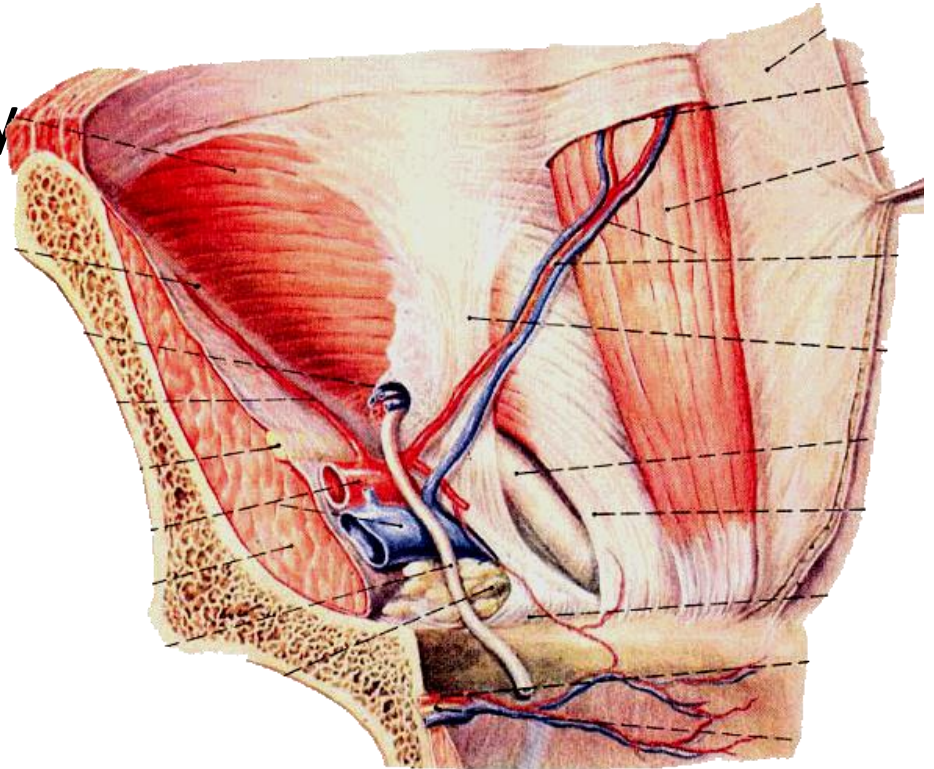


- **Internal pudendal artery**
 - Perineal artery
 - Anal artery
 - Dorsal artery of penis (clitoris)



External iliac artery

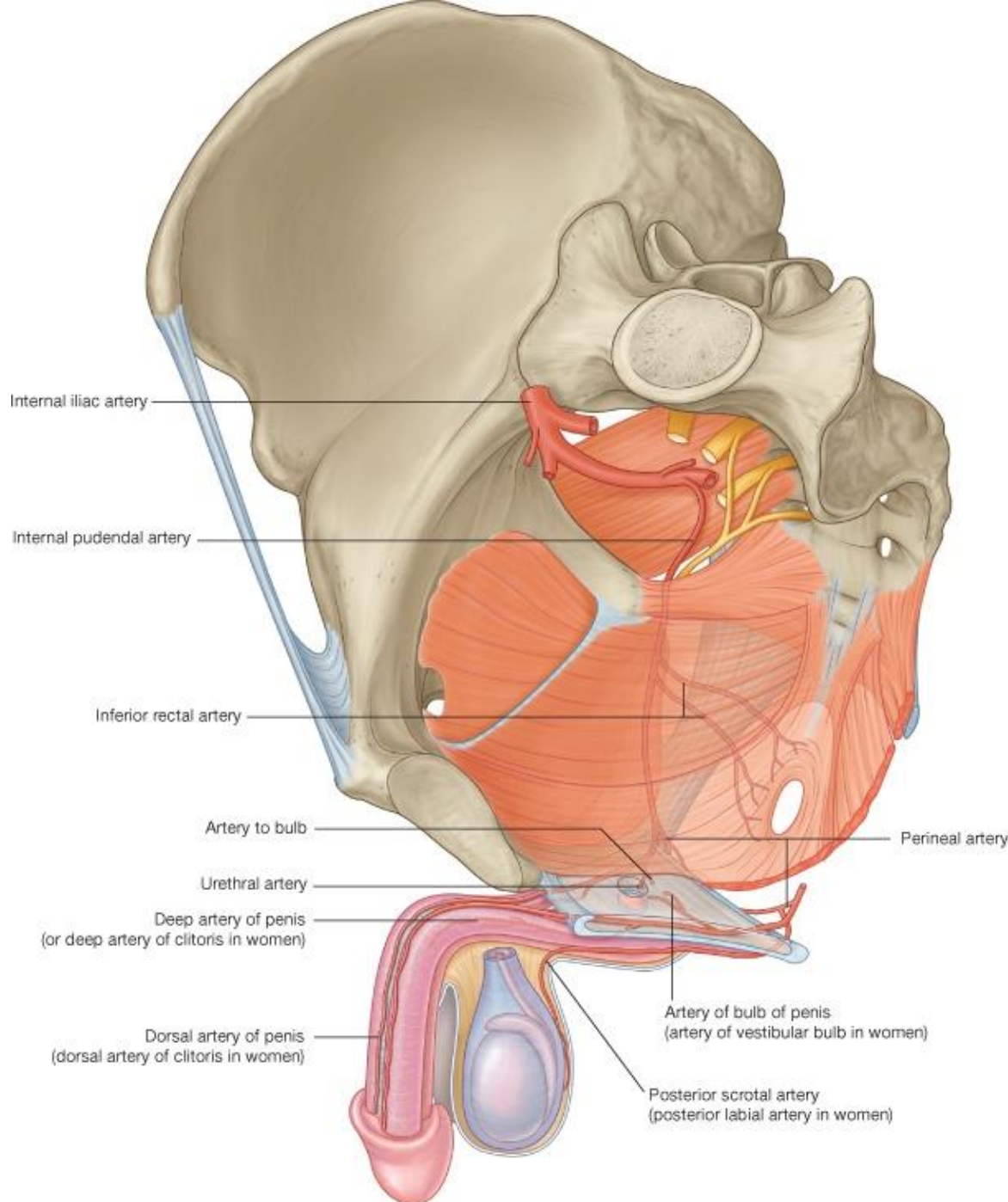
- Inferior epigastric artery
- Deep iliac circumflex artery

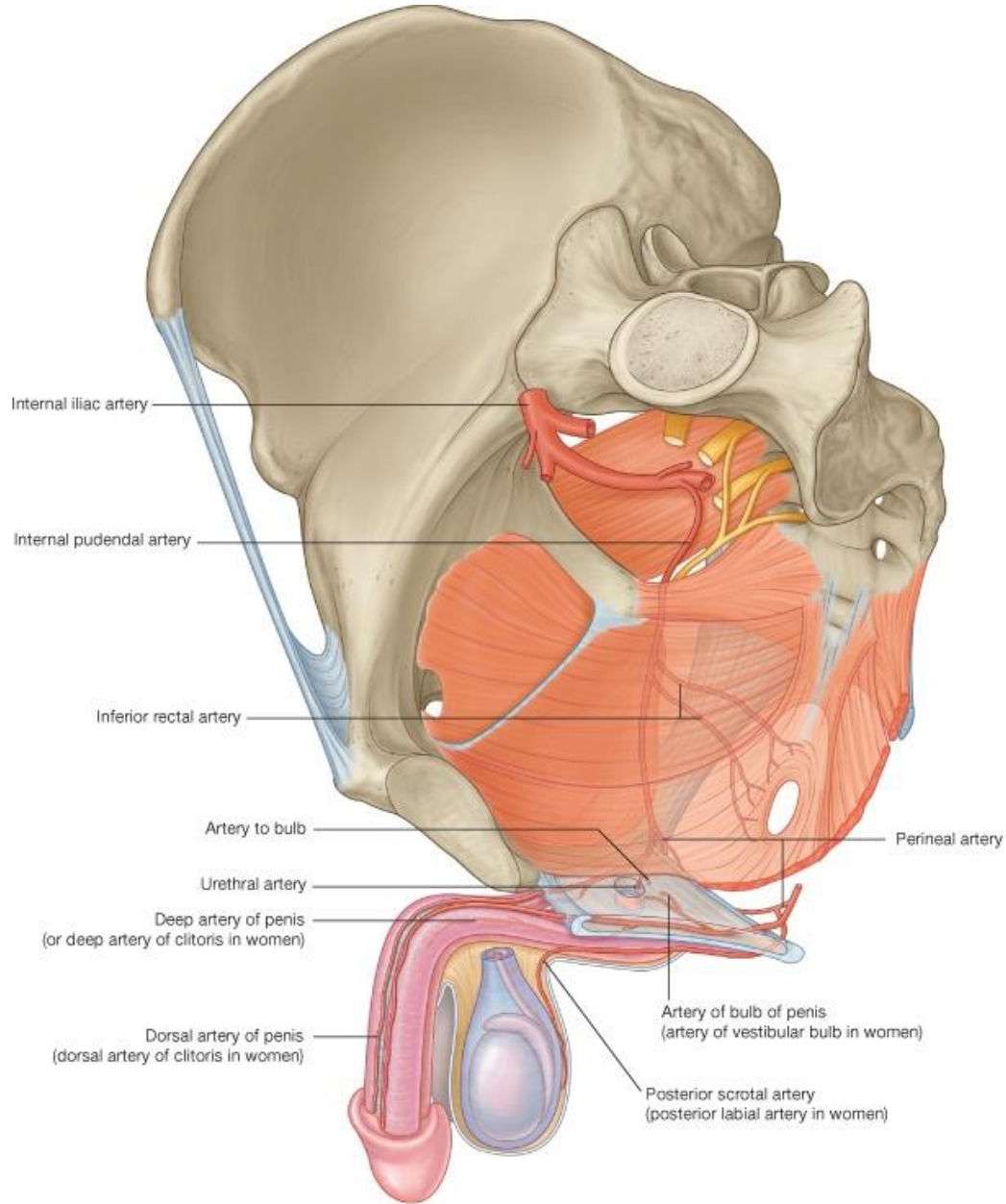


Arteries in perineum

- **Internal Pudendal A., V.** (they exit pelvis into gluteal region via greater sciatic foramen [infrapiriform] and reenter perineum via lesser sciatic foramen within the fascia of the obturator internus m. [passes through Pudendal or Alcock's canal with pudendal n.;])

- Inf. Rectal a.
- Perineal a. (clitoral or labial brs. in women)
- Post. Scrotal a.
- Dorsal a. of penis
- Deep a. of penis
- A. to & of bulb?





Veins of pelvis

Internal iliac vein

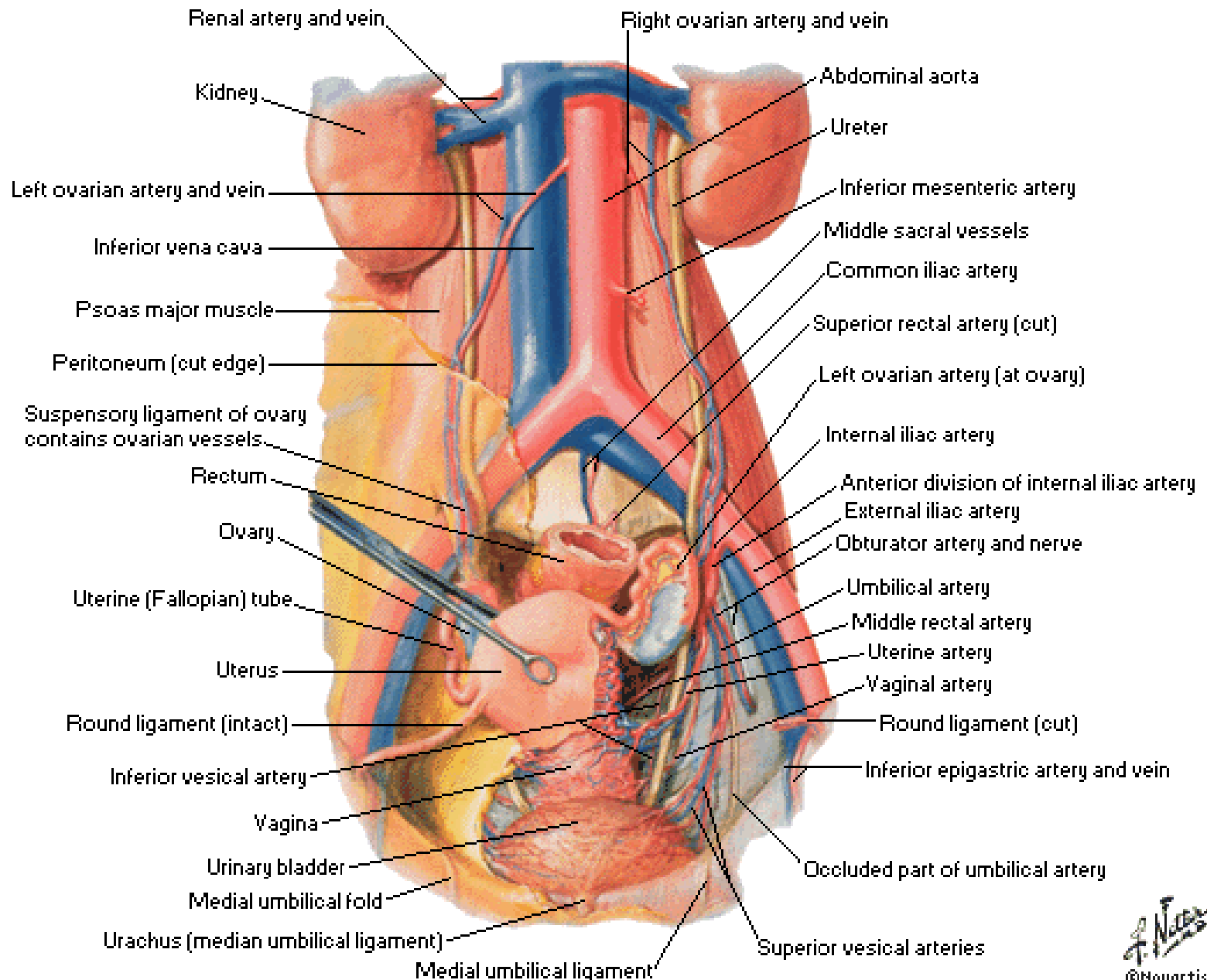
- Parietal tributaries: accompany with arteries
- Visceral tributaries

- ① Rectal venous plexus
- superior rectal vein → inferior mesenteric v.
 - inferior rectal vein → internal iliac v.
 - anal vein → internal pudendal v.
- ② Vesical venous plexus → vesical v.
- ③ Uterine venous plexus → uterine v.

Arteries and Veins of Pelvic Organs

Anterior View

Female



The lymphatic drainage of pelvis

Internal iliac lymph node

- Surround internal iliac vessels
- Receive afferents from pelvic viscera, perineum, buttock and back of thigh

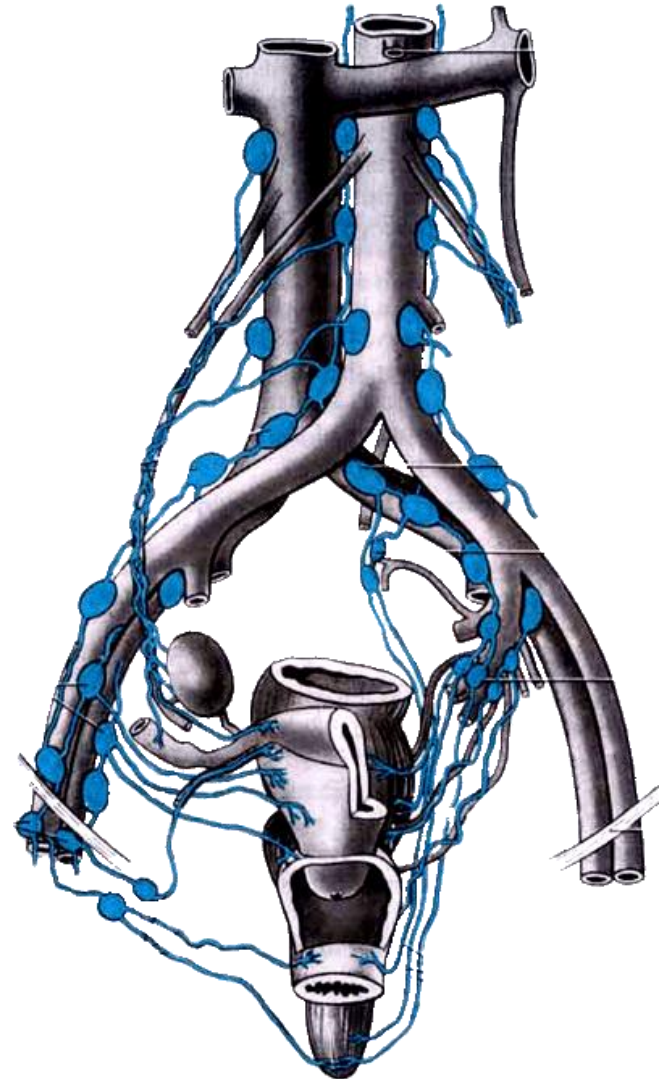
External iliac lymph nodes

- Lie along external iliac artery
- Receive afferents from lower limb and some parts of pelvic viscera

Sacral lymph node

Common iliac lymph node

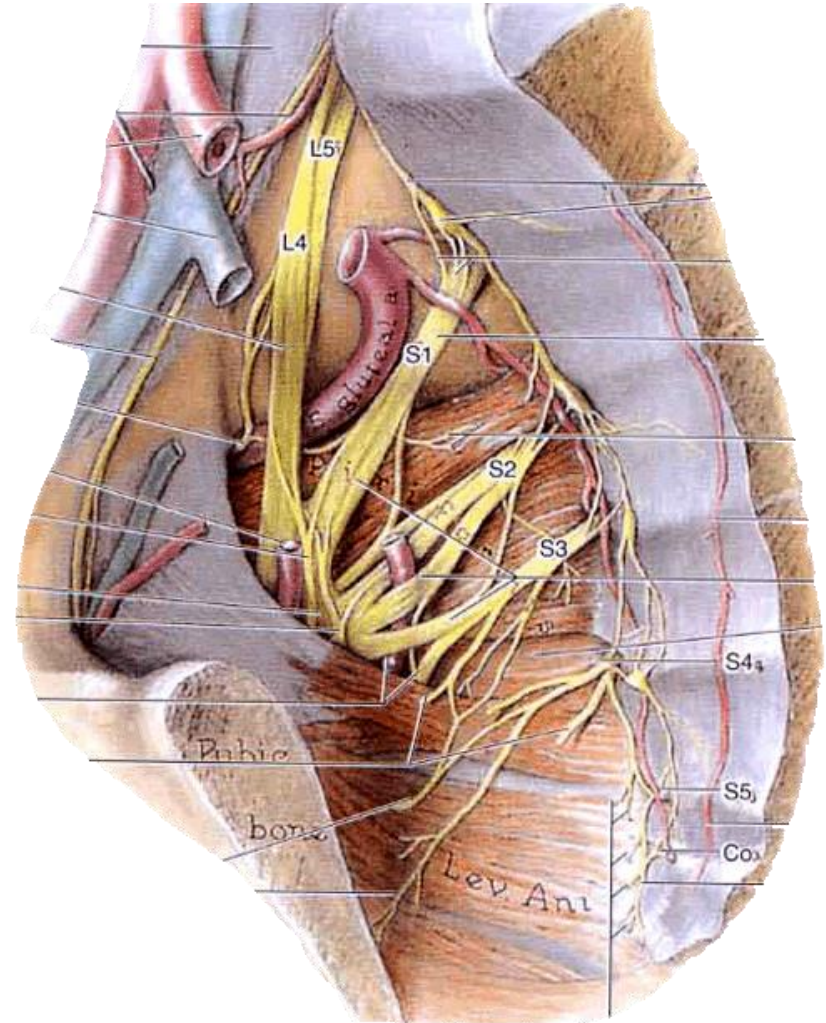
- Lie along common iliac artery
- Receive afferents from all the above nodes
- Efferents pass to lumbar lymph node



Sacral plexus 骶丛

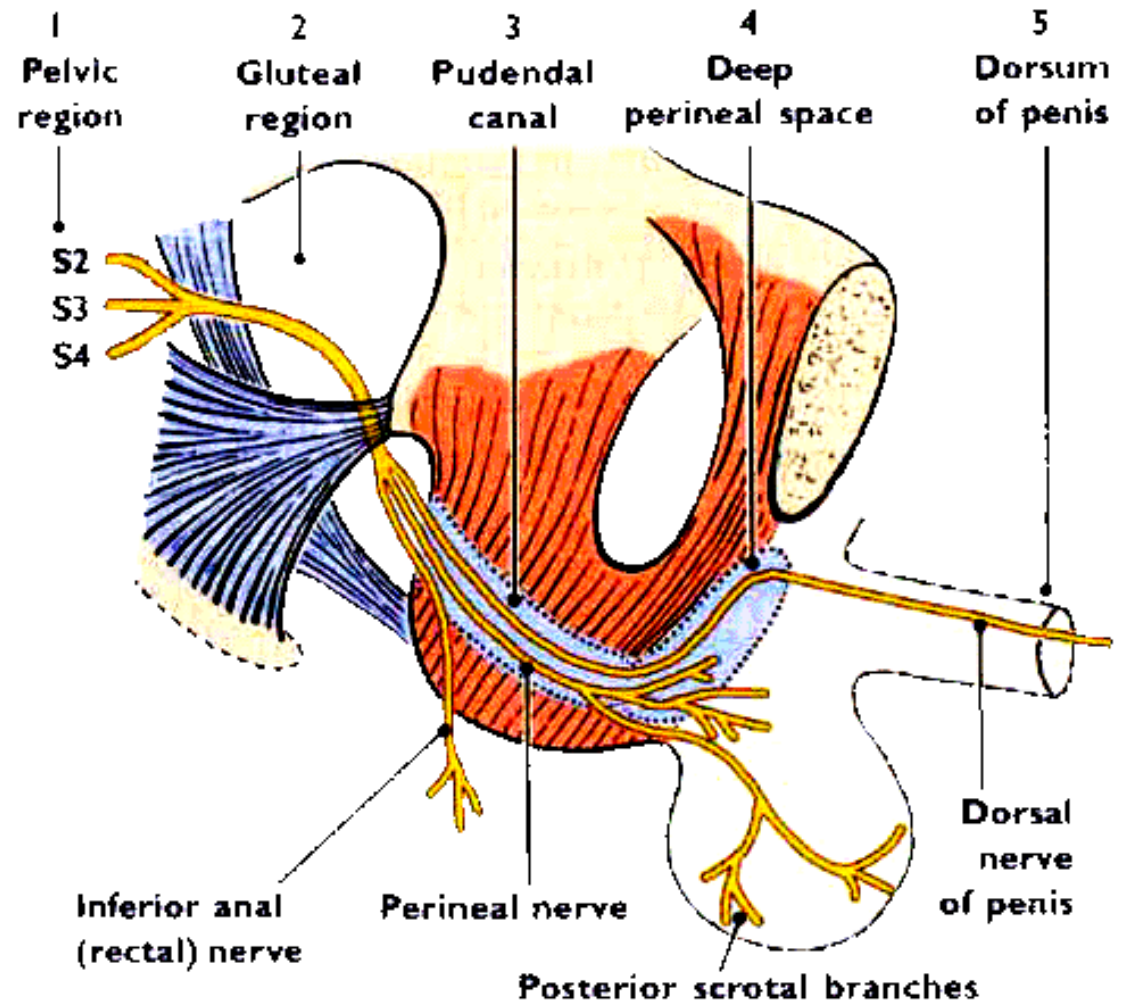
Formation: formed by anterior rami of L4 and L5 spinal nerves (the lumbosacral trunk) and anterior rami of sacral and coccygeal nerves

Position: lies in pelvic cavity, anterior to sacrum and piriformis

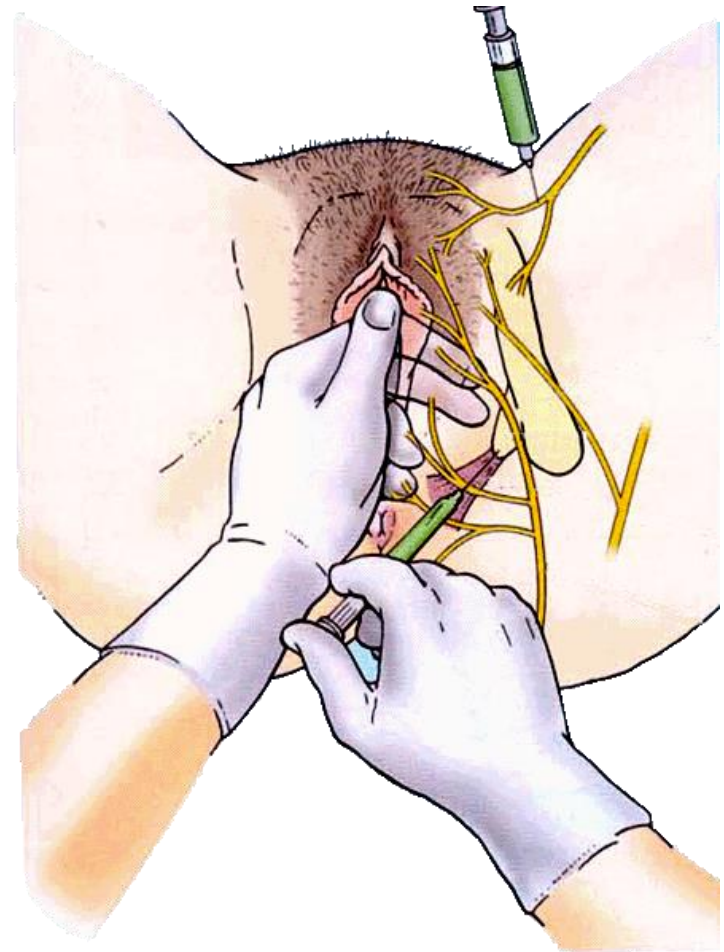
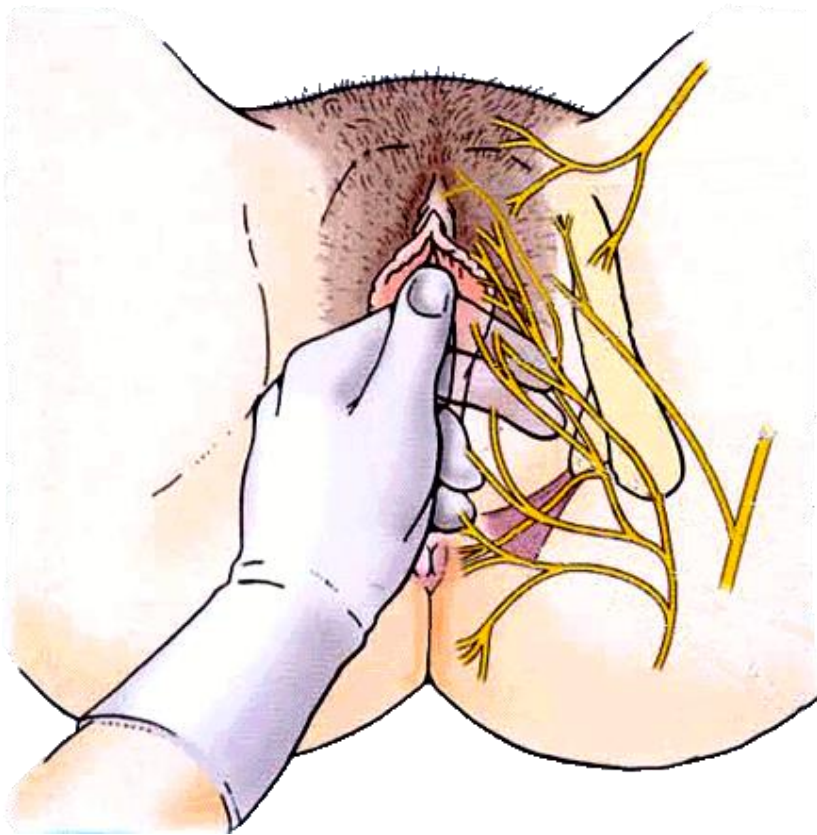


Branches

- Superior gluteal
- Inferior gluteal
- **Pudendal**
- Posterior femoral cutaneous
- **Sciatic Common**



Pudendal nerve block



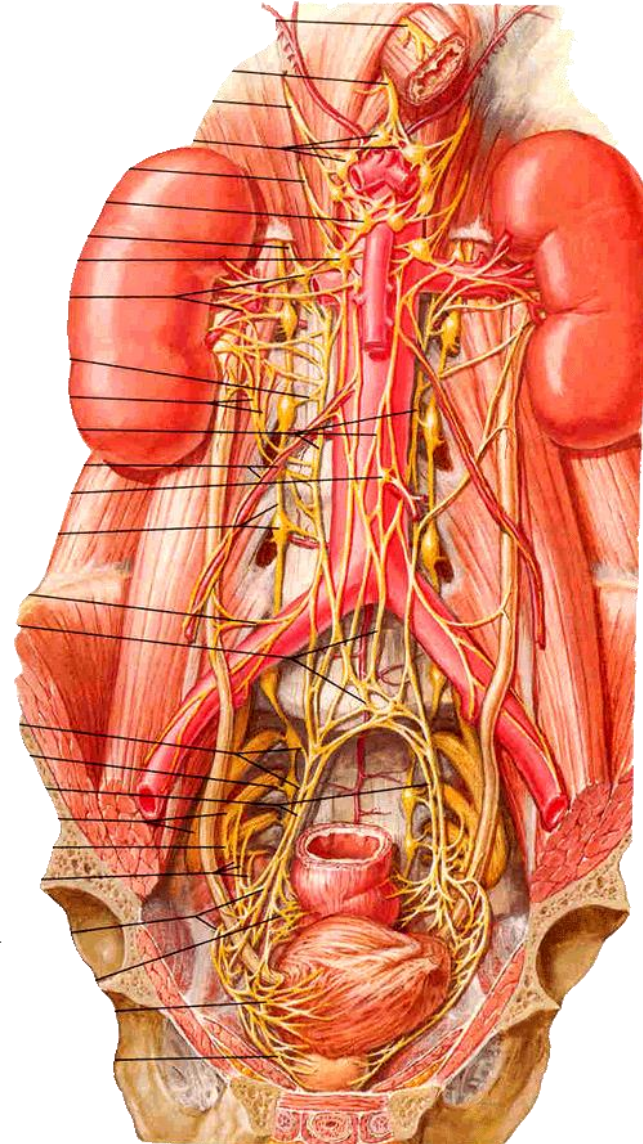
Autonomic plexuses of plevis

Hypogastric plexus

- Superior hypogastric plexus : lies in front of L5 between common iliac arteries
- Inferior hypogastric plexus (pelvic plexus): lie on each side of rectum

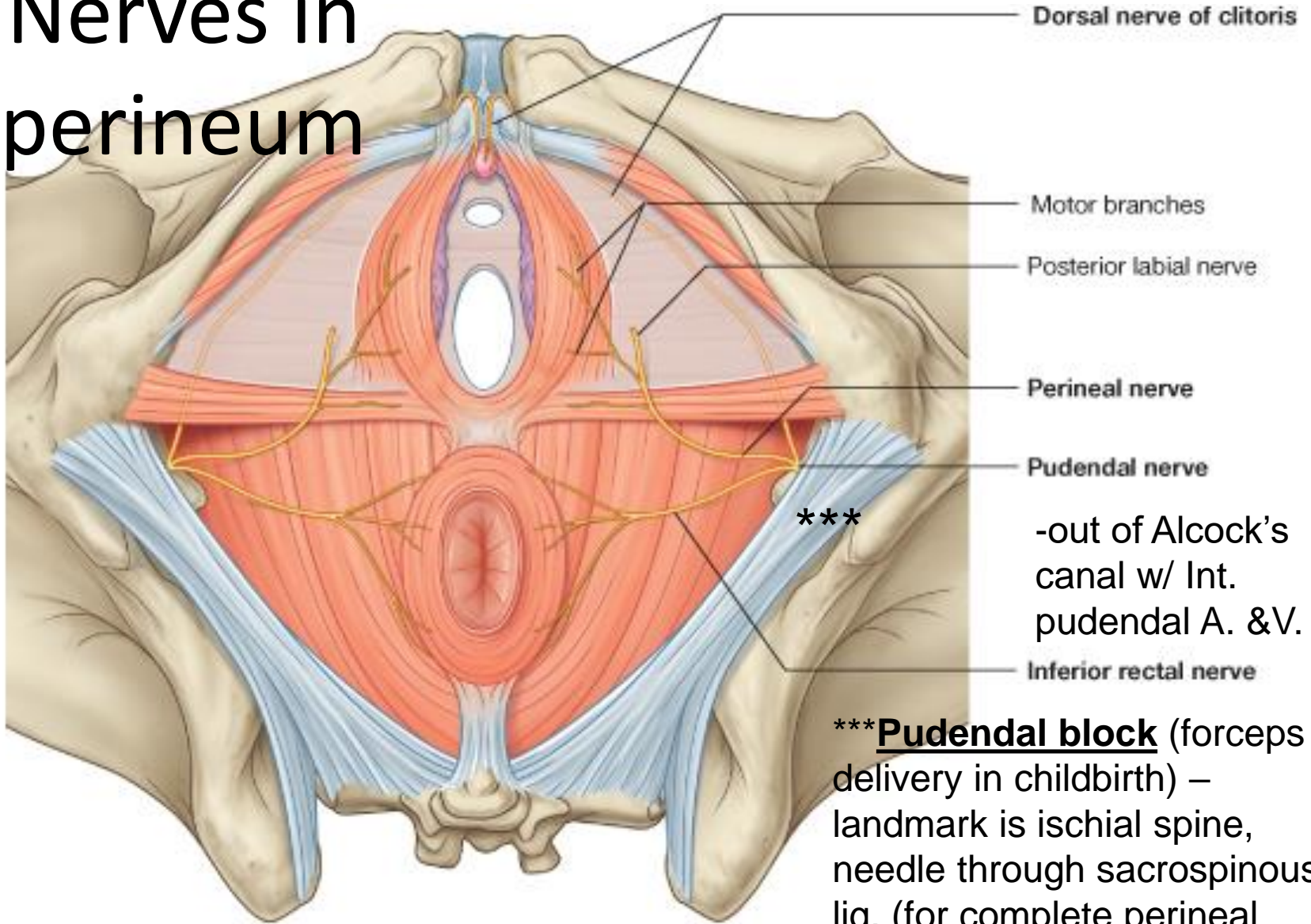
Sacral sympathetic trunk

- Is continuous above with the abdominal part
- Has 4 or 5 ganglion



B

Nerves in perineum



Dorsal nerve of clitoris

Motor branches

Posterior labial nerve

Perineal nerve

Pudendal nerve

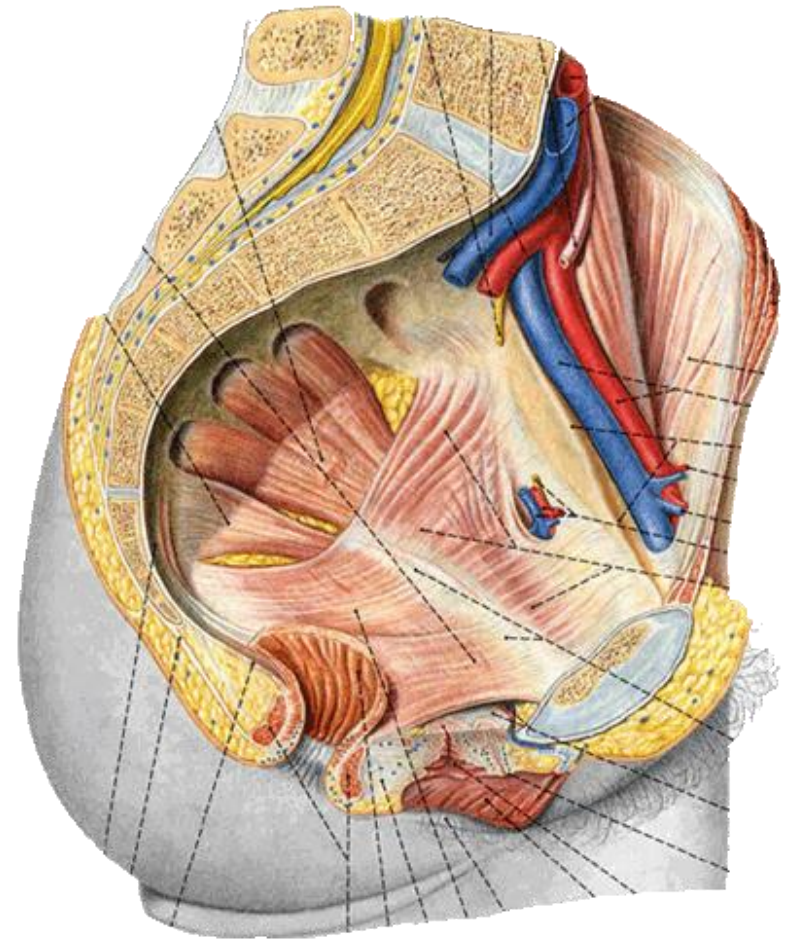
-out of Alcock's canal w/ Int. pudendal A. & V.

Inferior rectal nerve

*****Pudendal block** (forceps delivery in childbirth) – landmark is ischial spine, needle through sacrospinous lig. (for complete perineal block need to get ilioinguinal and genitofemoral ns.)

Muscles of pelvic wall

- Piriform m.
- Obturator internus m.



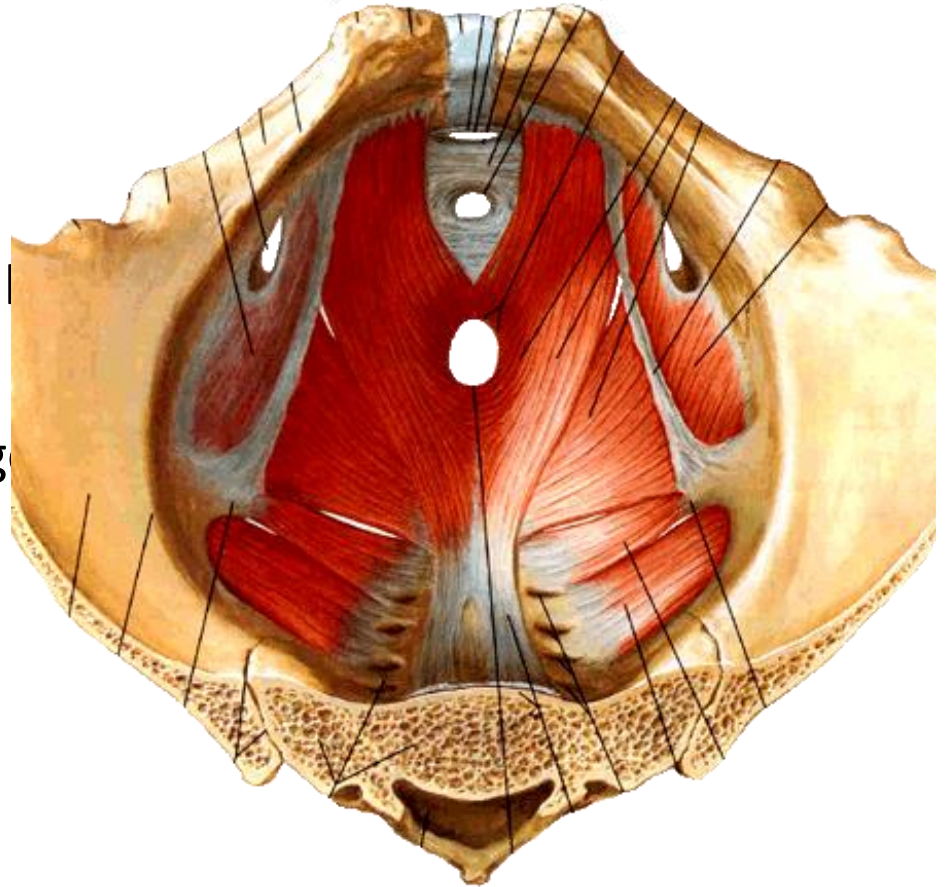
Muscles of floor of pelvis and pelvic diaphragm

Muscles of floor of pelvis

Levator ani

- Levateo prostate (pubovaginal)
- Puborectalis
- Pubococcygeus and iliococcyg

Coccygeus

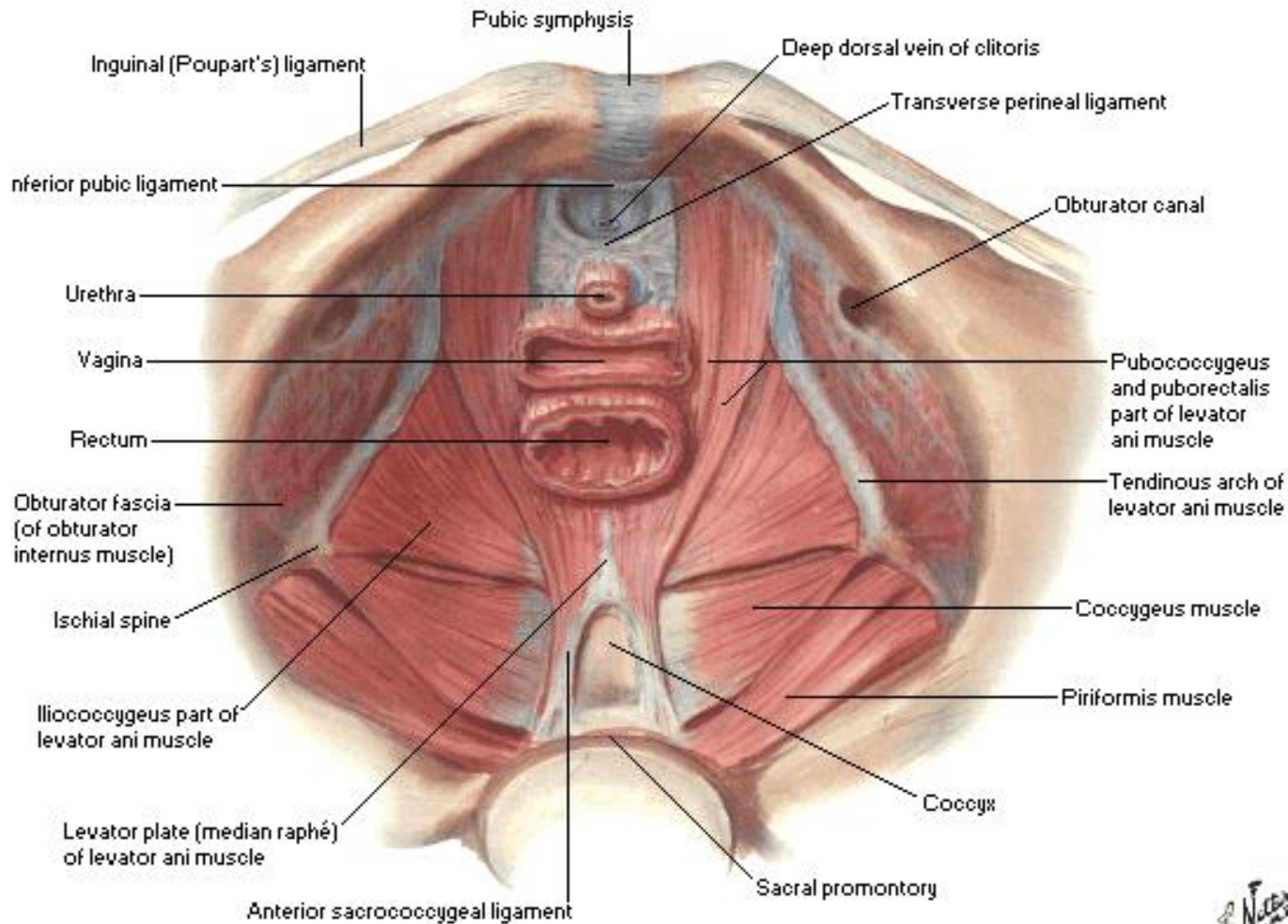


Levator Ani

- Consists of three parts – the pubococcygeus, the puborectalis and the iliococcygeus.
- Collectively they run from the body of the pubis, the tendinous arch of the obturator fascia and the ischial spine TO the perineal body, the coccyx, the anococcygeal ligament, the walls of the prostate or vagina, the rectum and the anal canal
- Innervated by the nerve to levator ani from S4 and the inferior anal (rectal) nerve (from S2-S4) and the coccygeal plexus
- Help to support the pelvic viscera; acting together they raise the pelvic floor and assist the abdominal muscles in forced expiration activities

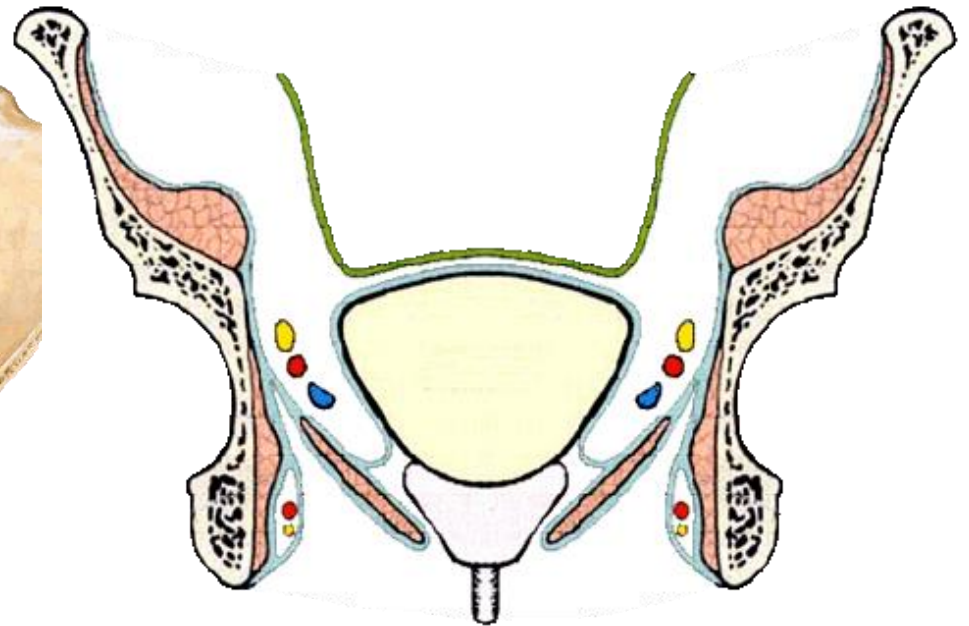
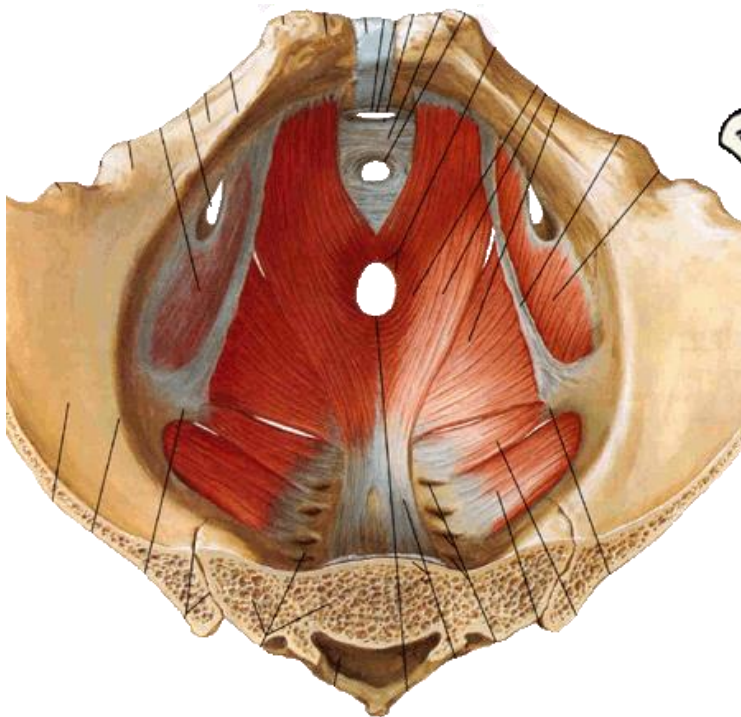
Pelvic Floor - Female

Pelvic Diaphragm of Female Superior View

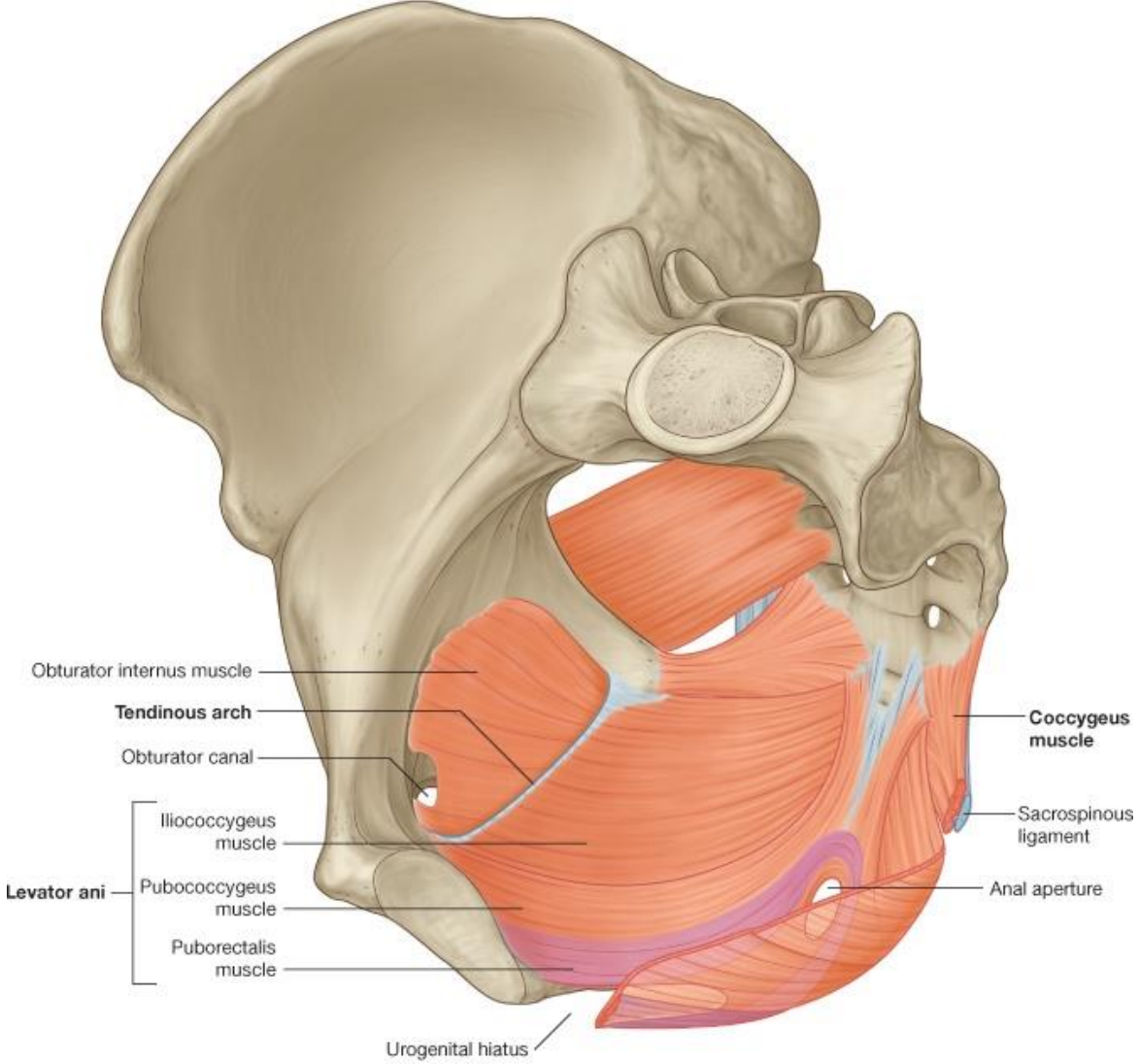


Pelvic diaphragm

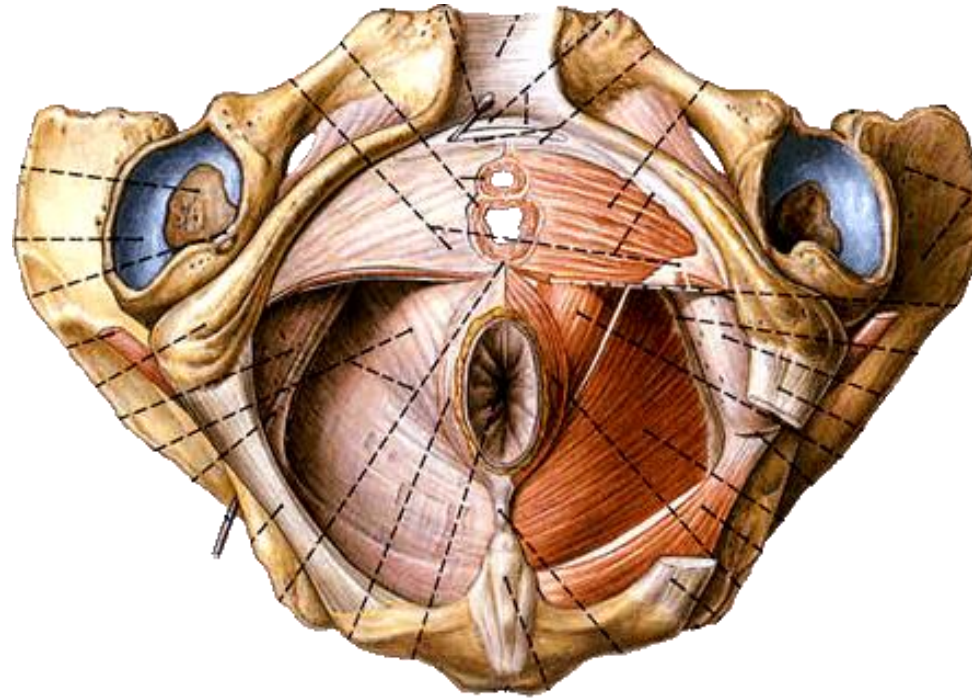
- Superior fascia of pelvic diaphragm
- Levator ani
- Coccygeus
- Inferior fascia of pelvic diaphragm



Pelvic Diaphragm



- **Ischio rectal fossa**
- **Anterior**
 - Posterior border of urogenital diaphragm
 - Forward projection of anterior recess of fossa between pelvic diaphragm above and urogenital diaphragm below

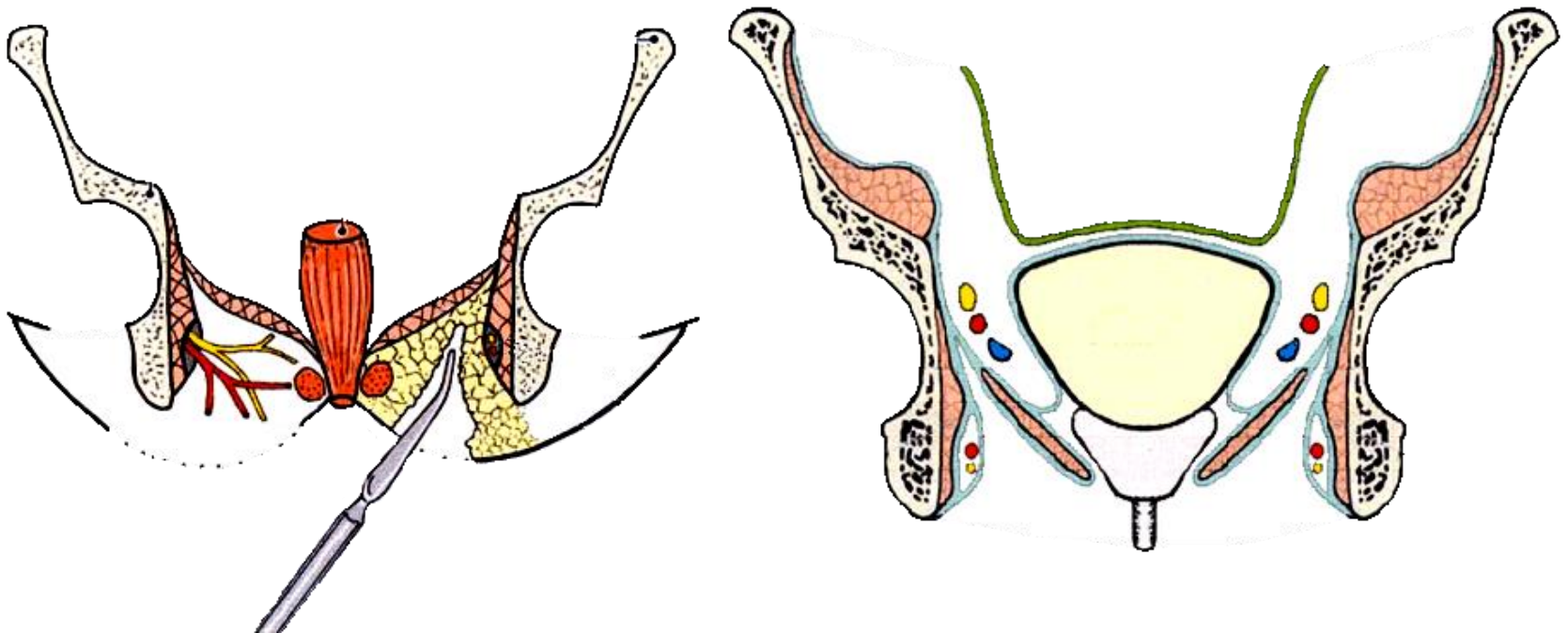


Posterior
backward projection of posterior recess of fossa between gluteus maximus, sacrotuberous ligament and coccyx

Contents

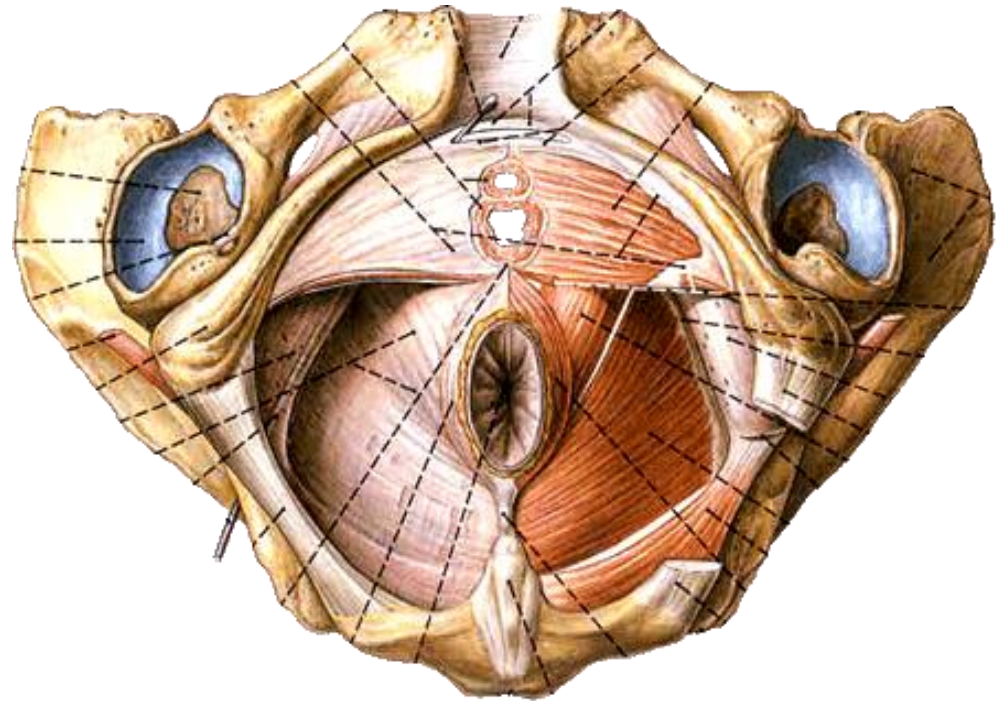
- Fat
- Internal pudendal artery and vein and their rectal branches
- Pudendal nerve and its inferior rectal branch

Vessels and nerves enter from gluteal region, through lesser sciatic foramen, travel on the pudental canal (Alcock's) on the lateral wall of fossa, and extend forward into urogenital region



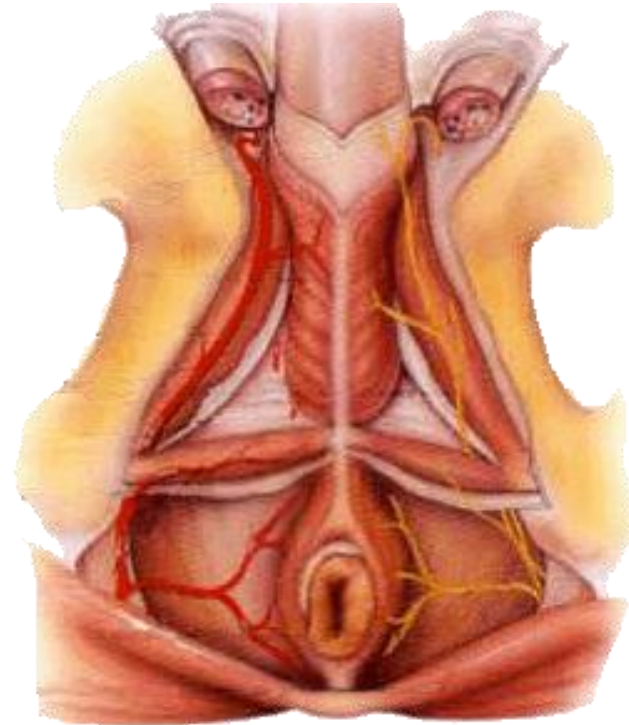
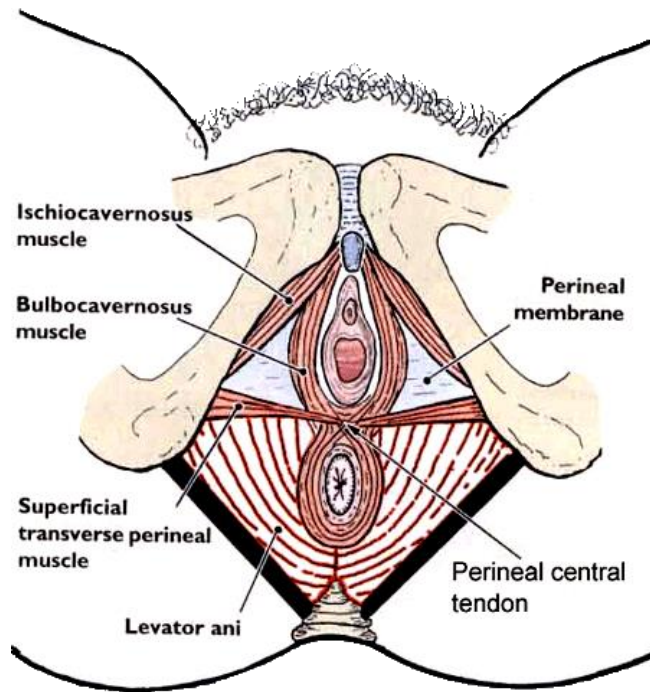
Urogenital diaphragm 尿生殖隔

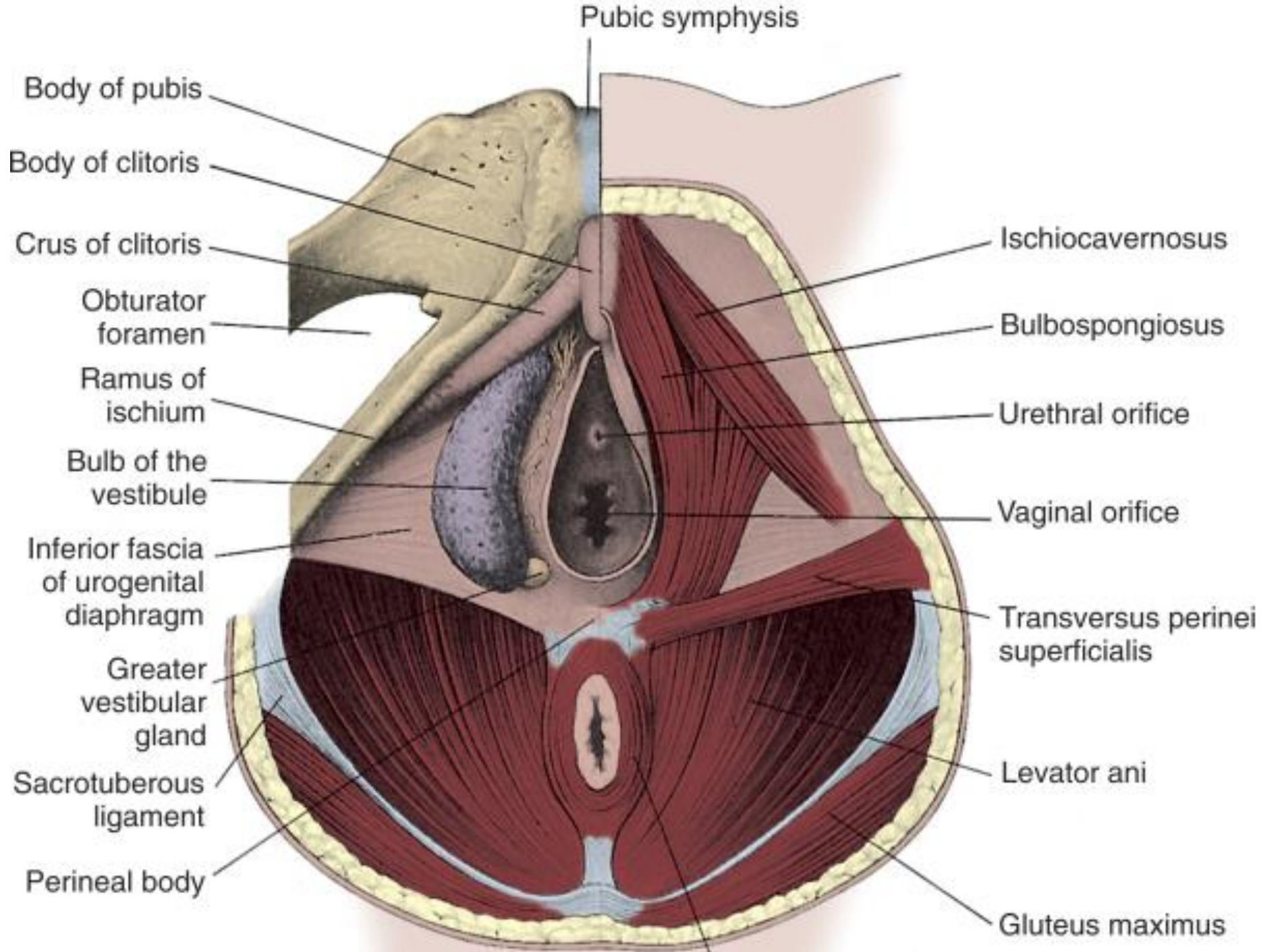
- Triangular in shape
- Attached laterally to ischiopubic rami and ischial tuberosities
- Formed by sphincter of urethra, deep transverse perineal muscle, superior and inferior fascia of urogenital diaphragm

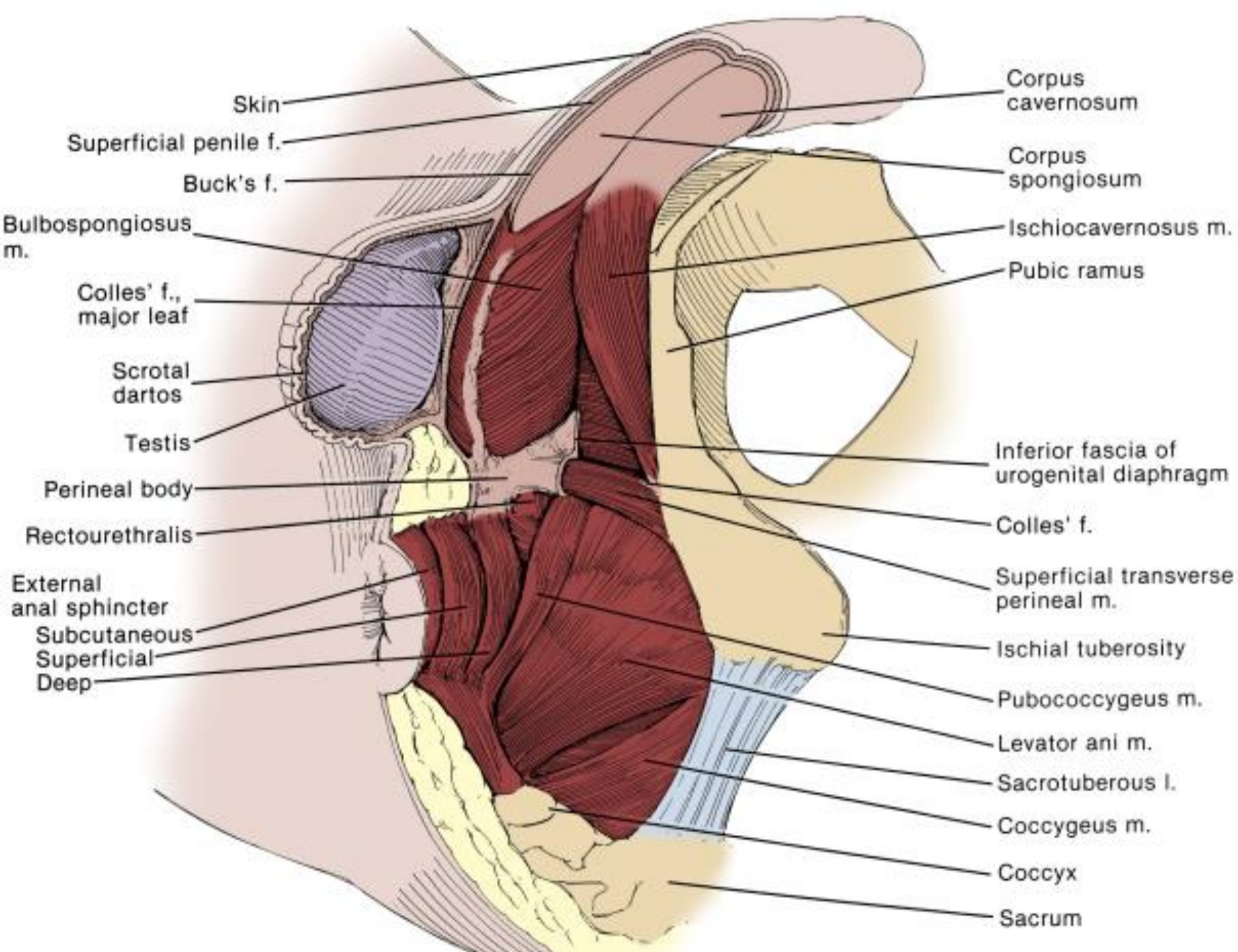


Perineal central tendon

- Wedge-shaped fibromuscular mass
- In female, between anal canal and lower end of vagina,
- In male, between anal canal and root of penis
- It is larger in the female than in the male and give support to the posterior wall of the vagina



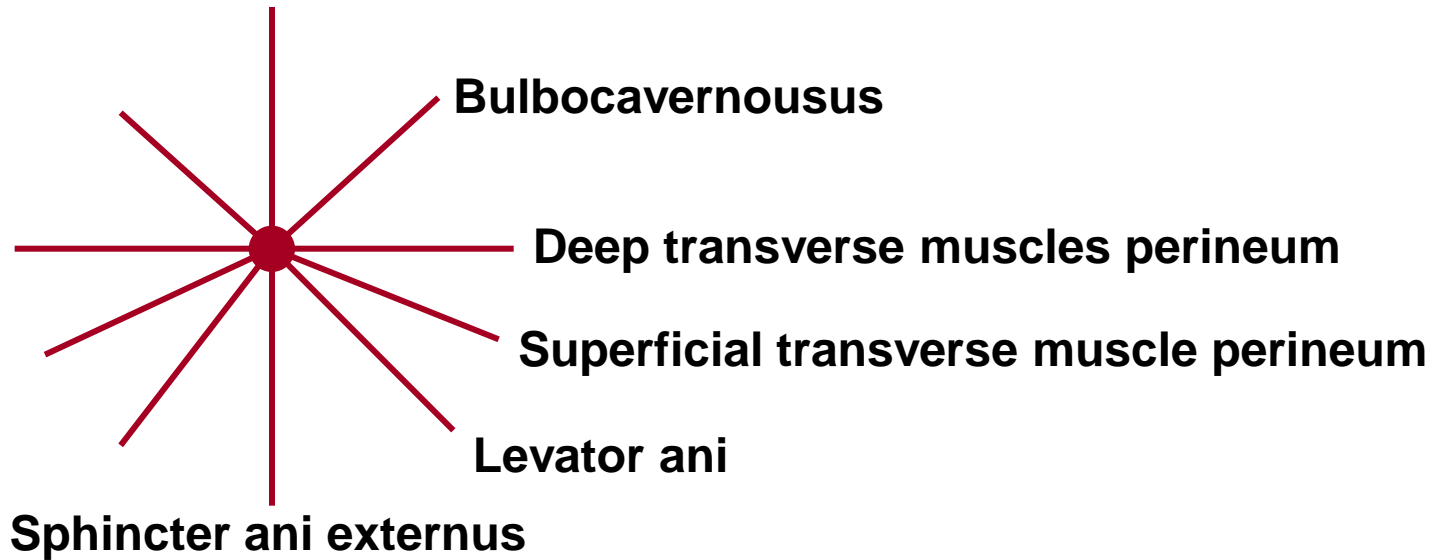




- Origin or insertion of several small muscles and insertion of part of pelvic diaphragm
- These muscles are:
 - Sphincter ani externus
 - Levator ani
 - Superficial transverse muscle perineum
 - Deep transverse muscles perineum
 - Bulbocavernosus
 - Sphincter of urethra (male) or urethrovaginal sphincter (female)

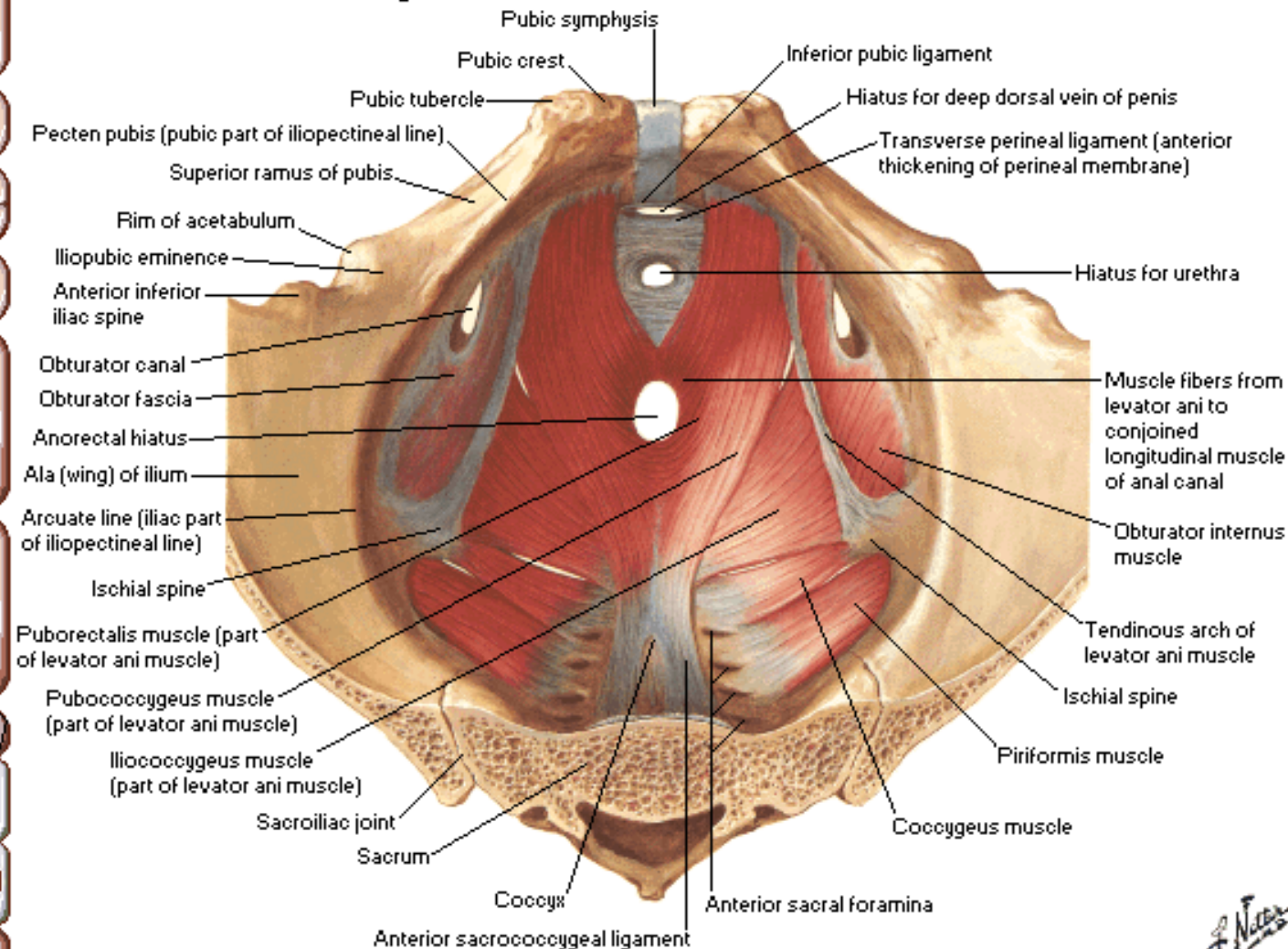


**Sphincter of urethra (male) or
urethrovaginal sphincter (female)**

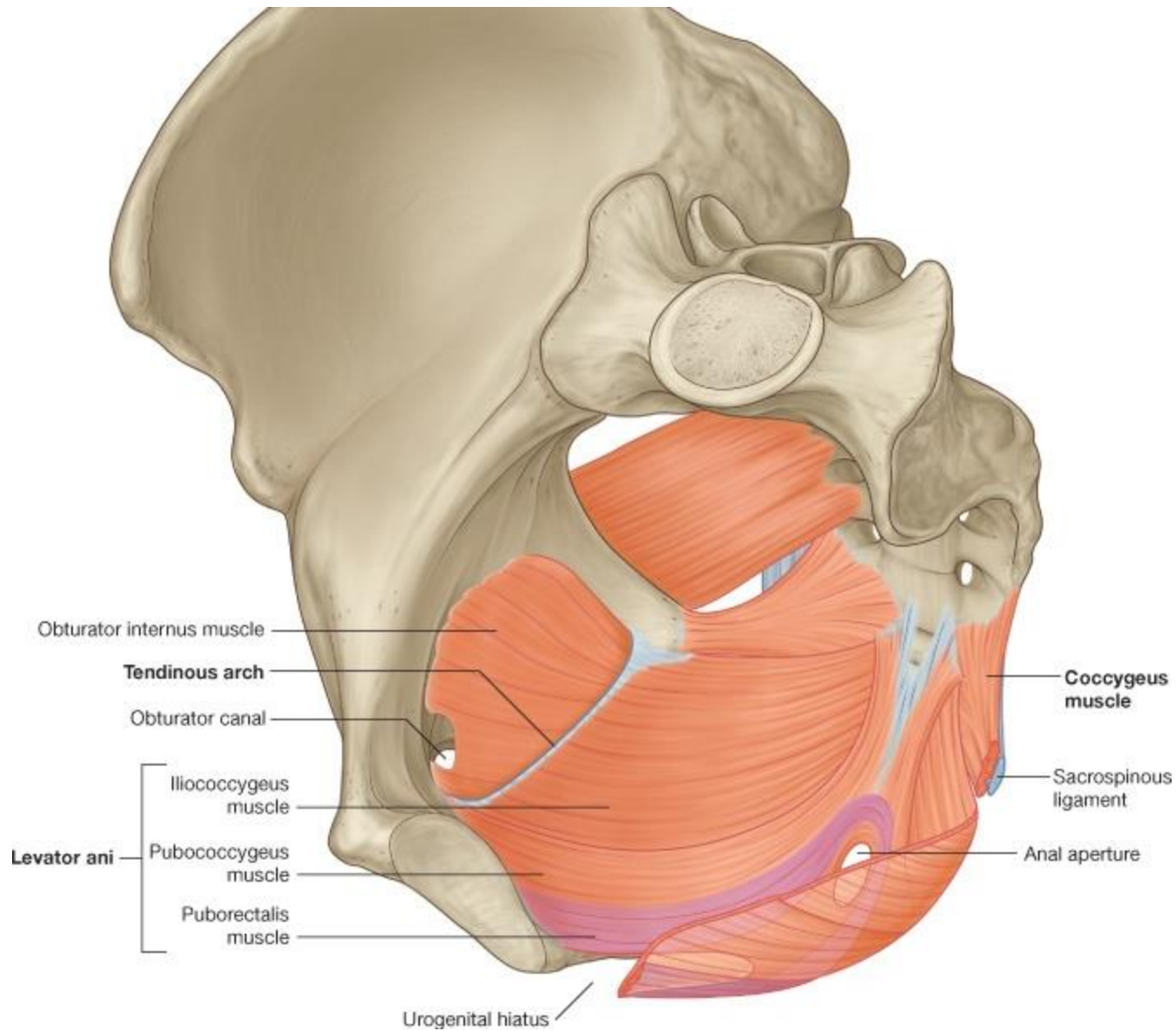


Pelvic Floor - Male

Pelvic Diaphragm of Male Superior View - Viscera Removed

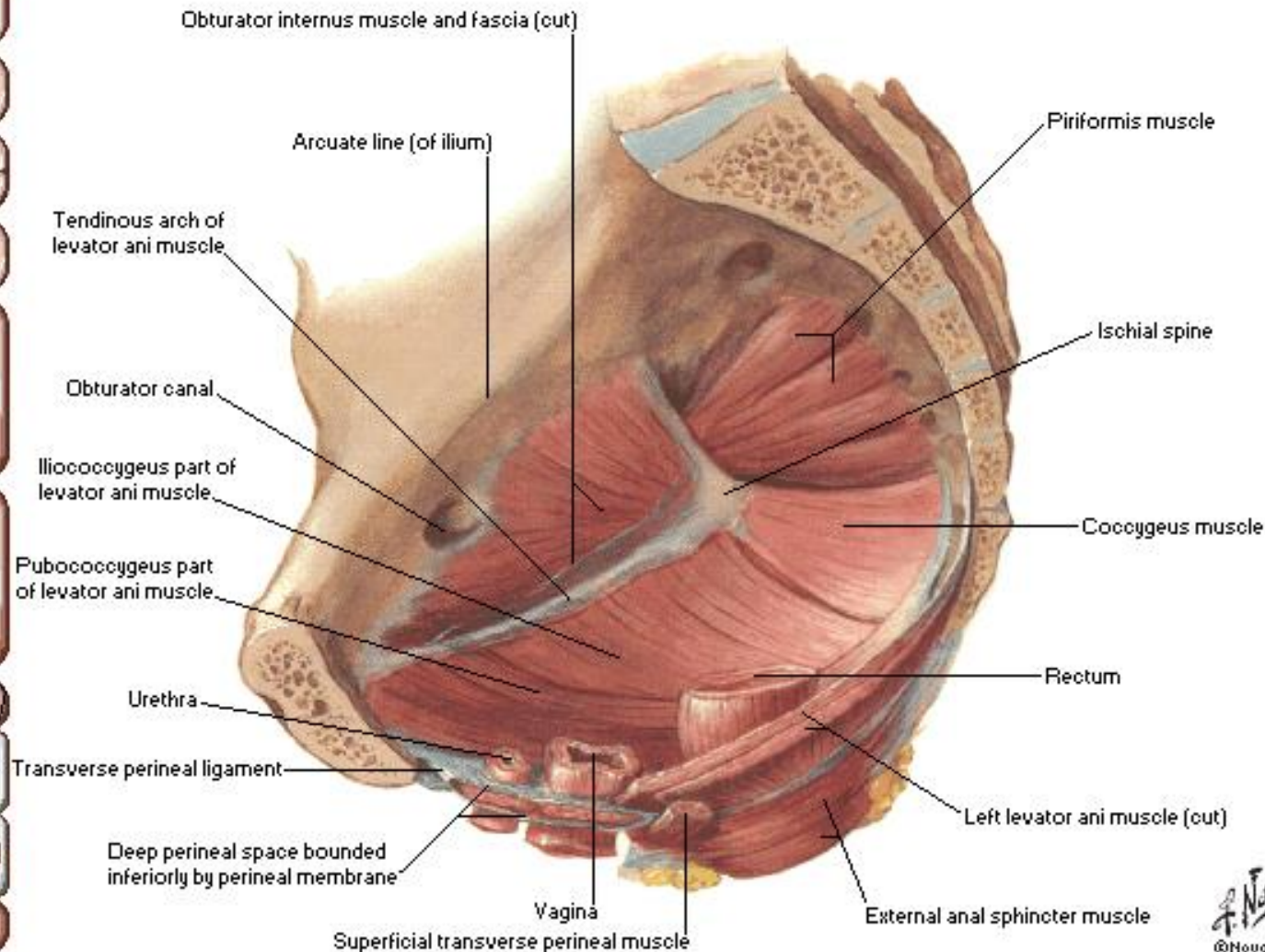


Pelvic Floor- Lateral Inferior



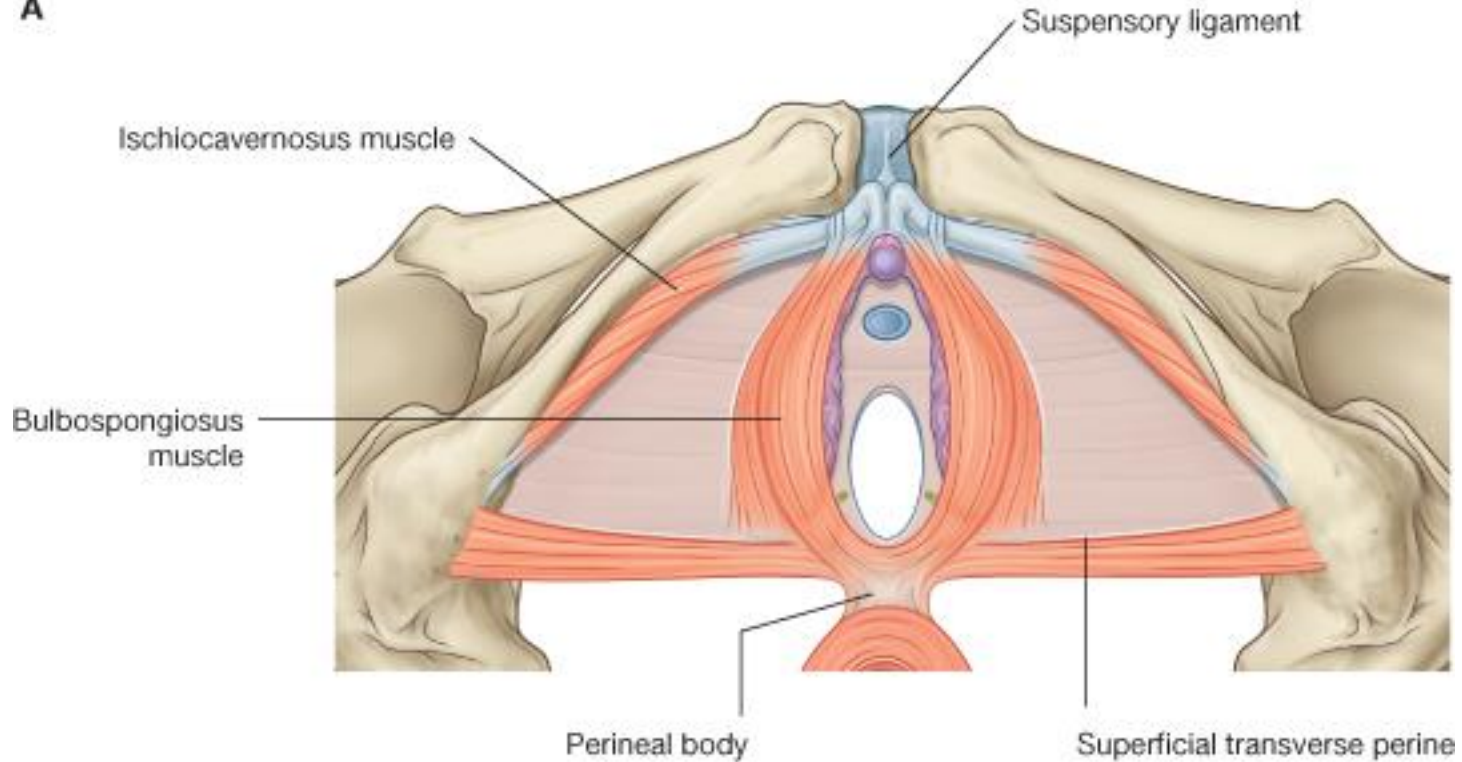
Female – Medial View

Pelvic Diaphragm of Female Medial View



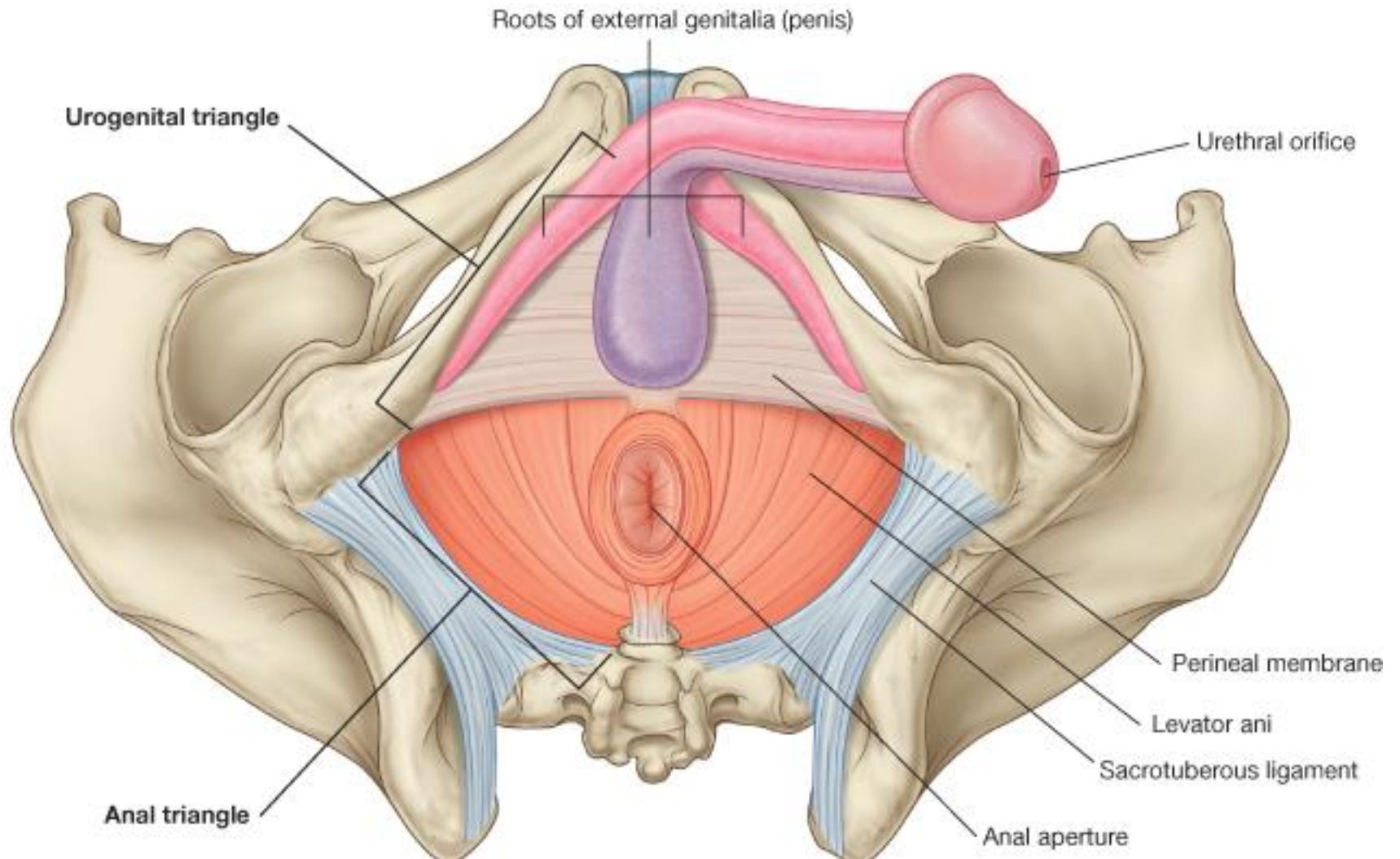
Perineal Body

A



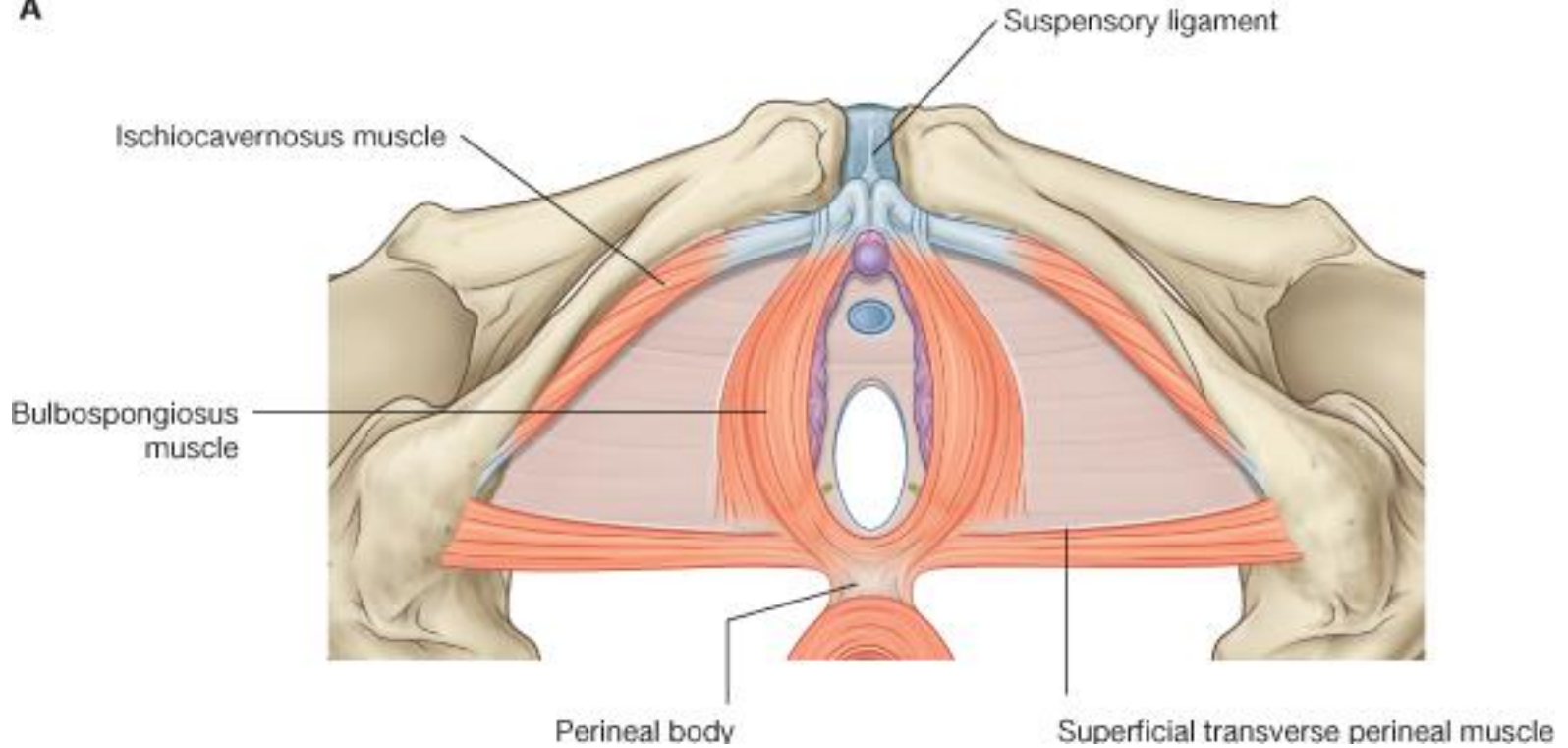
Perineum - Male

B



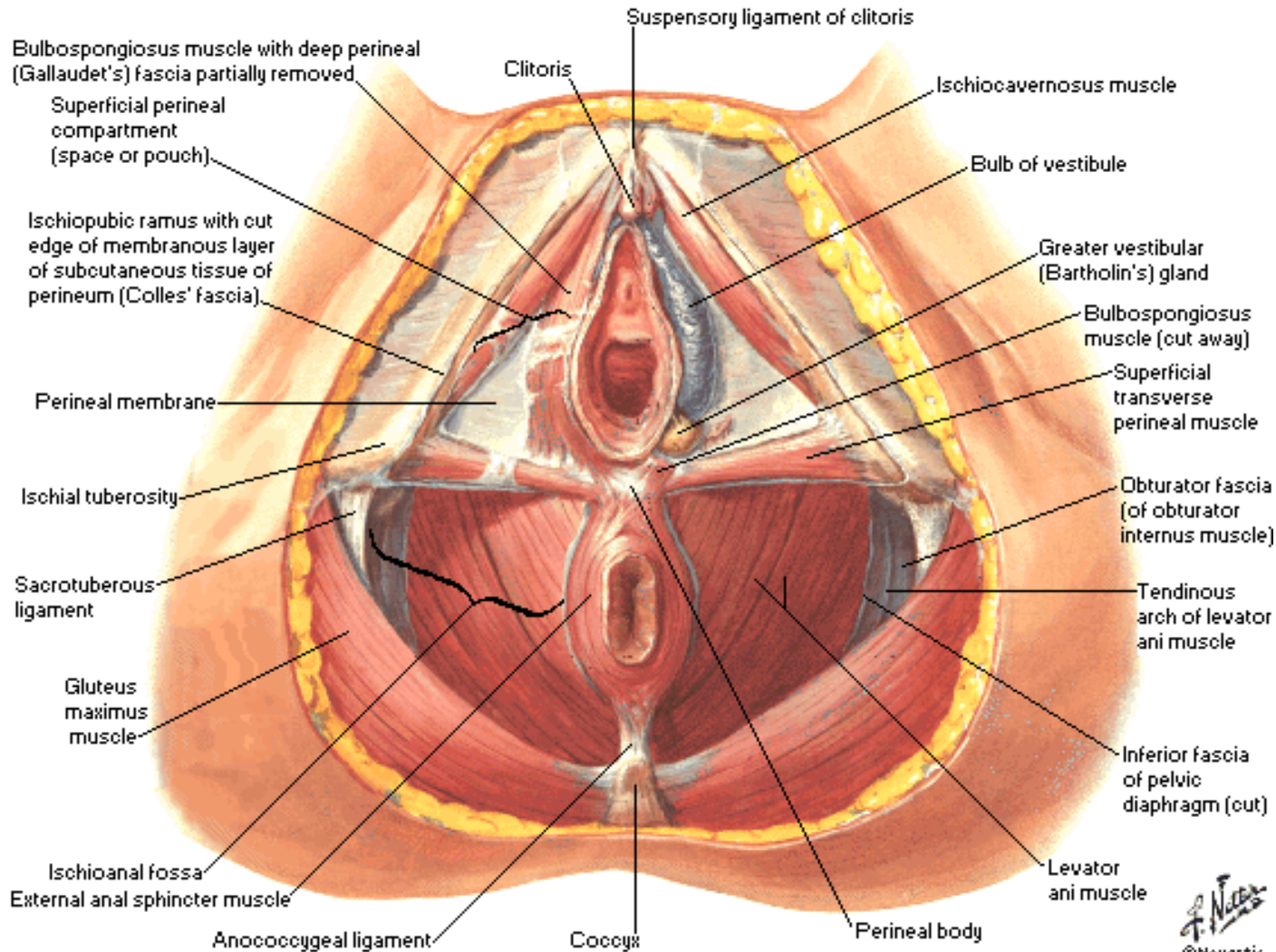
Muscles - Female

A



Muscles - Female

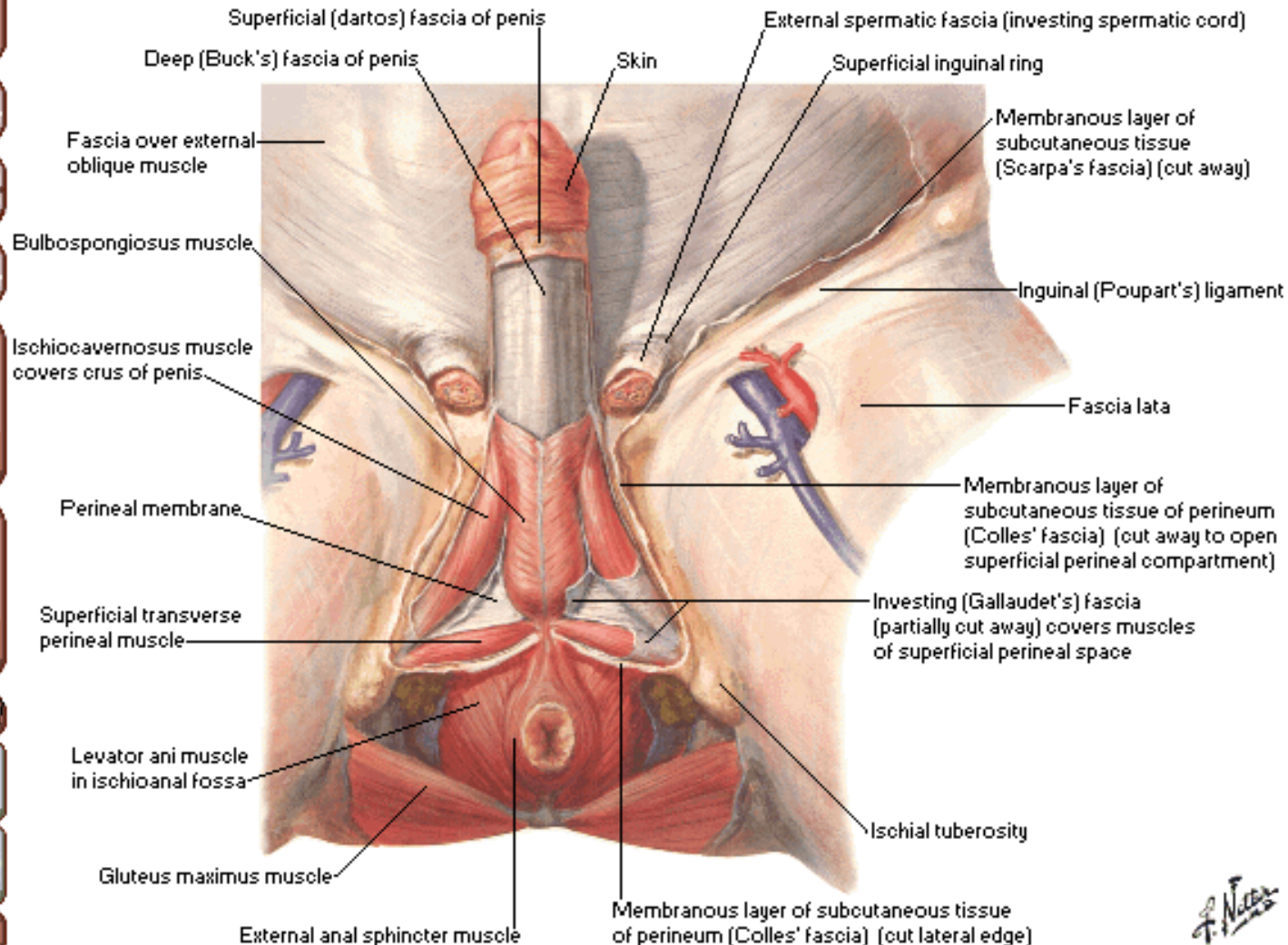
Perineum and Urogenital Diaphragm of Female



Muscles - Male

Perineum and External Genitalia of Male

Deep Dissection



Deep Perineal Space of Male

Deep Dissection

