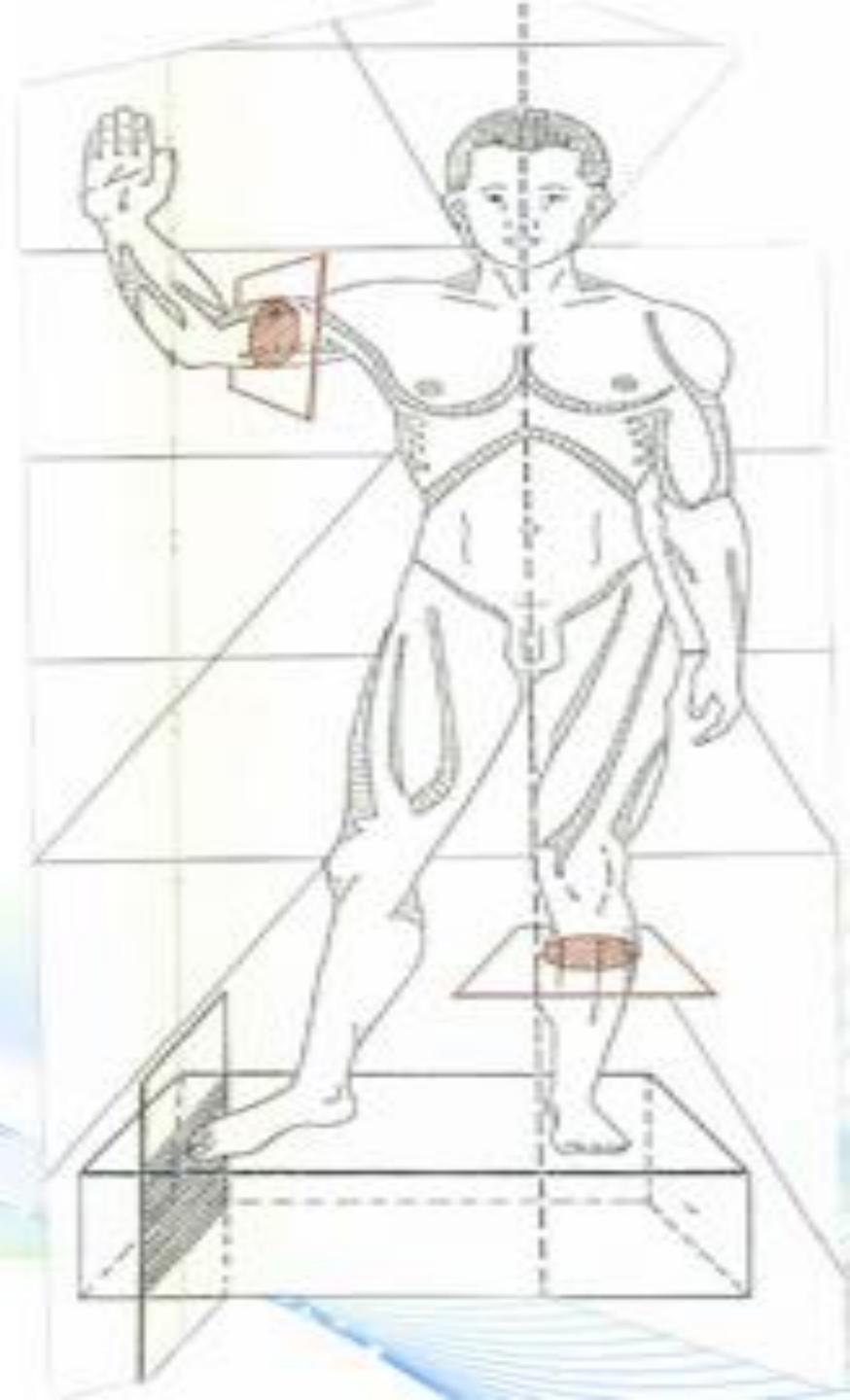


PERINEUM



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***III. MALE UROGEINTAL
REGION***

***IV. FEMALE UROGEINTAL
REGION***

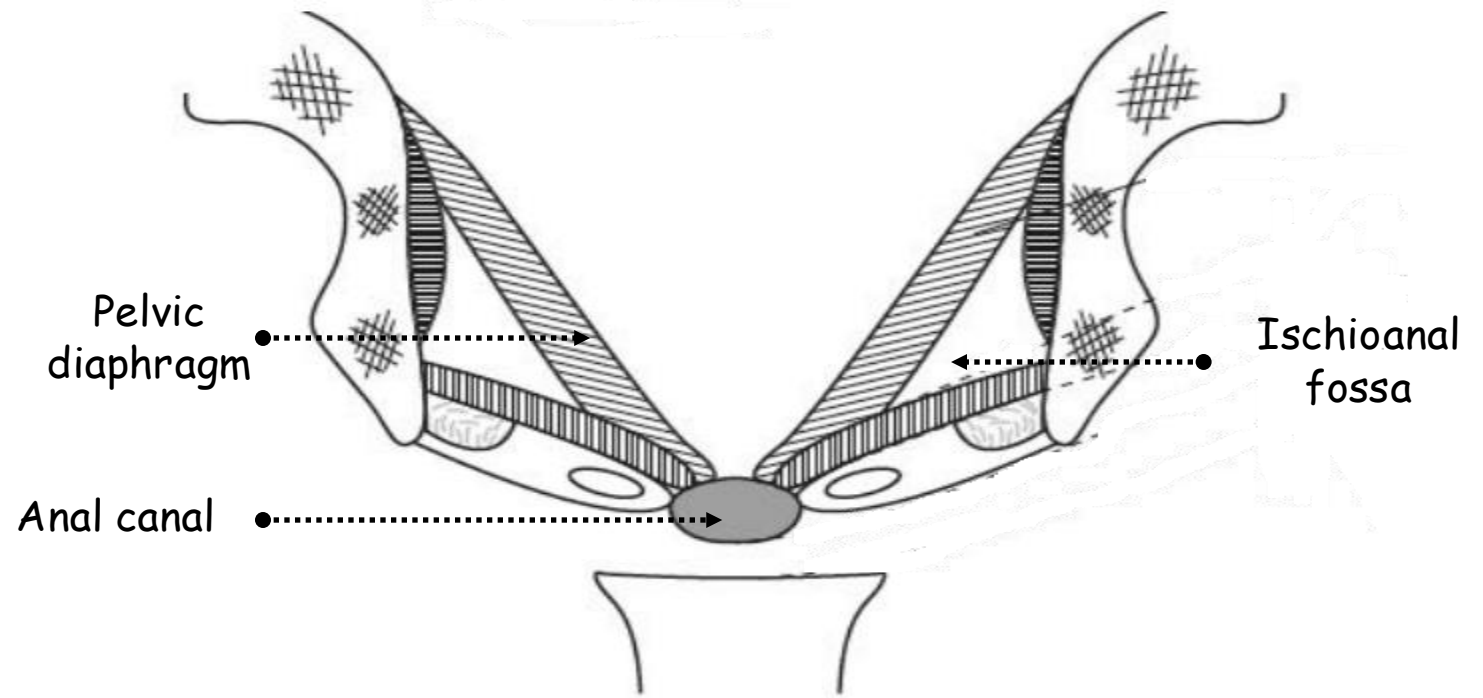
V. NERVE SUPPLY

VI. CONCLUSION

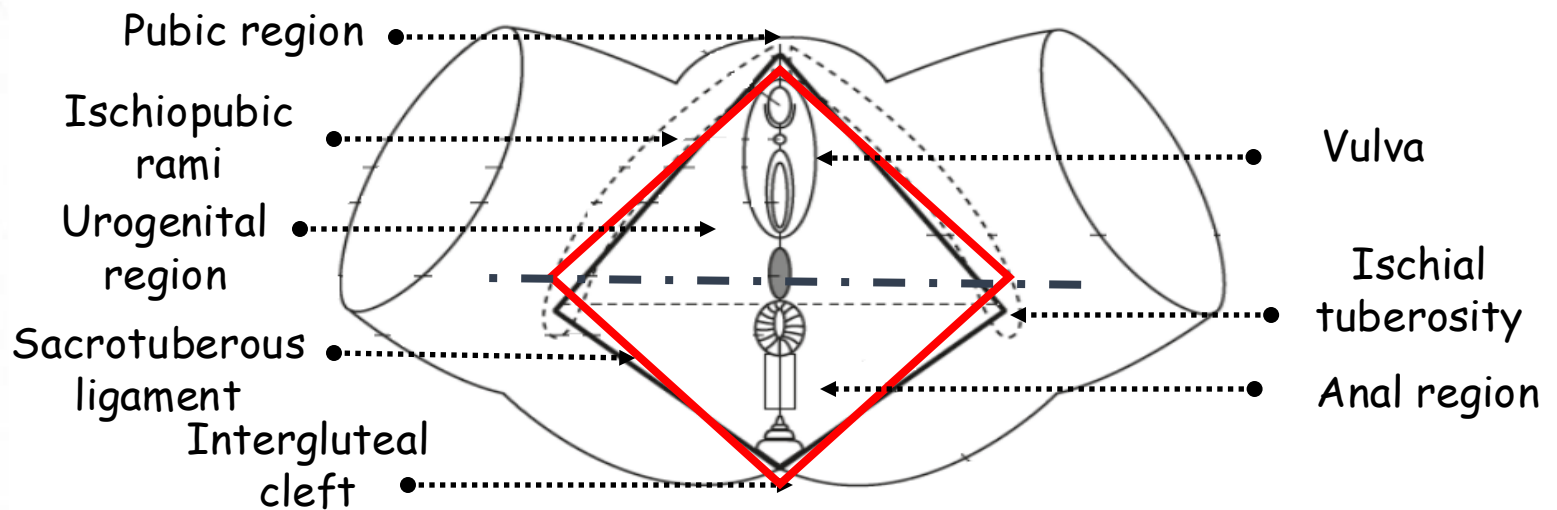


I. INTRODUCTION

- Part of the trunk of the body caudal to the pelvic diaphragm
- Situated between the pubic region forwards and the intergluteal cleft backwards
- Diamond-shaped area divided by a line joining the anterior parts of the ischial tuberosities into a larger posterior anal region and a smaller anterior urogenital region
- **Anal region:**
 - Anal canal and ischioanal fossae
 - Sides: sacrotuberous ligaments
- **Urogenital region:**
 - Sides: conjoined ischiopubic rami
 - External genitalia



SCHEMATIC CORONAL SECTION OF THE PELVIC CAVITY

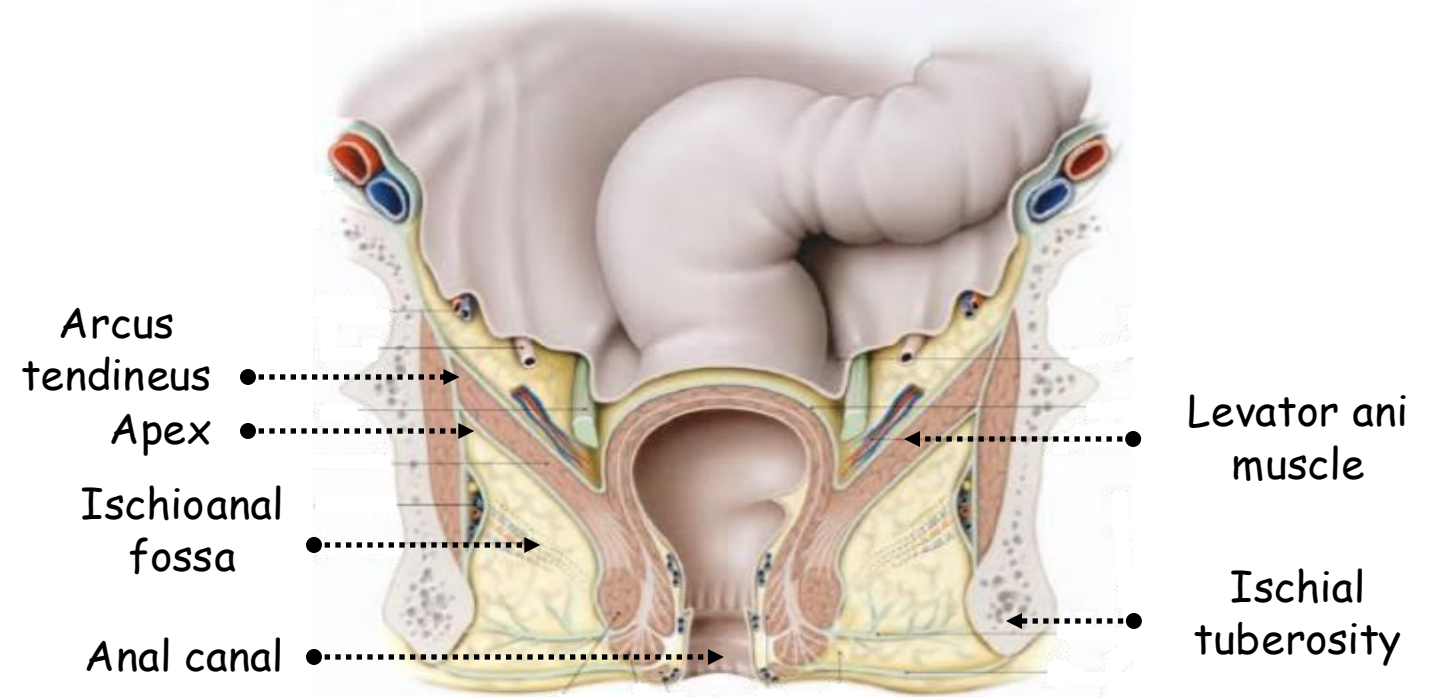


SCHEMATIC ANTERIOR VIEW OF THE FEMALE PERINEUM

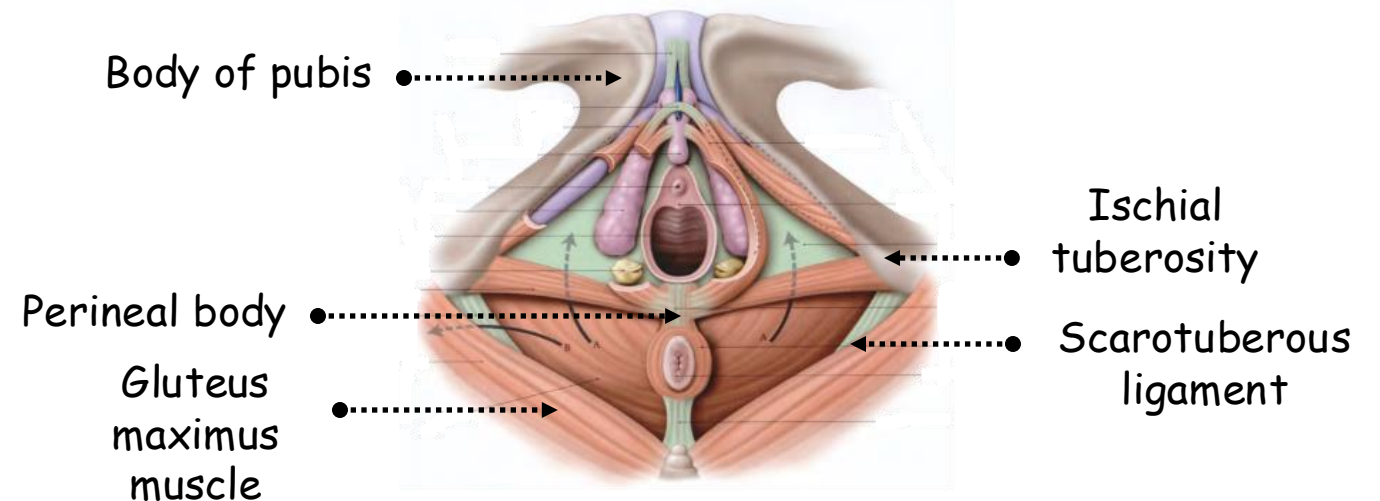
II. ANAL REGION

A. ISCHIOANAL FOSSA

- Wedge-shaped space filled with fat lateral to the anal canal
- Base: above the skin over the anal region of the perineum
- Medial wall: anal canal and levator ani muscle
- Lateral wall: ischial tuberosity below and obturator internus muscle above
- Sharp apex: tendinous origin of levator ani over obturator fascia
- Anterior boundary: posterior border of perineal body
- Posterior boundary: sacrotuberous ligament and lower border of gluteus maximus muscle
- Anterior recess: above the urogenital diaphragm as far as the posterior surface of the body of the pubis
- Posterior recess: smaller as far as the lower border of gluteus maximus



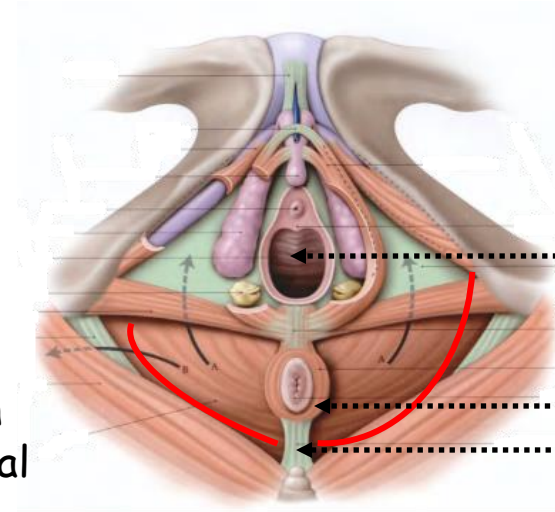
CORONAL SECTION OF THE PELVIC CAVITY (FROM KAMINA)



ANTERIOR VIEW OF THE FEMALE PERINEUM (FROM KAMINA)

- Horse-shoe communication below the anococcygeal body
- Separated from the rectum
- Ischioanal fat pad: dilatation of anal canal and vagina
- **Pudendal canal (of Alcock):**
 - Connective tissue sheath
 - Lower lateral wall of the fossa
 - Overlies obturator internus and the medial side of the ischial tuberosity
 - Contains the pudendal nerve and internal pudendal vessels
 - From the lesser sciatic notch to the deep perineal pouch above the perineal membrane

Communication between ischional fossae



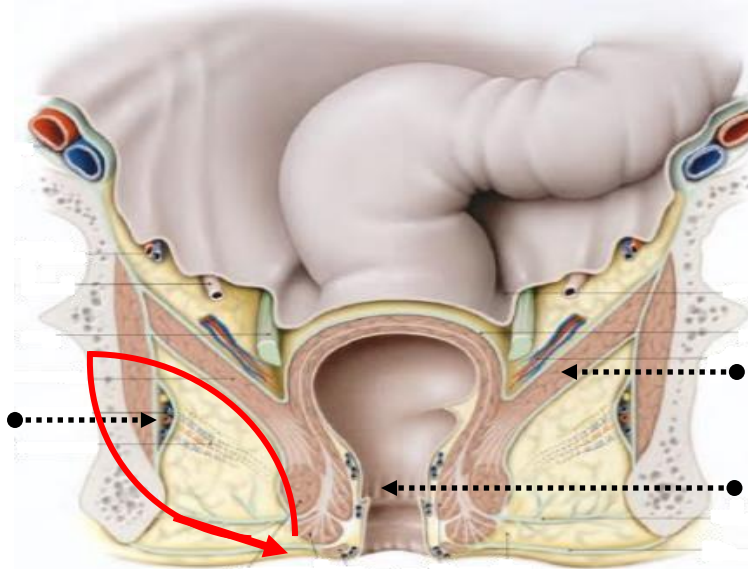
Vaginal orifice and vagina

Anal canal and rectum

Anococcygeal body

ANTERIOR VIEW OF THE FEMALE PERINEUM (FROM KAMINA)

Pudendal canal and pedicle



Levator ani muscle

Anal canal and rectum

CORONAL SECTION OF THE PELVIC CAVITY (FROM KAMINA)

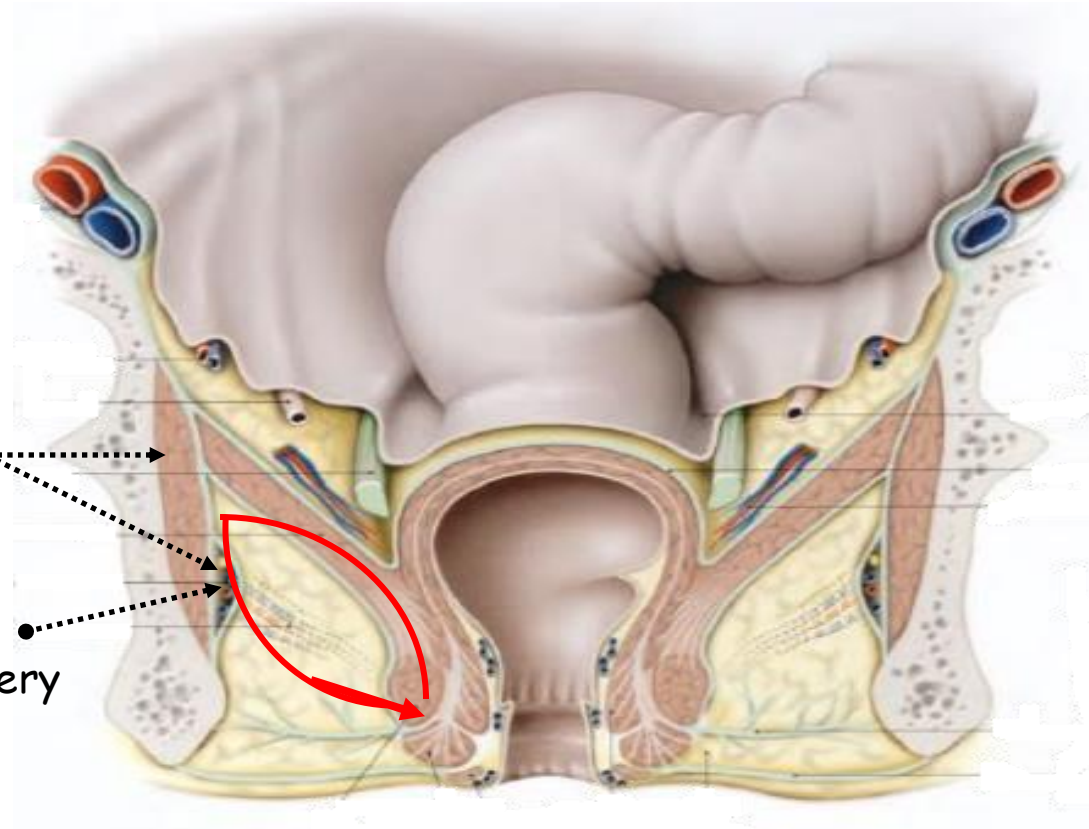
-Splitting of the obturator fascia joining the falciform process of the sacrotuberous ligament

- Inferior rectal branches of the pudendal nerve and internal pudendal vessels:
 - Arche convexly upwards through the fat towards the apex and then downwards to the anal canal
 - Portosystemic anastomosis
- Scrotal and labial branches: urogenital region
- Perineal branch of S4 and perforating cutaneous nerve: posterior

Obturator internus muscle and fascia

Internal pudendal artery

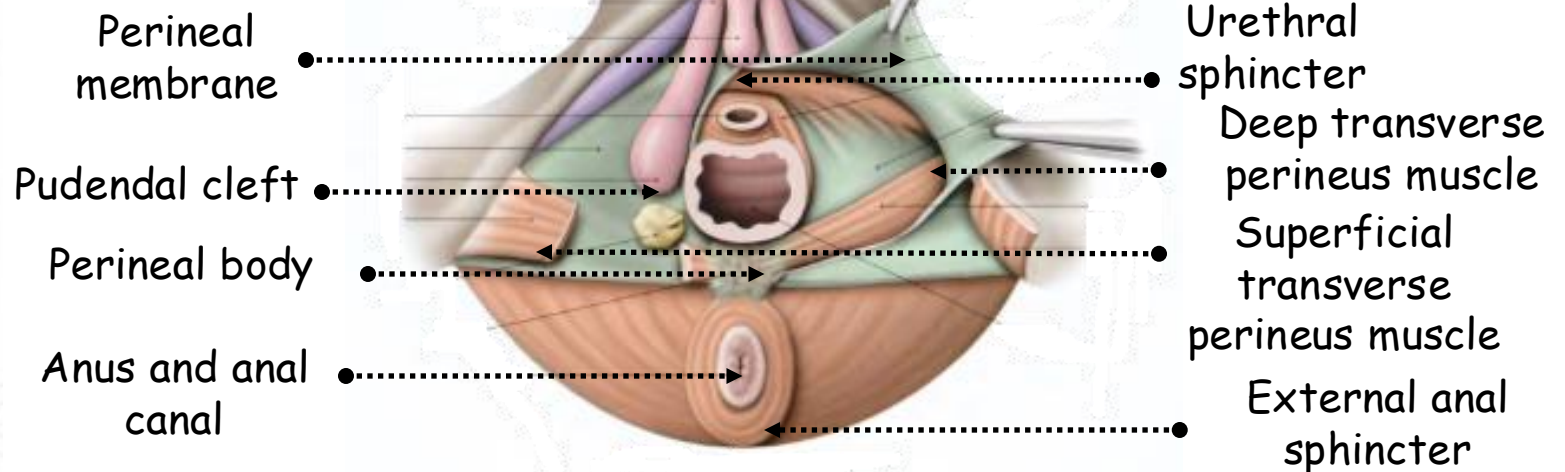
Course of the pudendal pedicle



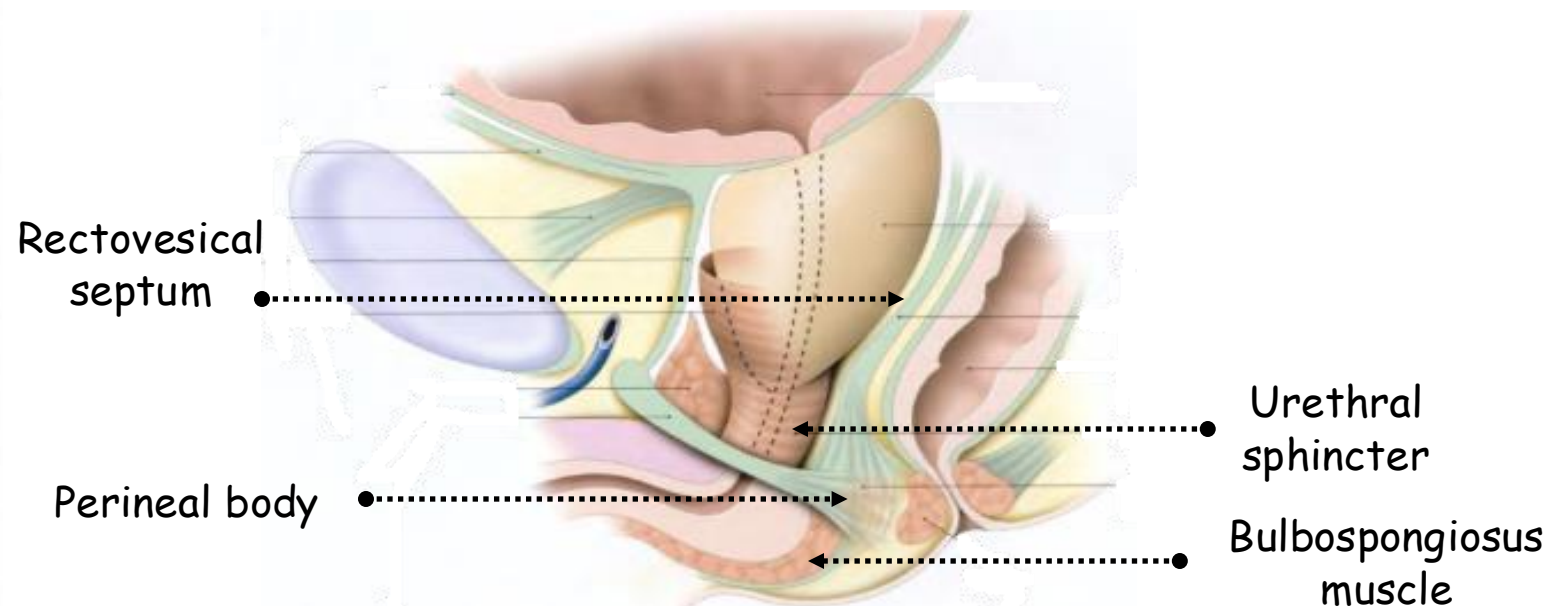
CORONAL SECTION OF THE PELVIC CAVITY (FROM KAMINA)

B. PERINEAL BODY

- Central perineal tendon
- Elongated midline fibromuscular mass to which a number of muscles gain attachment
- Lies in front of the anal canal and behind the posterior border of the perineal membrane
- Between the anal canal and the pudendal cleft in the female and scrotum in the male
- Rectovesical and rectovaginal septa blends into it above
- **Muscles:**
 - 2 spincters: external anal and urethral
 - 4 paired: levator prostatae or pubovaginalis, bulbospongiosus, superficial and deep transverse perinei
- Obstetrical perineum



ANTERIOR VIEW OF THE FEMALE PERINEUM (FROM KAMINA)



SAGITTAL SECTION OF THE MALE PELVIC CAVITY (FROM KAMINA)

C. ANOCOCCYGEAL LIGAMENT

- Fibromuscular mass of tissue between skin and raphe of iliococcygeus and pubococcygeus parts of levator ani
- Extends from the tip of the coccyx to the anorectal junction
- Separates the two ischioanal fossae behind the lower part of the anal canal
- Anococcygeal muscle: fibres of the superficial part of the external sphincter superficial to the anococcygeal ligament attached to the tip of the coccyx

Iliococcygeus
part of levator
ani muscle

Anococcygeal
raphe and
ligament

Ischioanal fossa

Coccyx

ANTERIOR VIEW OF THE FEMALE PERINEUM (FROM KAMINA)

External anal
sphincter

Anococcygeal
raphe

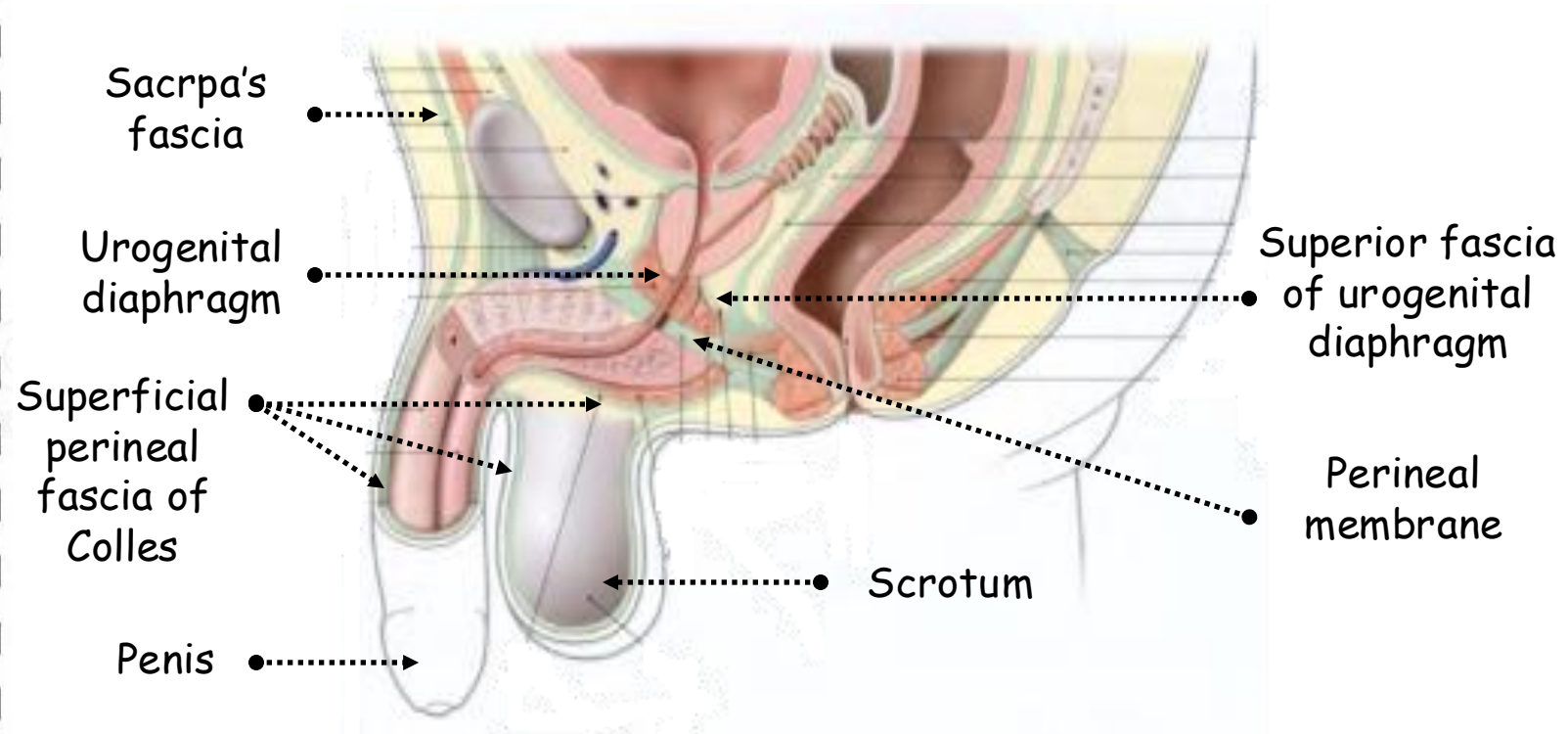
Anococcygeal
ligament

Anococcygeal
muscle

SAGITTAL SECTION OF THE MALE PELVIC CAVITY (FROM KAMINA)

III. MALE UROGENITAL REGION

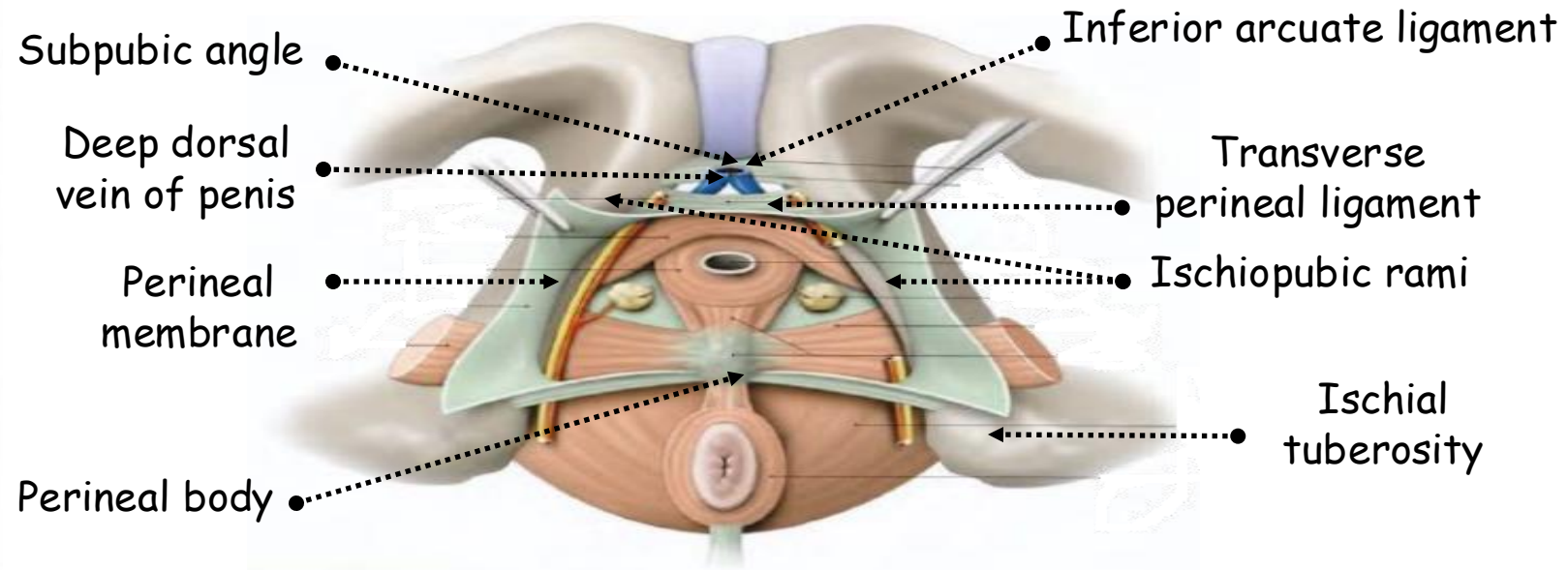
- Urogenital diaphragm: small mass of muscle
- **3 layers of fascia:**
 - Superior fascia of urogenital diaphragm
 - Perineal membrane
 - Superficial perineal fascia of Colles
- **Superficial perineal fascia of Colles:**
 - Continuation into the perineum of the Scarpa's fascia
 - Attached to the back of the perineal membrane
 - Sheath for penis and scrotum



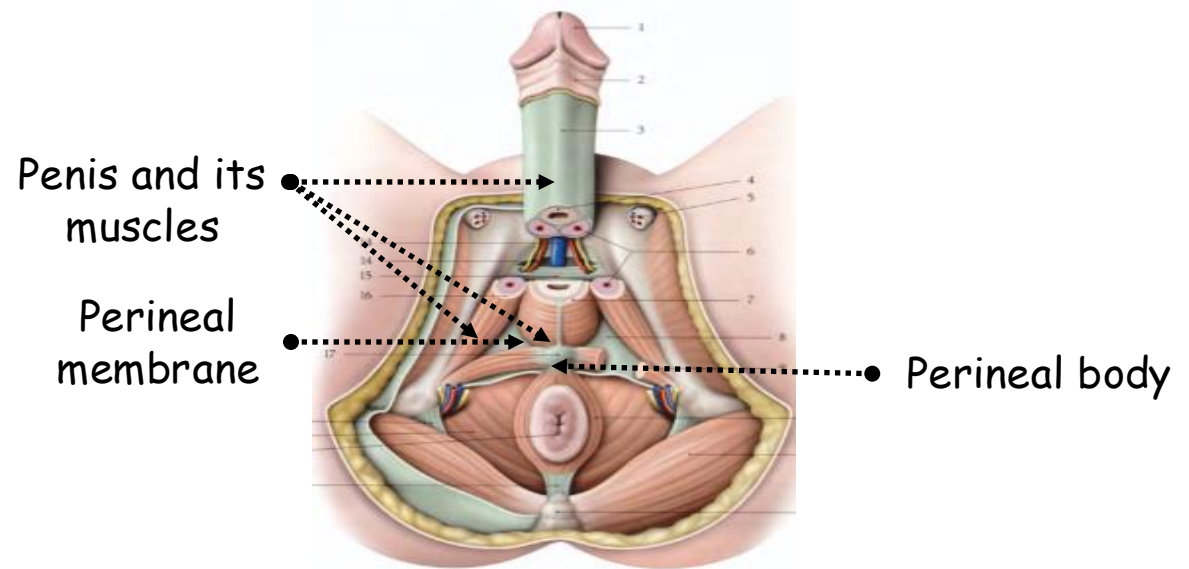
SAGITTAL SECTION OF THE MALE PELVIC CAVITY (FROM KAMINA)

A. DEEP PERINEAL POUCH

- Above the perineal membrane
- **Perineal membrane:**
 - Lower boundary of the deep perineal pouch
 - Unyielding horizontal sheet of fibrous tissue
 - Basis of penis and penile musculature
 - Attached on either side to the ischiopubic rami from just behind the subpubic angle back to the level of the anterior part of the ischial tuberosities along a ridge which lies on the inner part of the medial surface of each ramus
 - Anterior border: transverse perineal ligament
 - Posterior border: perineal body



ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE DEEP PERINEAL POUCH (FROM KAMINA)



ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE SUPERFICIAL PERINEAL POUCH (FROM KAMINA)

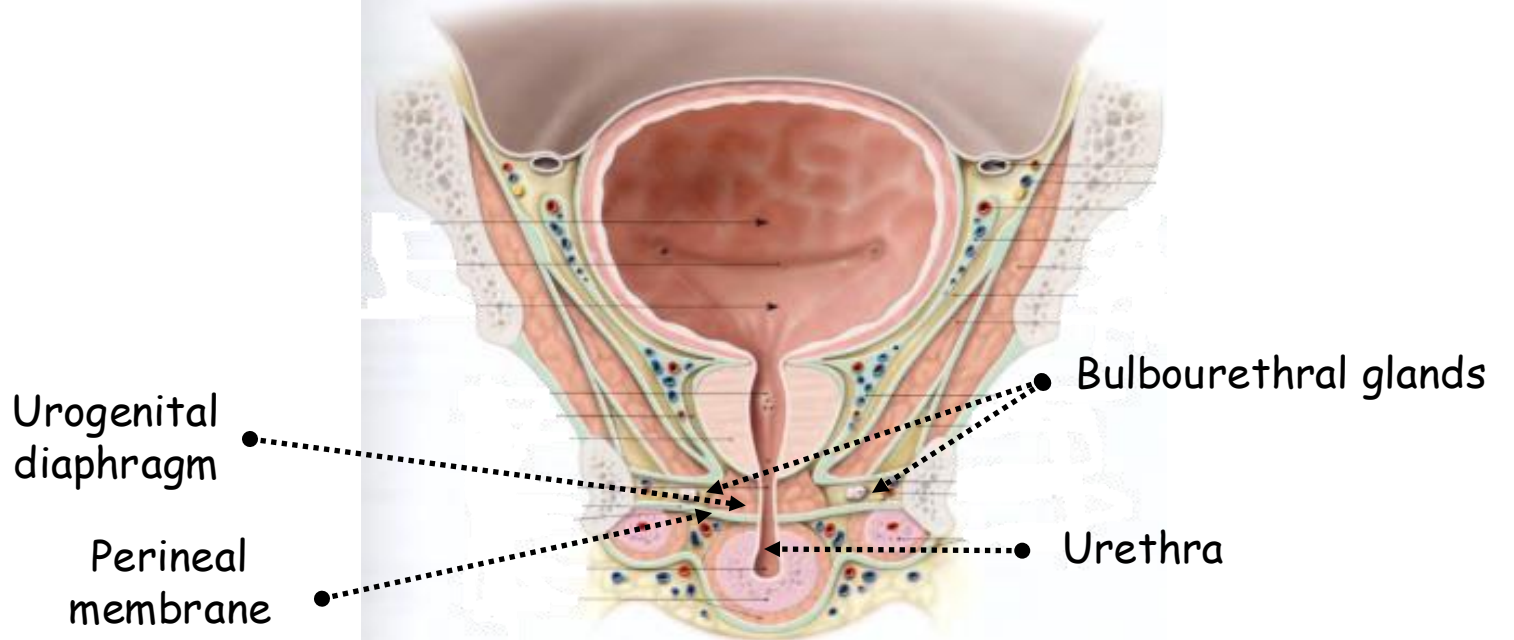
-Pierced by urethra, ducts of the bulbourethral glands and foramina for vessels and nerves

- **Urogenital diaphragm:**

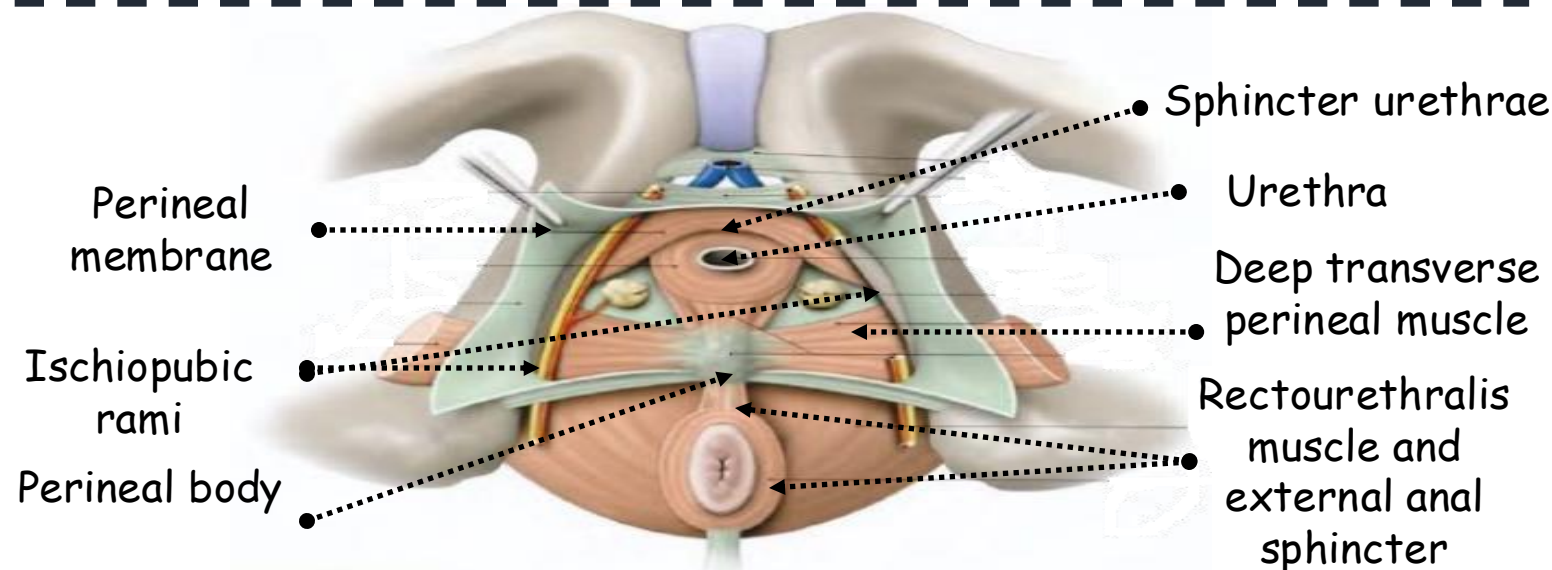
- Muscle mass above the perineal membrane
- Sphincter urethrae and paired deep transverse perineal muscles

- **Deep transverse perineal muscles:**

- Run horizontally from the ischiopubic rami to the perineal body
- Some fibres merge with the sphincter muscle



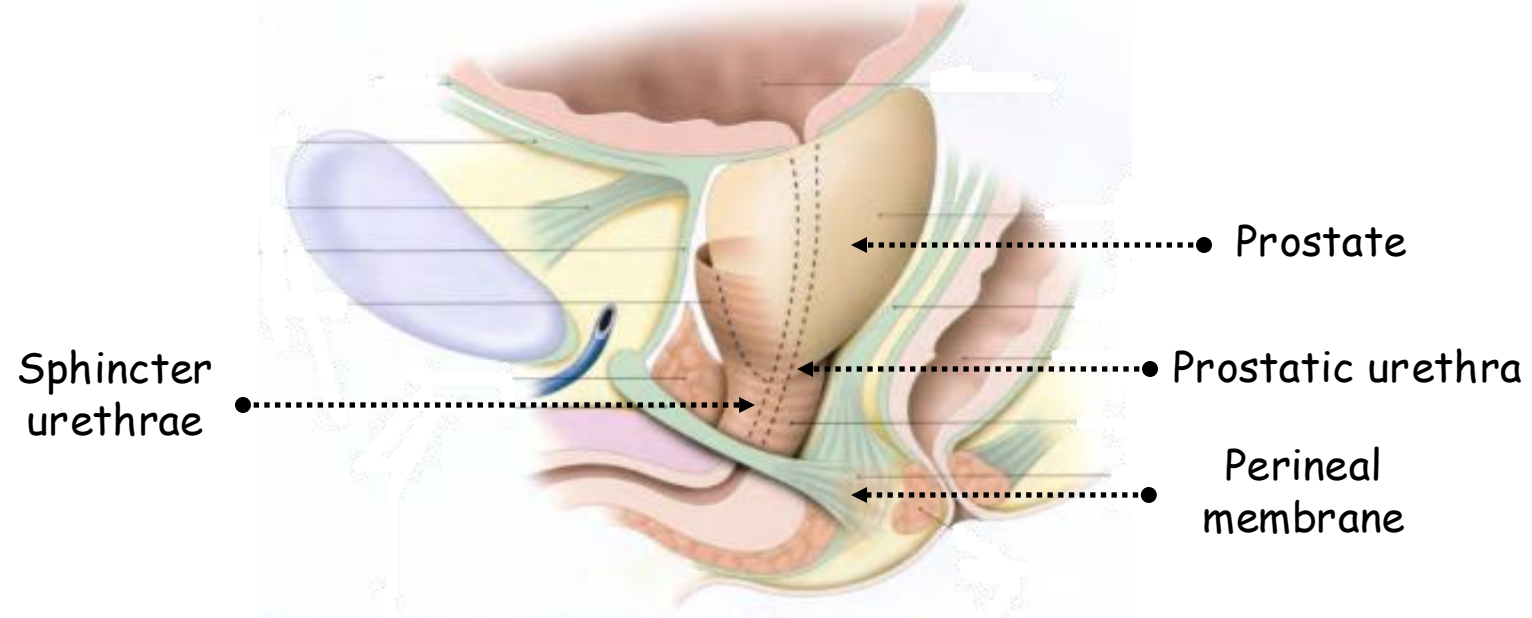
ANTERIOR VIEW OF THE MALE PELVIC CAVITY SHOWING THE MALE UROGENITAL REGION (FROM KAMINA)



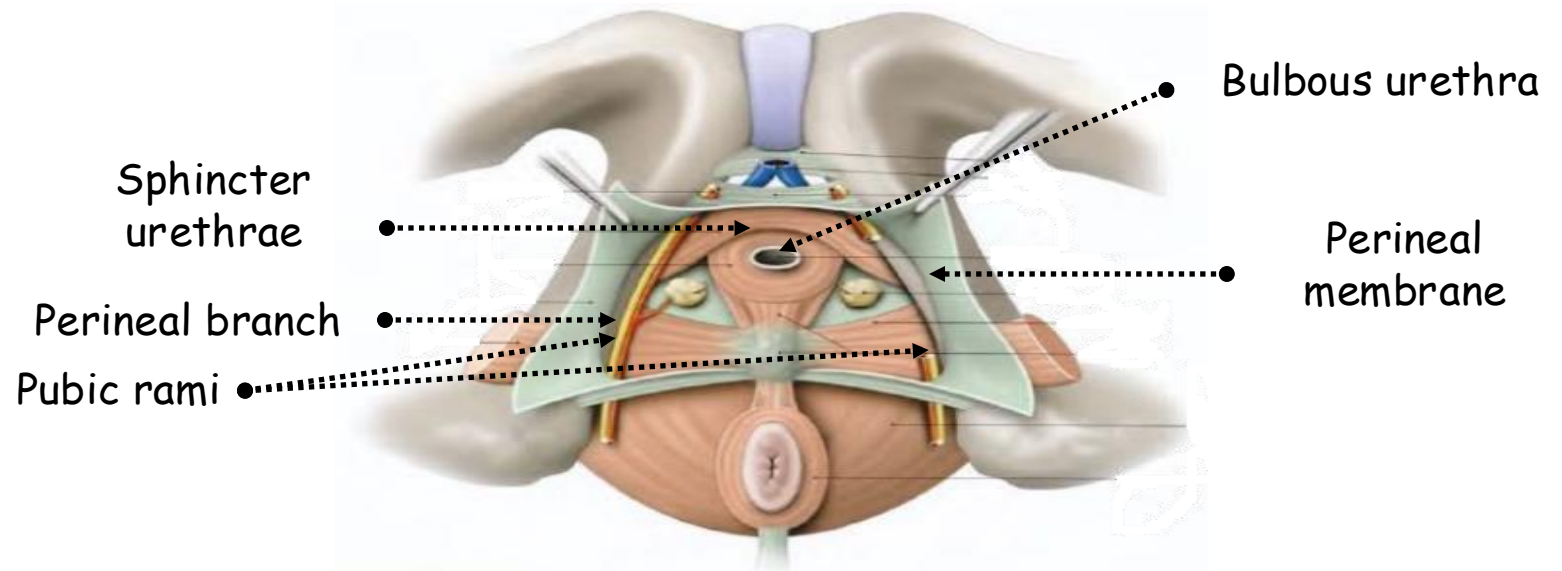
ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE DEEP PERINEAL POUCH (FROM KAMINA)

- **Sphincter urethrae:**

- Pear-shaped
- Extends upwards out of the deep perineal pouch to surround the lower part of the prostatic urethra
- Lower more bulbous part is below the apex of the prostate and above the perineal membrane
- U-shaped fibres: arise from the pubic rami and run in front of and behind the urethra
- Skeletal muscle clearly distinguished from levator prostatae
- Nerve supply: perineal branch of pudendal nerve



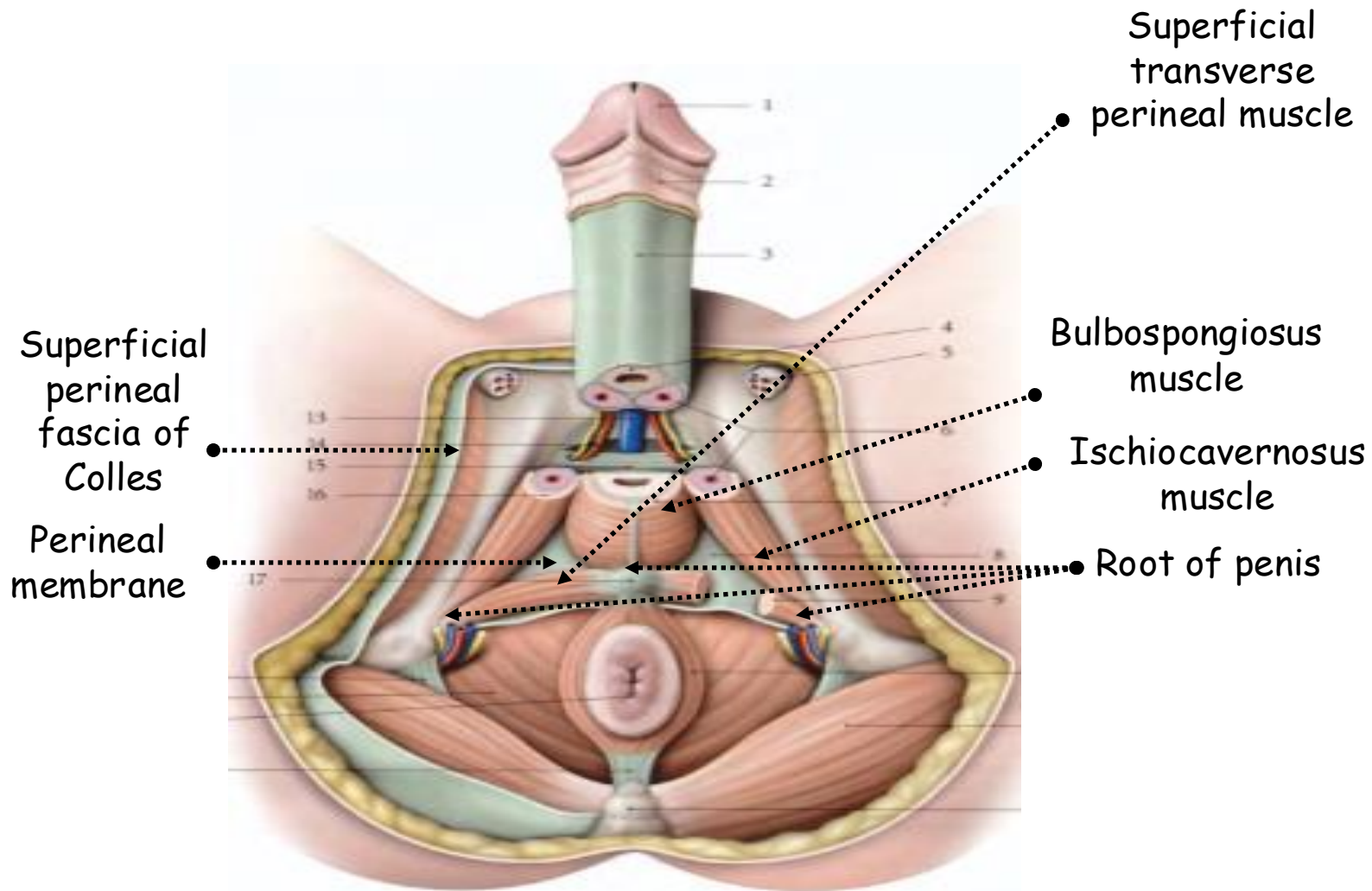
SAGITTAL SECTION OF THE MALE PELVIC CAVITY (FROM KAMINA)



ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE DEEP PERINEAL POUCH (FROM KAMINA)

B. SUPERFICIAL PERINEAL POUCH

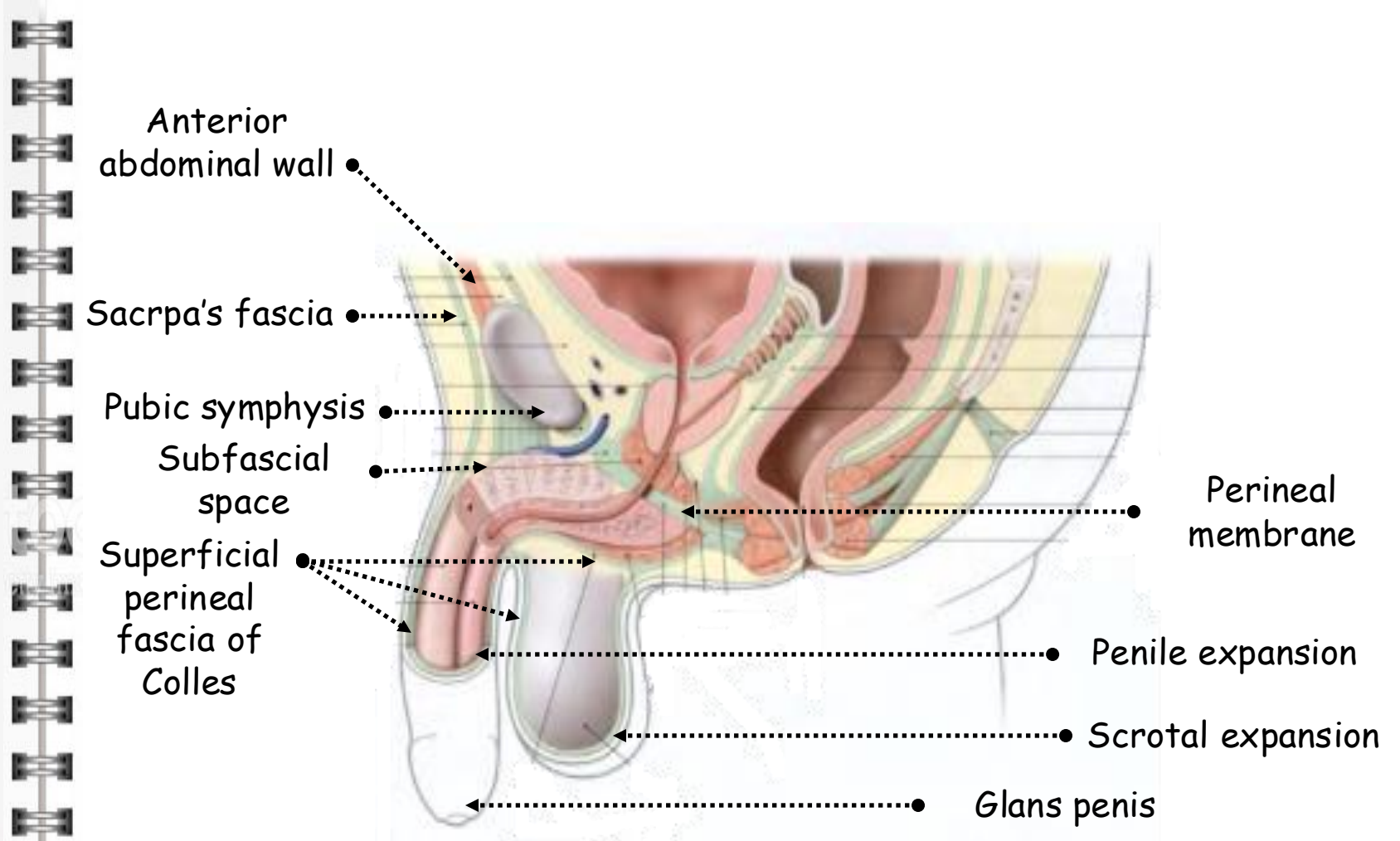
- Below the perineal membrane
- Bounded by the superficial perineal fascia of Colles
- Contents:
 - Root of penis
 - Superficial perineal muscles
 - Perineal vessels and nerves



ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE SUPERFICIAL PERINEAL POUCH (FROM KAMINA)

- **Superficial perineal fascia (of Colles):**

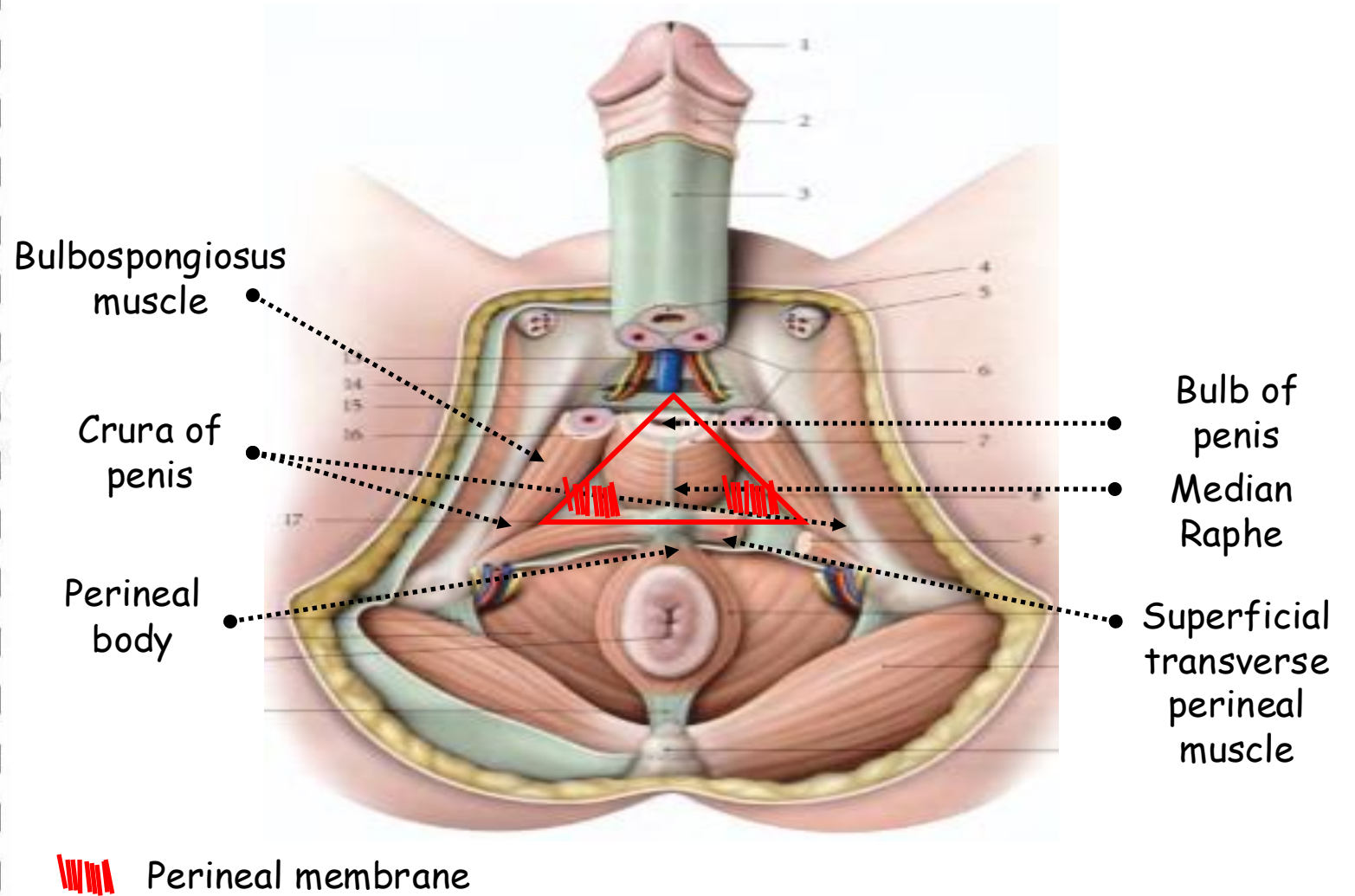
- Continuation into the perineum from the membranous fascia of Scarpa of the anterior abdominal wall
- Attaches to the front of the pubic bone, the pubic ramus and the posterior margin of the perineal membrane
- Closes in the subfascial space that lies beneath it in continuity with the space deep to the membranous fascia of the anterior abdominal wall
- Bulbous scrotal expansion
- Cylindrical penile expansion which distal end is attached round the corona of the glans penis



SAGITTAL SECTION OF THE MALE PELVIC CAVITY (FROM KAMINA)

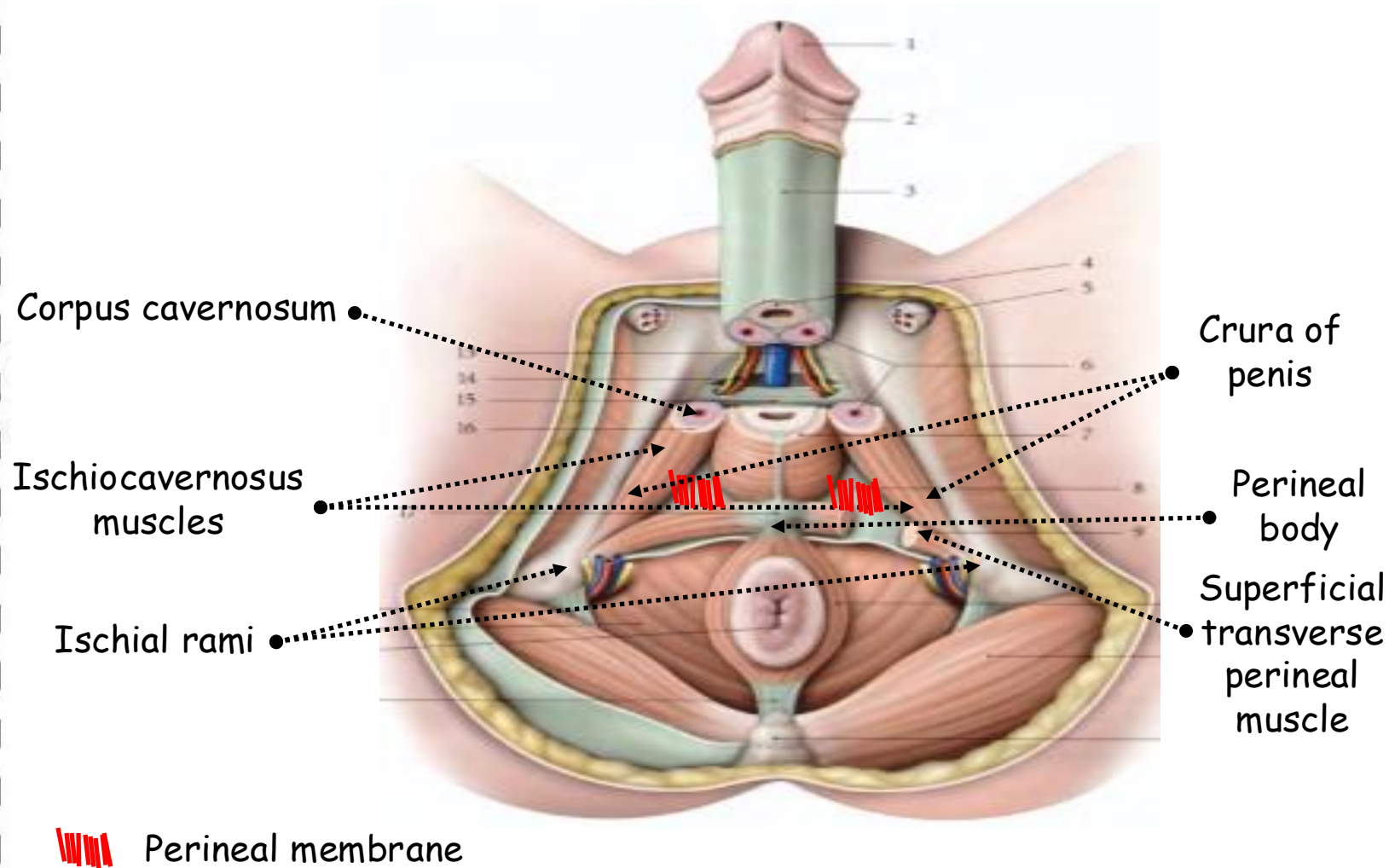
C. SUPERFICIAL PERINEAL MUSCLES

- Overlying muscles of crura and bulb of penis and the superficial transverse perineal muscle
- Triangular pattern in lithotomy position
- **Bulbospongiosus muscle:**
 - Arises from the perineal body and in front of that from a median raphe that joins the pair together
 - Posterior fibres: directed forwards and laterally over the bulb to be inserted into the perineal membrane
 - Fibres from the raphe: dorsal fibrous expansion on penis; the more posterior of these fibres clasp the corpus spongiosum, while the more anterior extend on to the corpus cavernosum



ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE SUPERFICIAL PERINEAL POUCH (FROM KAMINA)

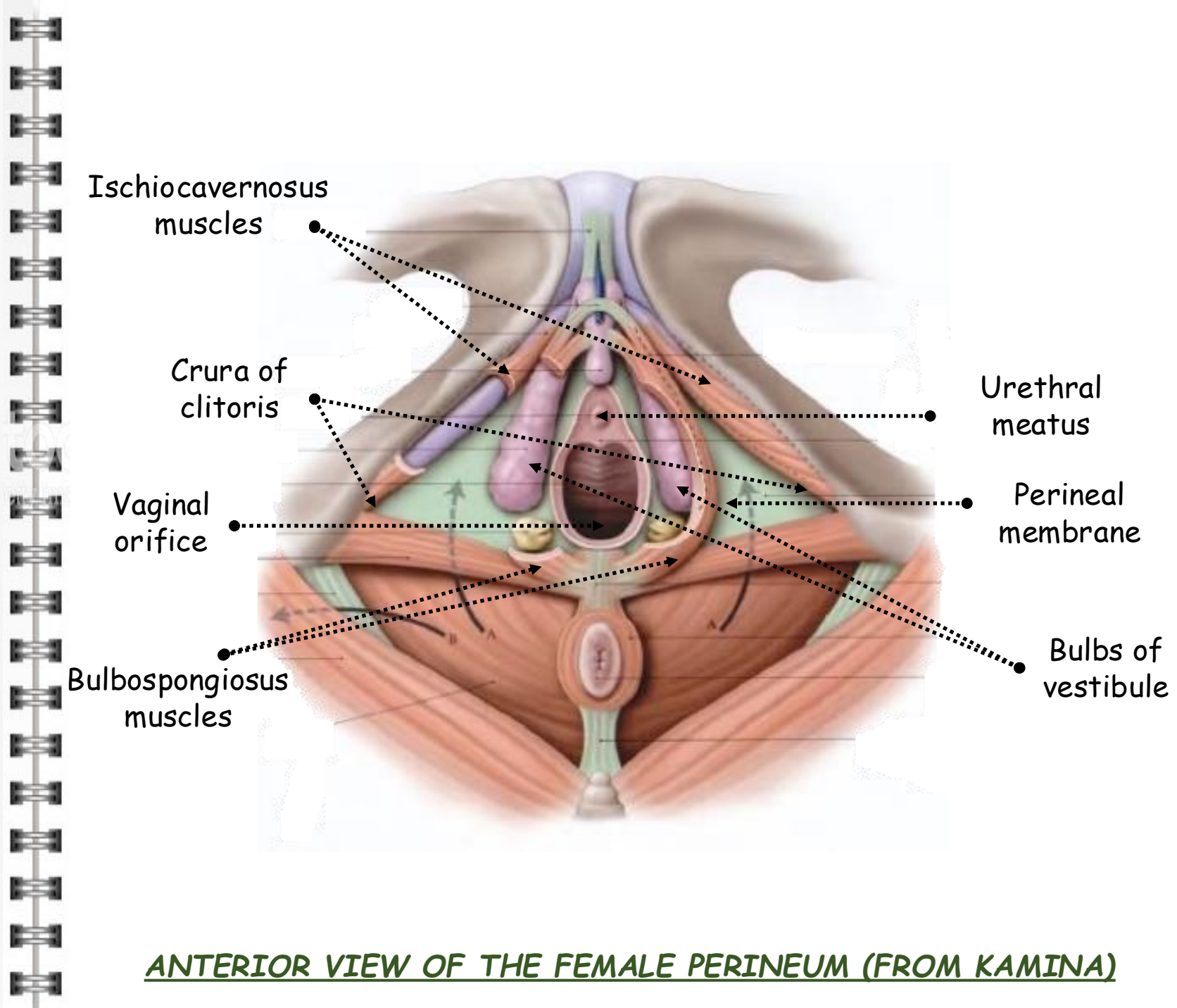
- **Ischiocavernosus muscle:**
 - Arises from the posterior part of the perineal membrane and from the ramus of the ischium
 - The fibres spiral forwards over the crus and are inserted into the upper surface of the commencement of the corpus cavernosum
 - Muscle of erection
- **Superficial transverse perineal muscle:**
 - Arises from the ischial ramus just behind the attachment of the perineal membrane and is inserted into the perineal body
- Nerve supply: perineal branch of the pudendal nerve S2 S3



ANTERIOR VIEW OF THE MALE PERINEUM SHOWING THE SUPERFICIAL PERINEAL POUCH (FROM KAMINA)

IV. FEMALE UROGENITAL REGION

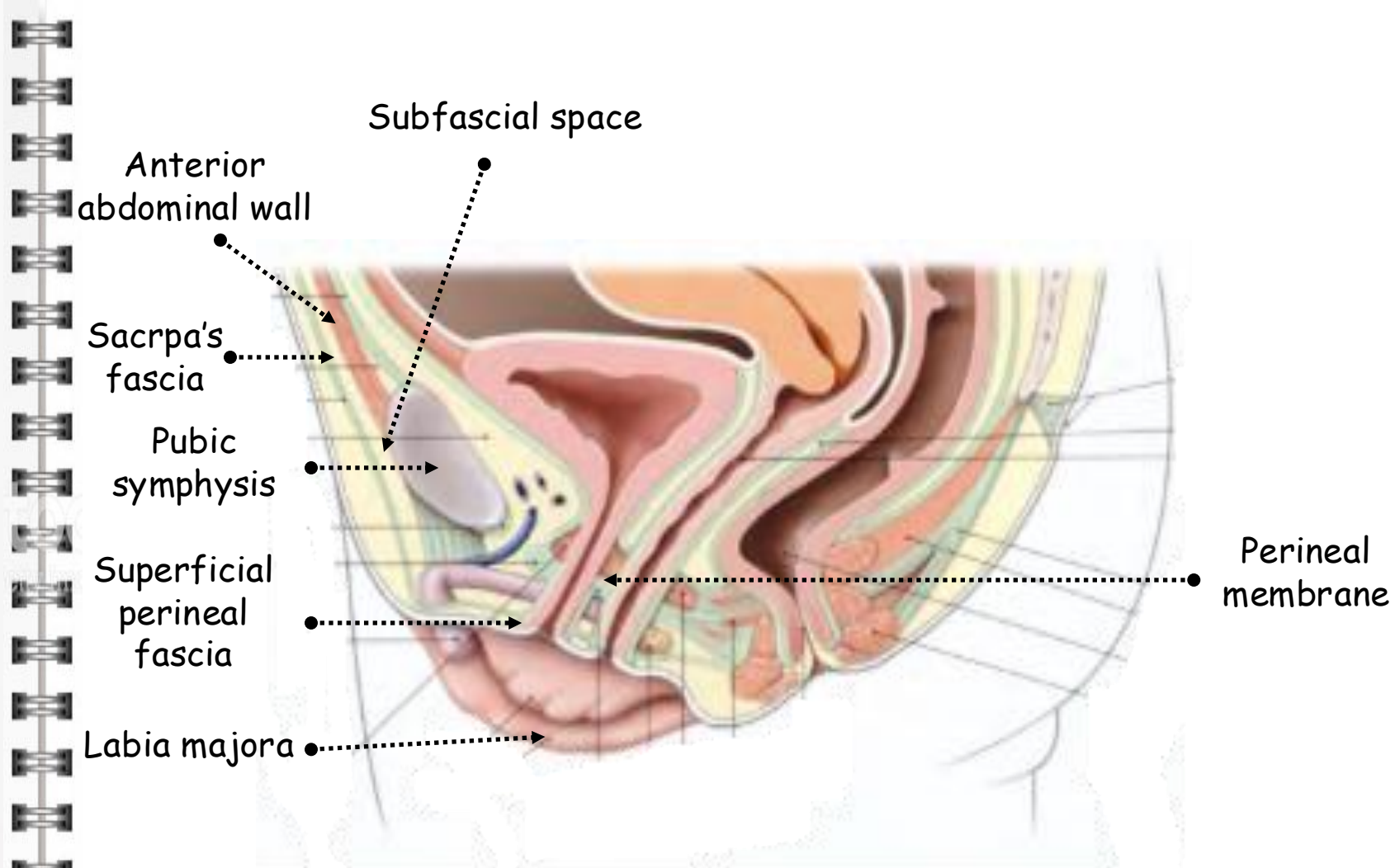
- **Perineal membrane:**
 - Wider and weaker
 - Being pierced transversely by vagina and urethra, although the opening of the vagina in the vulva is longitudinal
- **Crura of the clitoris:**
 - Attached to the perineal membrane
 - Covered by ischiocavernosus muscles
- **Bulb of the vestibule:**
 - Medial to crura of the clitoris
 - Attached to the perineal membrane at the side of the vagina
 - Mass of erectile tissue
 - On each side of the orifices of the vagina and urethra
 - Bulbospongiosus muscle



ANTERIOR VIEW OF THE FEMALE PERINEUM (FROM KAMINA)

- **Superficial perineal fascia:**

- Similar but less well-defined as in men
- Boundary of the superficial perineal pouch
- Centrally deficient because of the vulval slit
- Forms the labia majora



SAGITTAL SECTION OF THE MALE PELVIC CAVITY (FROM KAMINA)

V. NERVE SUPPLY

- **Anal region:**
 - Inferior rectal nerve S3 and S4
 - Perineal branch of S4
 - Twigs from the coccygeal plexus S5
- **Urogenital region:**
 - Anterior third of the scrotum and labium majus down to the anterior axial line: ilioinguinal nerve L1
 - Skin of penis and clitoris: S2
 - Lateral posterior two-thirds of the scrotum and labium majus: perineal branch of the posterior femoral cutaneous nerve

-Medial posterior two-thirds
of the scrotum and labium
minus: scrotal or labial
branches of the perineal
branch of the pudendal nerve
S3



VI. CONCLUSION

- Limited region
- Major functional implication
- Urinary and fecal continence and erection





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