

UROGENITAL SYSTEM

THE PERINEUM

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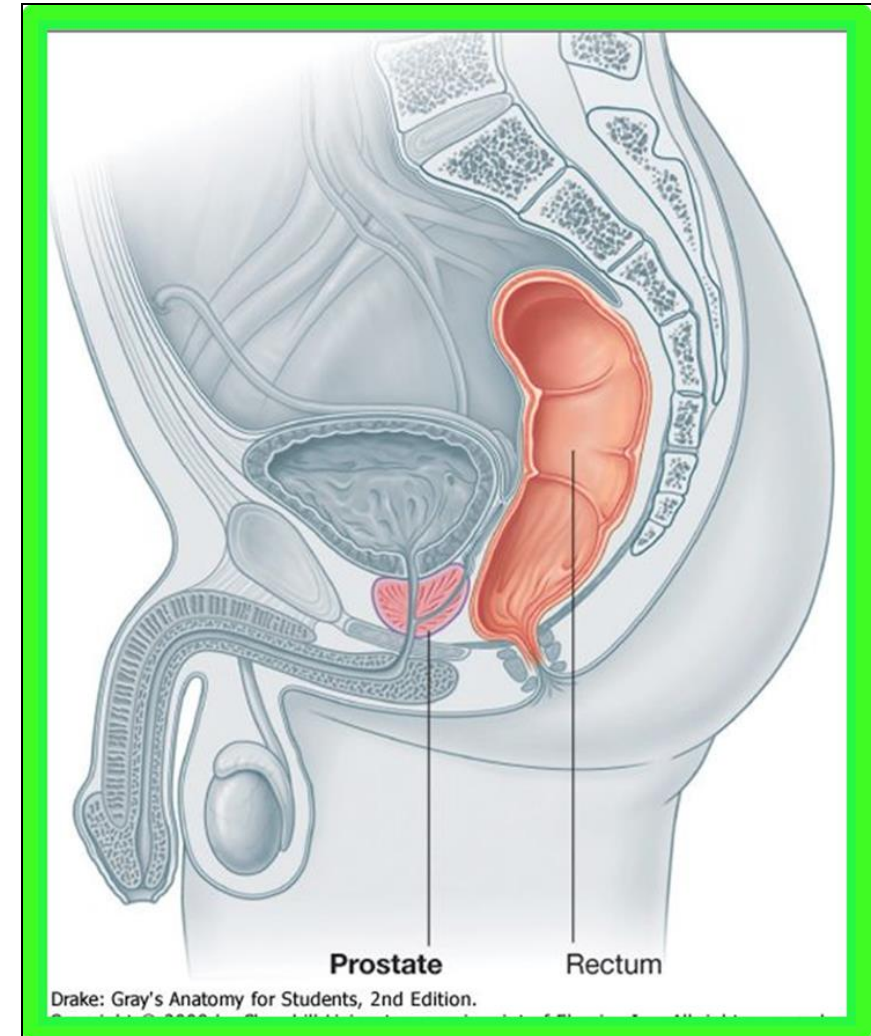
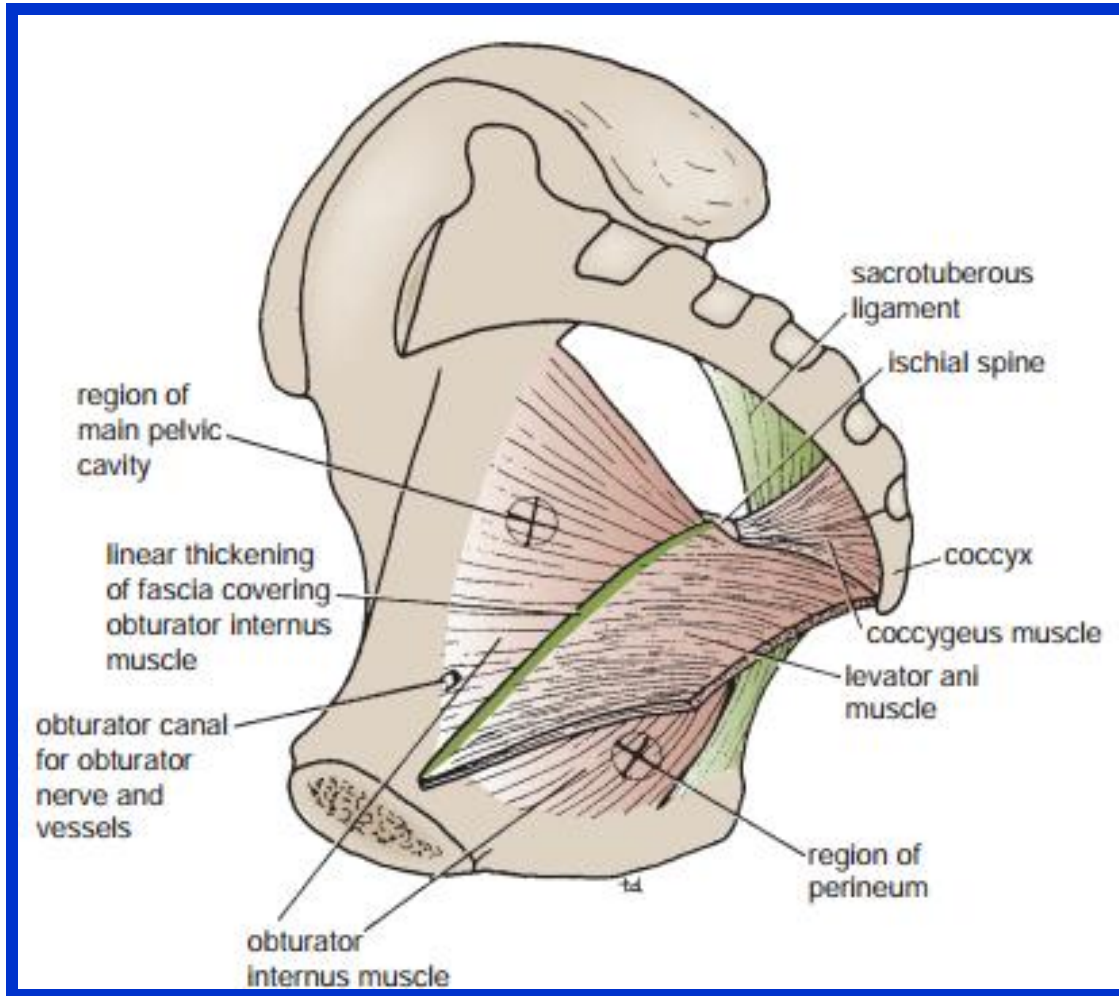
College of Medicine /University Of Mutah

2025-2026

Monday 4 May 2026

The Perineum

❖ The cavity of the pelvis is divided by **the pelvic diaphragm** into **the main pelvic cavity** above and **the perineum** below .



The Perineum

The perineum is diamond shaped and is bounded:

Anteriorly: The symphysis pubis

Posteriorly: the tip of the coccyx

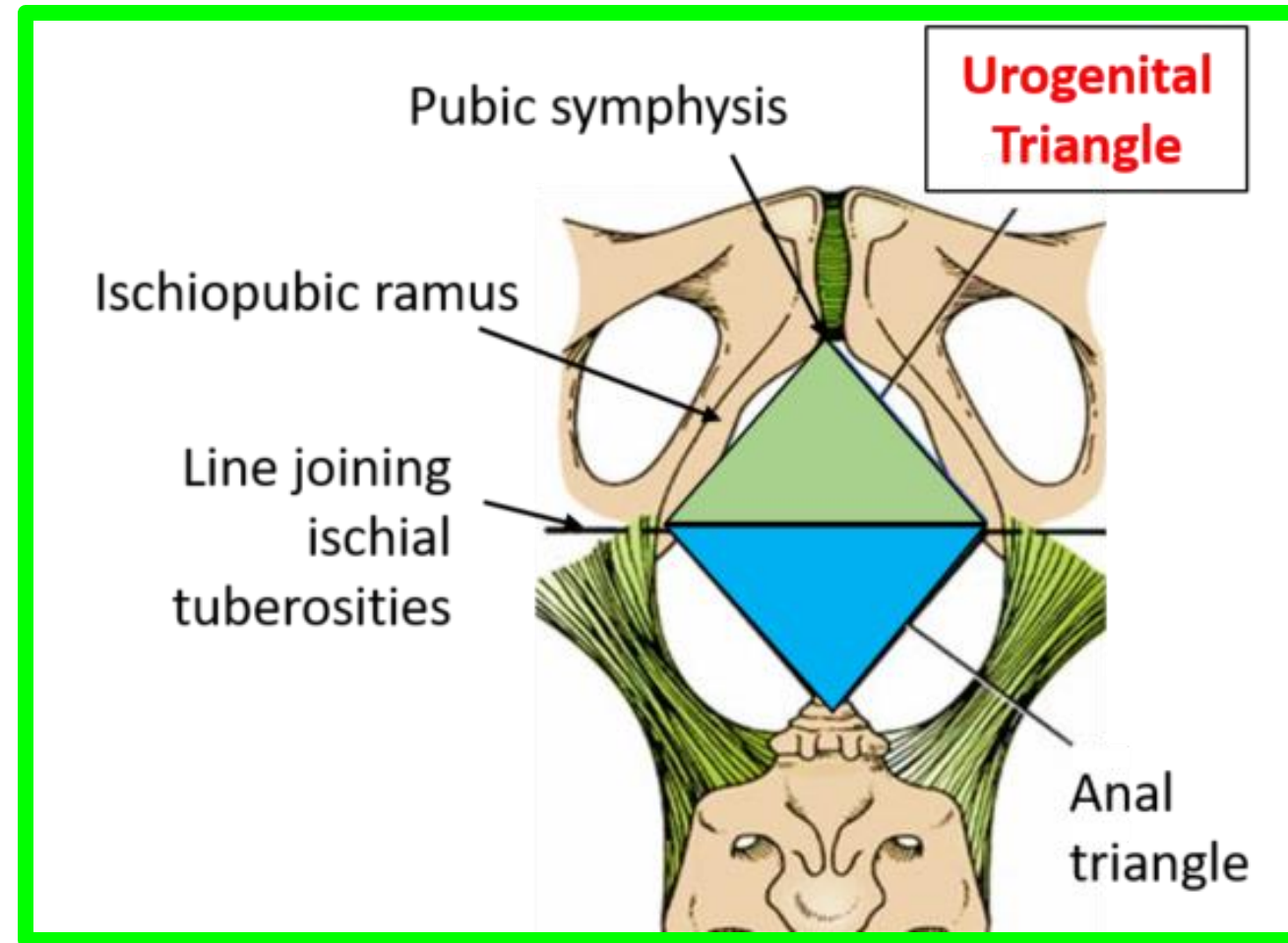
Laterally: The ischial tuberosities

❖ **Diamond-shaped perineum** divided by a broken line into the:

❖ **Urogenital triangle**

❖ **Anal triangle.**

The Urogenital triangle is bounded in front by the pubic arch and laterally by the ischial tuberosities



Urogenital Triangle

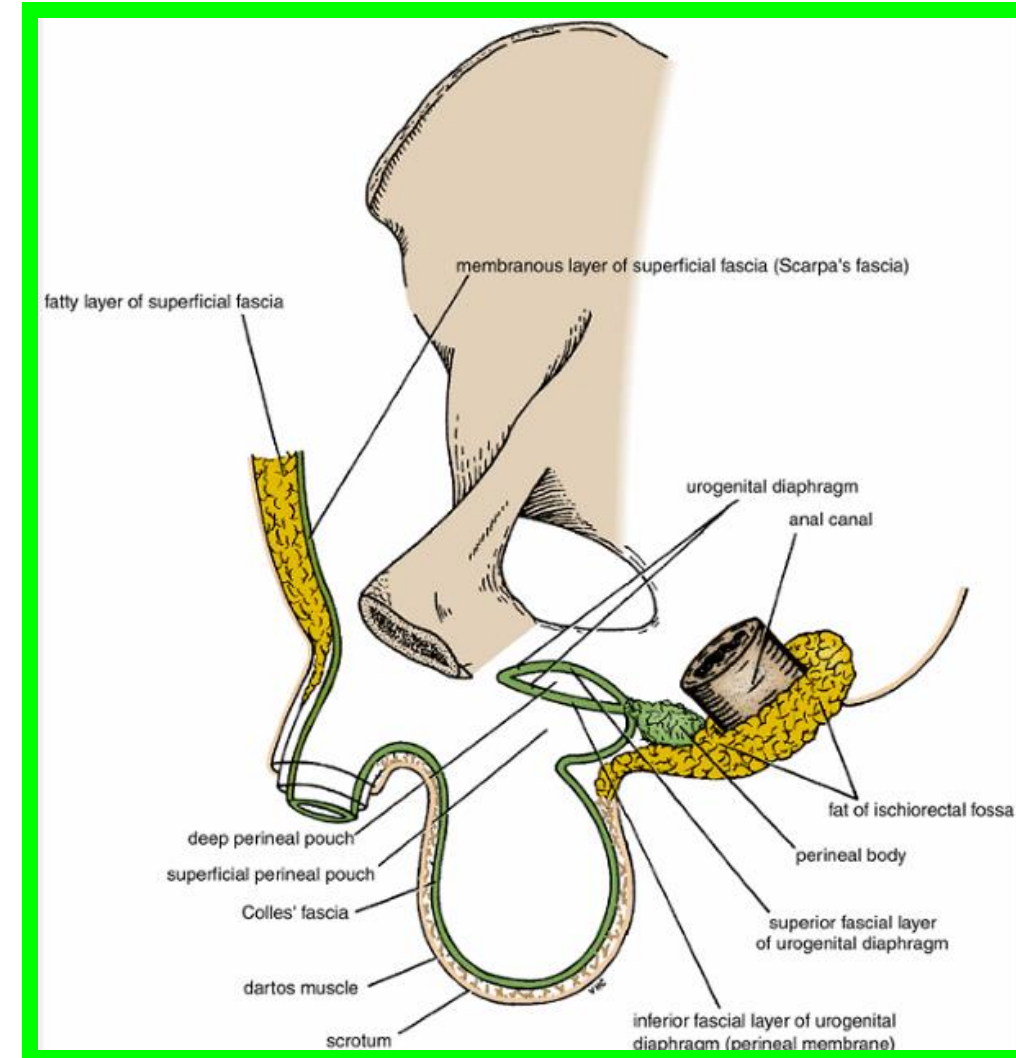
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Superficial Fascia

Can be divided into a fatty layer and a membranous layer.

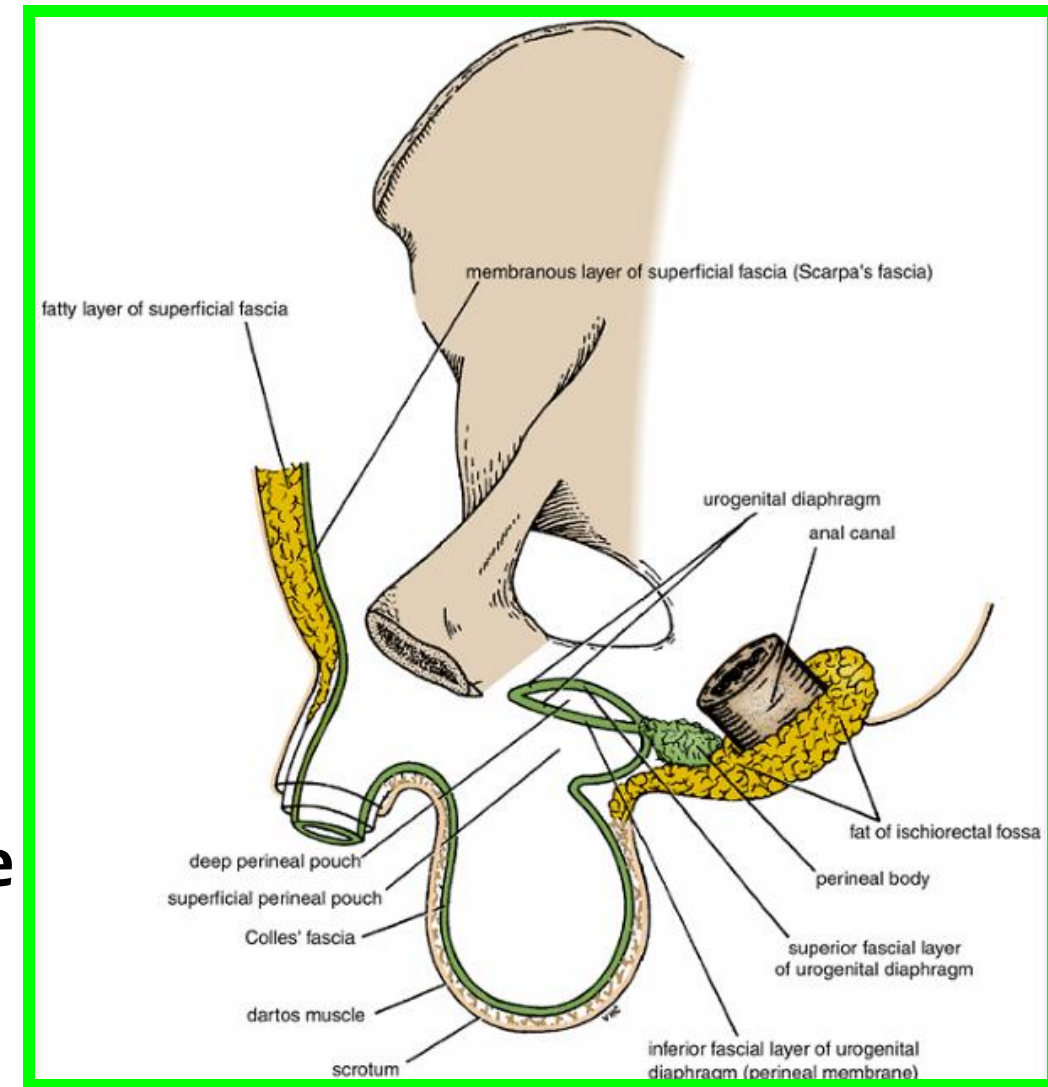
- ❖ The fatty layer (fascia of Camper) is continuous with the fat of **the ischiorectal fossa** and the superficial fascia of the thighs
- ❖ **In the scrotum**, the fat is replaced by smooth muscle **the dartos muscle**.
- ❖ **The dartos muscle** contracts in response to cold and **reduces the surface area of the scrotal skin**



Urogenital Triangle

Superficial Fascia

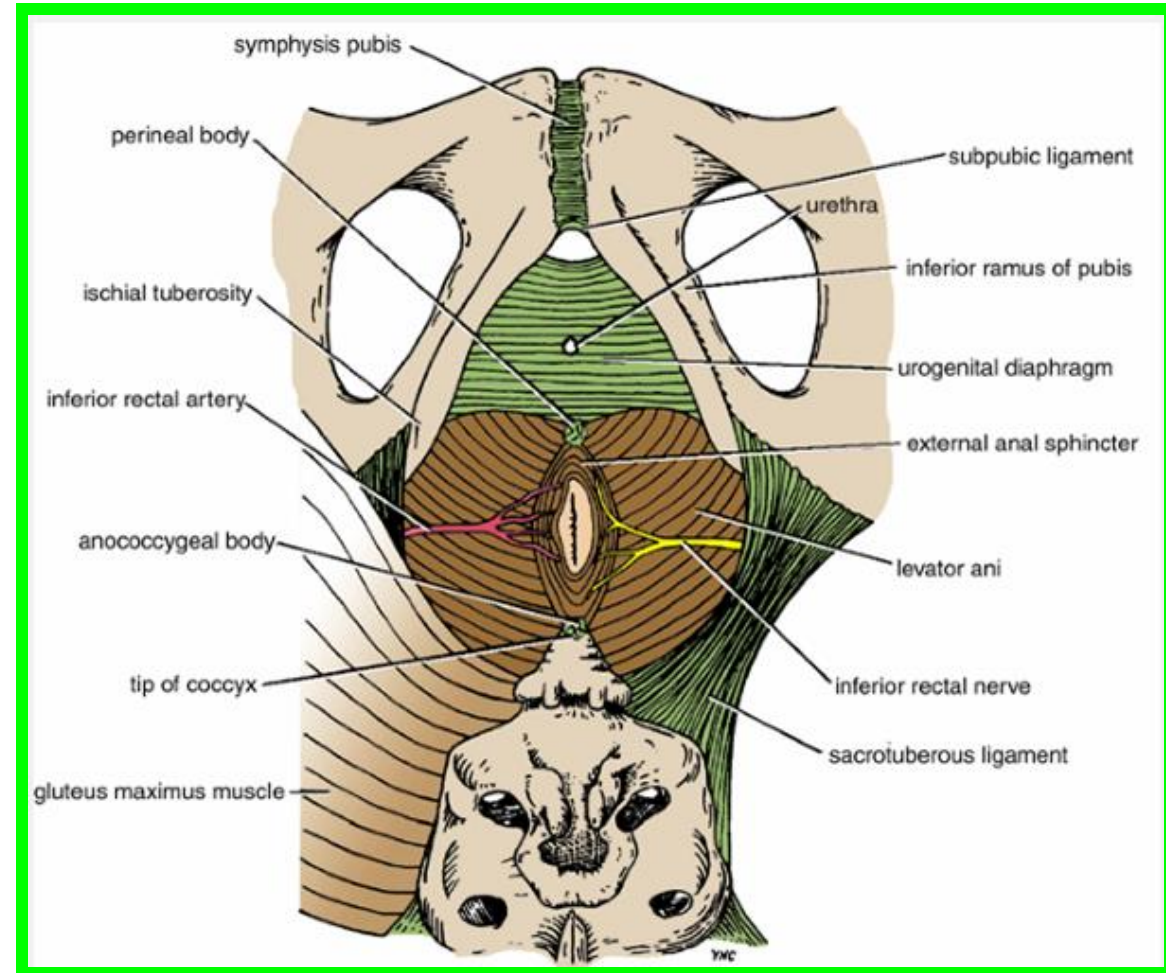
- ❖ The membranous layer (Colles' fascia) is attached:
 - ✓ **Posteriorly** to the posterior border of the urogenital diaphragm
 - ✓ **Laterally** to the margins of the pubic arch
 - ✓ **Anteriorly** it is continuous with the membranous layer of superficial fascia of the anterior abdominal wall (**Scarpa's fascia**).



- ✓ The fascia is continued over the **penis** (or clitoris) as a tubular sheath (**Buck's fascia**) and **Colle's Fascia** in **the scrotum**

Urogenital Diaphragm

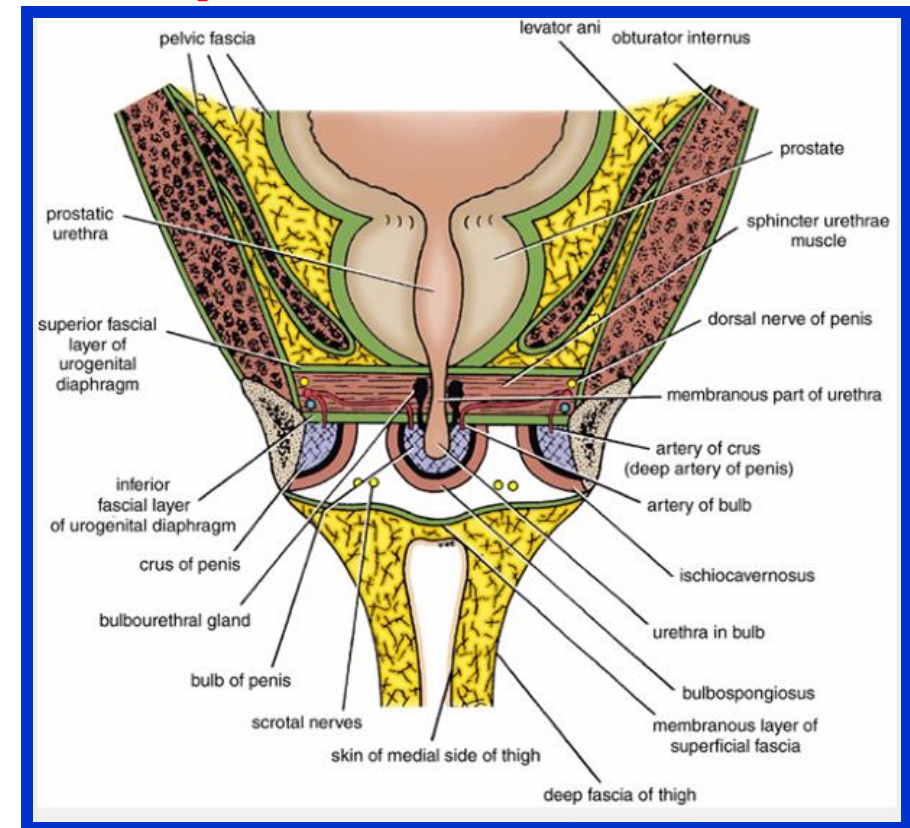
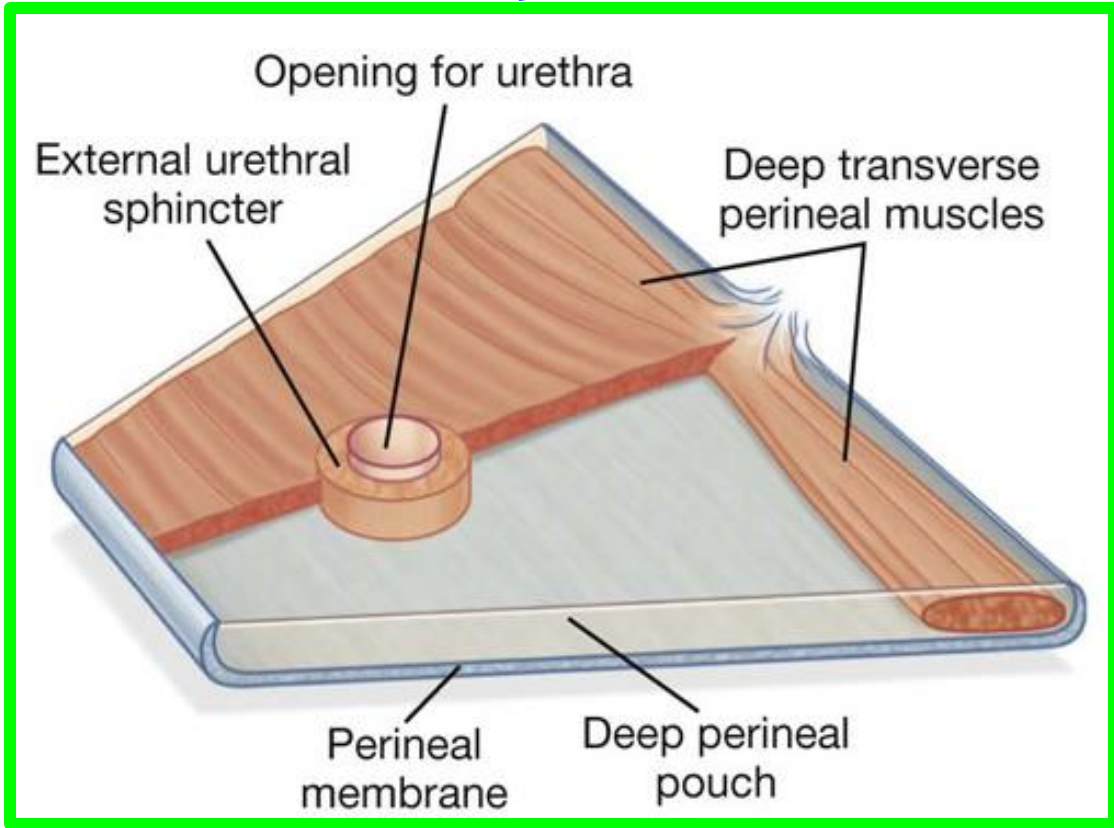
- Is a **triangular musculofascial diaphragm** situated in the anterior part of the perineum
- filling in the gap of the pubic arch



Urogenital Diaphragm

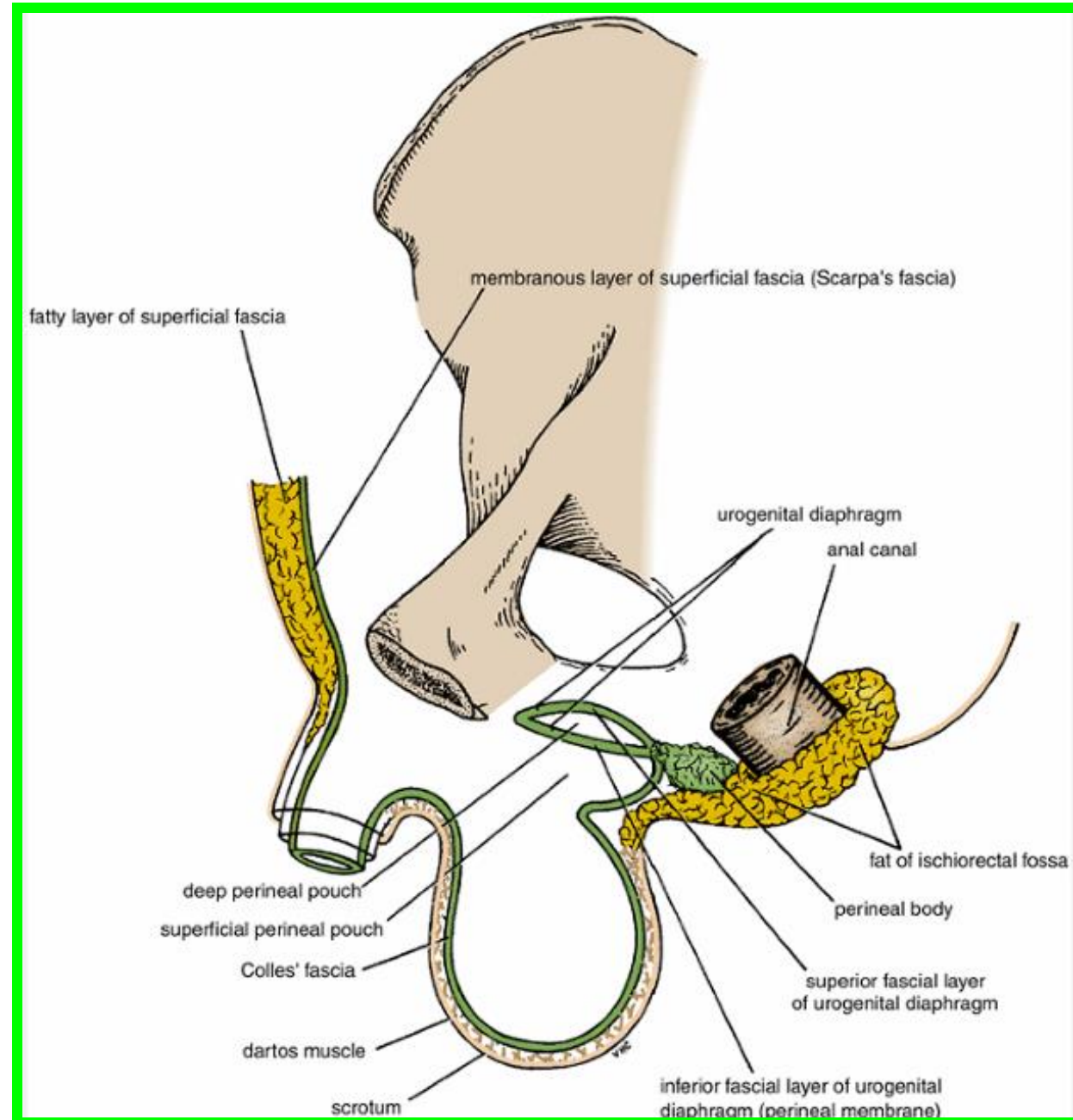
❖ It is formed by **the sphincter urethrae** and **the deep transverse perineal muscles**, which are enclosed between a superior and an inferior layer of fascia of the Urogenital diaphragm.

❖ The inferior layer of fascia is often referred to as **the perineal membrane**.



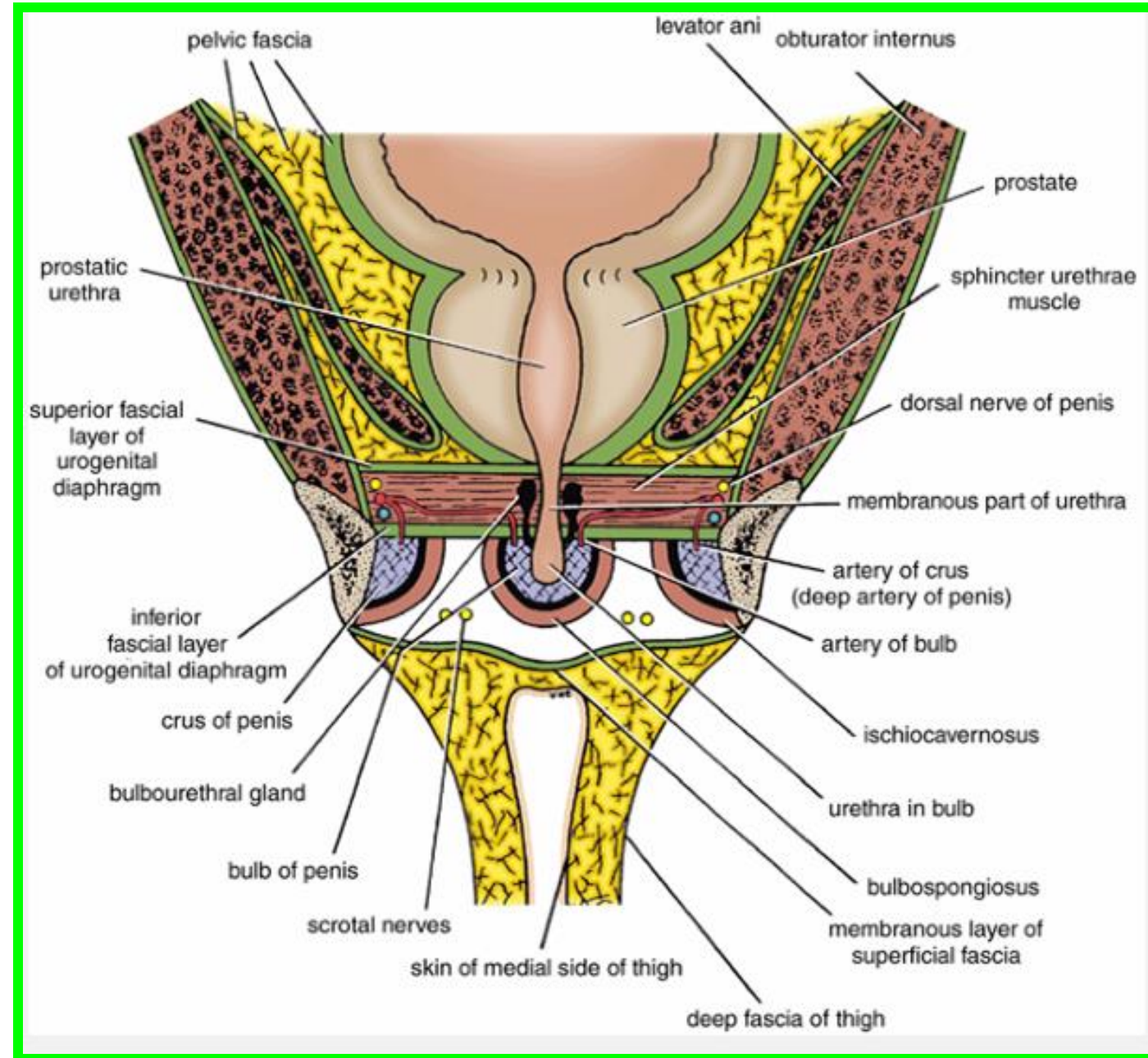
Urogenital Diaphragm

- ❑ **Anteriorly:** the **two layers of fascia fuse**, leaving a small gap beneath the symphysis pubis.
- ❑ **Posteriorly:** the two layers of fascia fuse with the **membranous layer of the superficial fascia** and the **perineal body**
- ❑ **Laterally,** the layers of fascia are attached to **the pubic arch.**



Urogenital Diaphragm

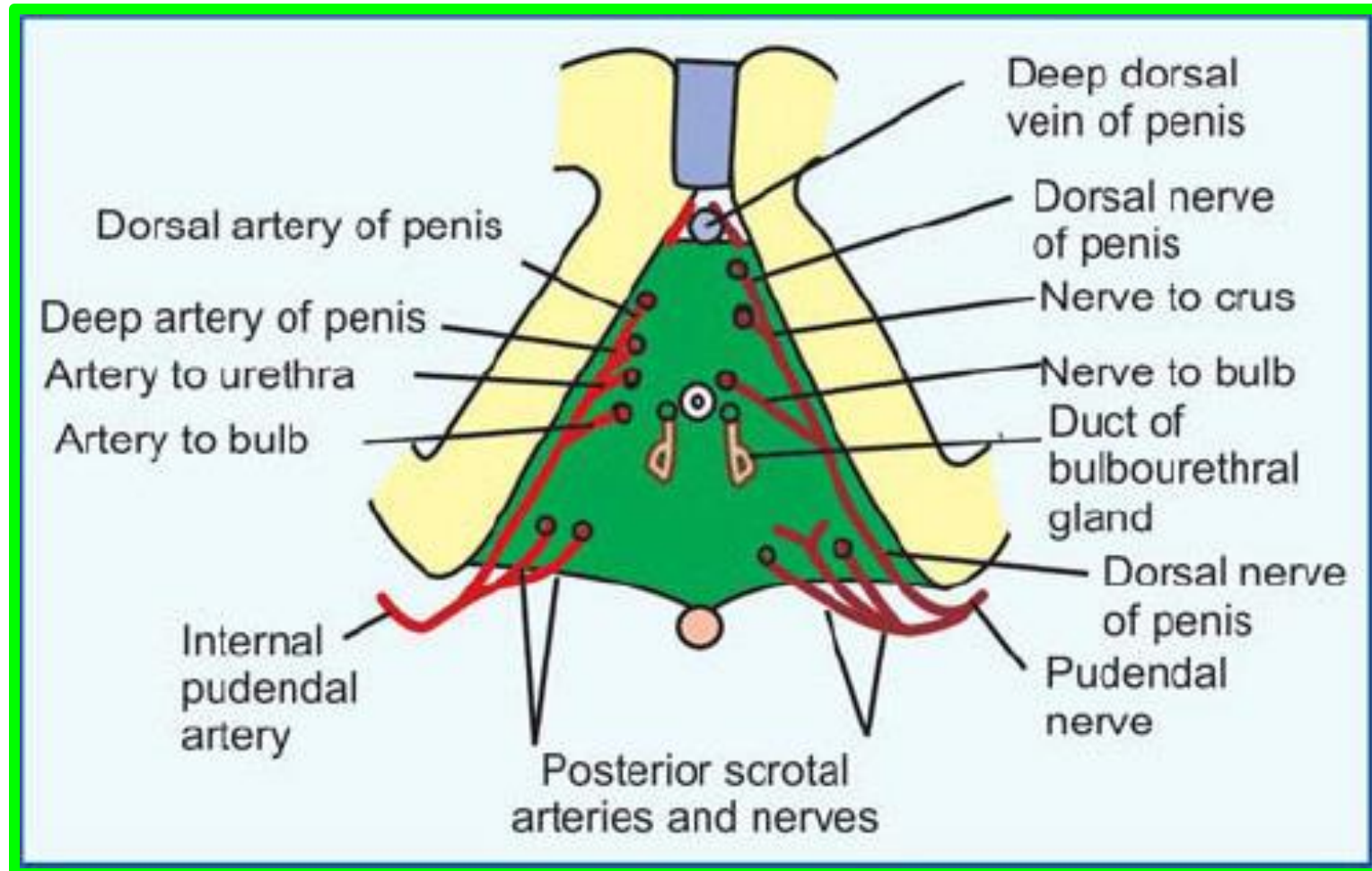
❖ The **closed space** that is contained between the superficial and deep layers of fascia is known as:
The deep perineal pouch.



** The structures piercing the perineal membrane.

In male

1. Membranous Urethra.
2. Ducts of the bulbo-urethral glands
3. **Artery of the urethra.**
4. **Artery of the bulb.**
5. **Deep artery of the penis.**
6. **Dorsal artery of the penis.**
7. **Dorsal nerve of the penis**



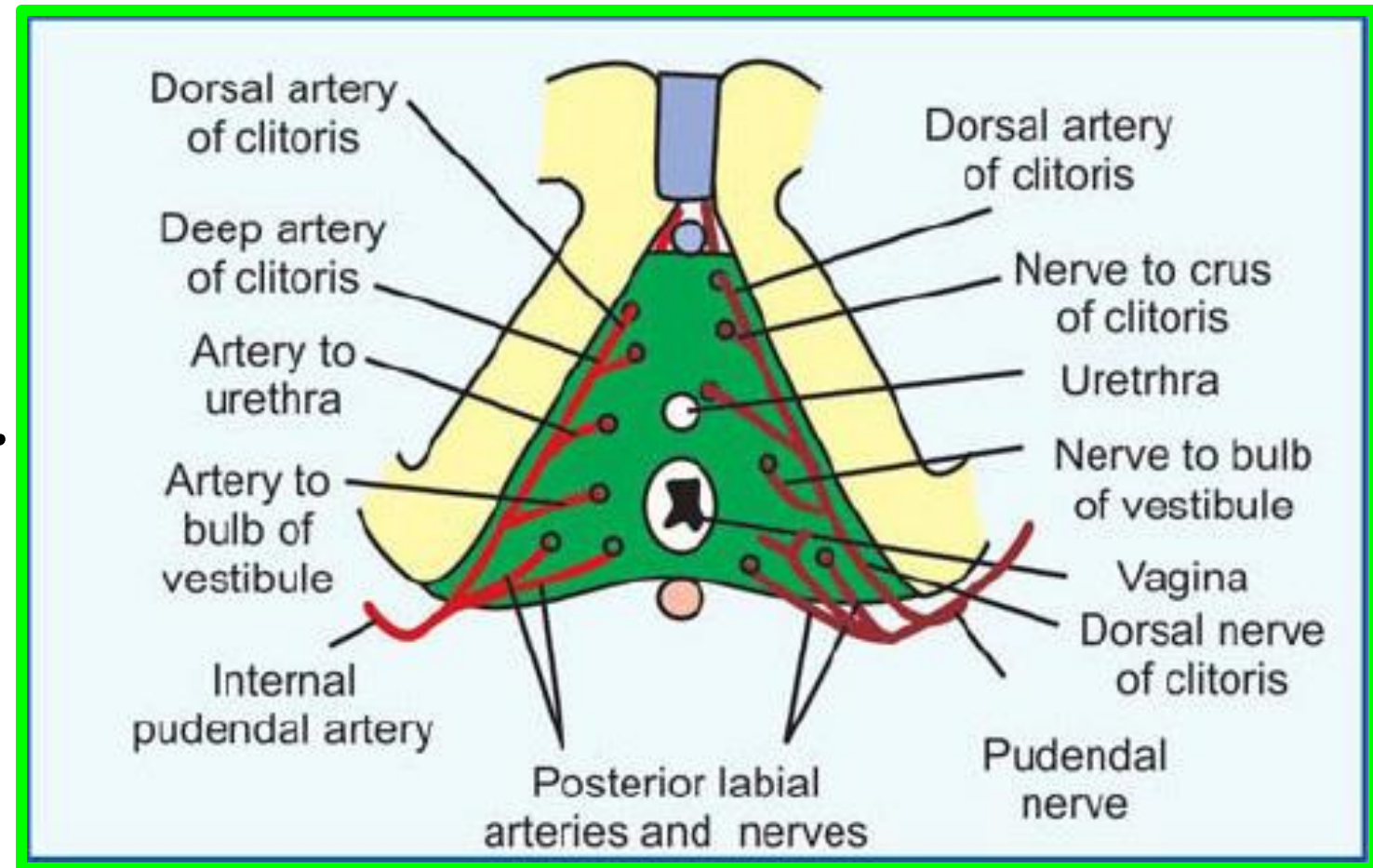
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** The structures piercing the perineal membrane.

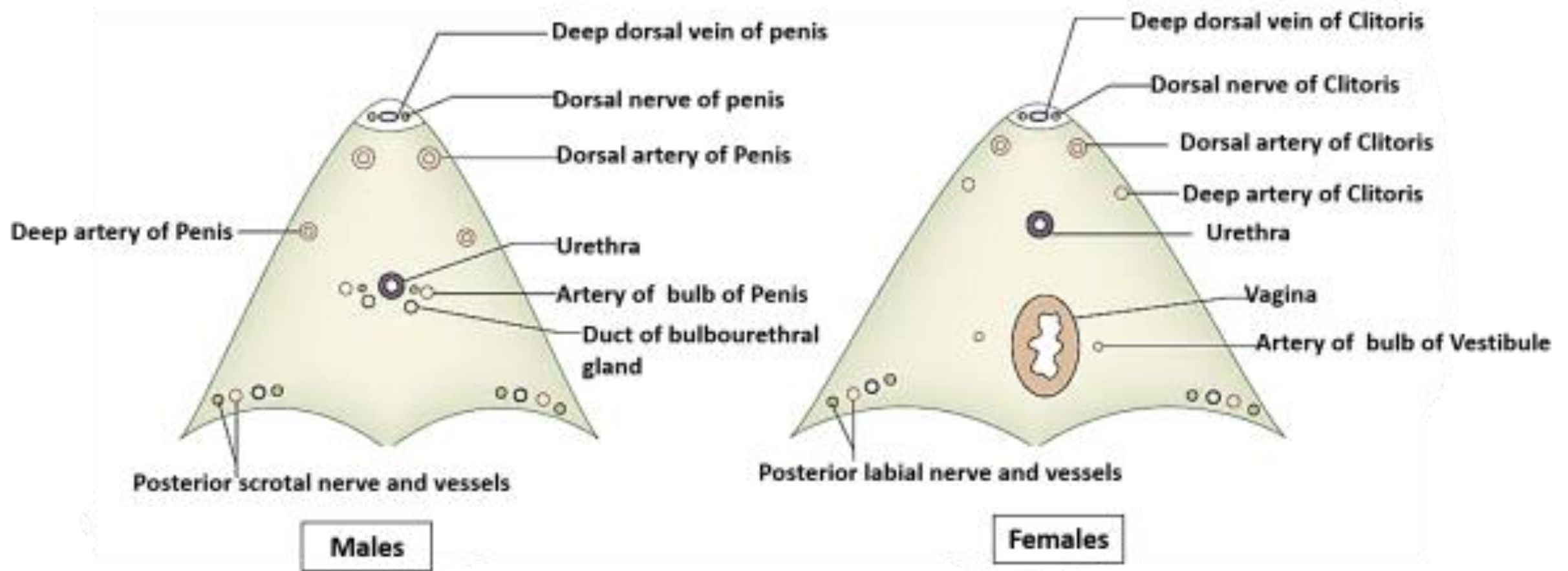
In female

1. Urethra.
2. Vagina behind the urethra.
3. **Artery of the urethra.**
4. **Artery of the bulb.**
5. **Deep artery of the clitoris.**
6. **Dorsal artery of the clitoris.**
7. **Dorsal nerve of the clitoris.**



The structures piercing the perineal membrane in male and Female

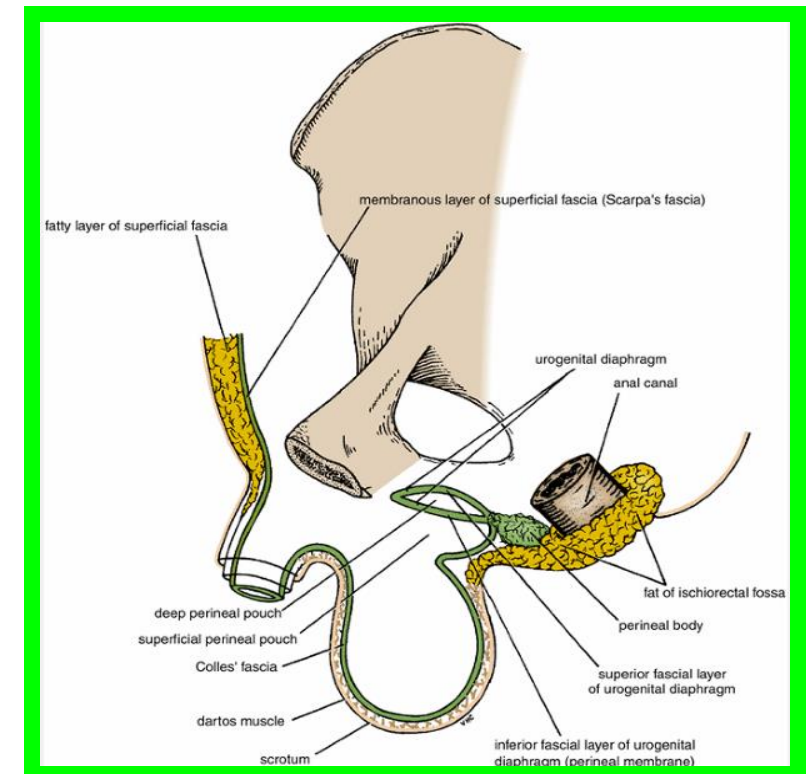
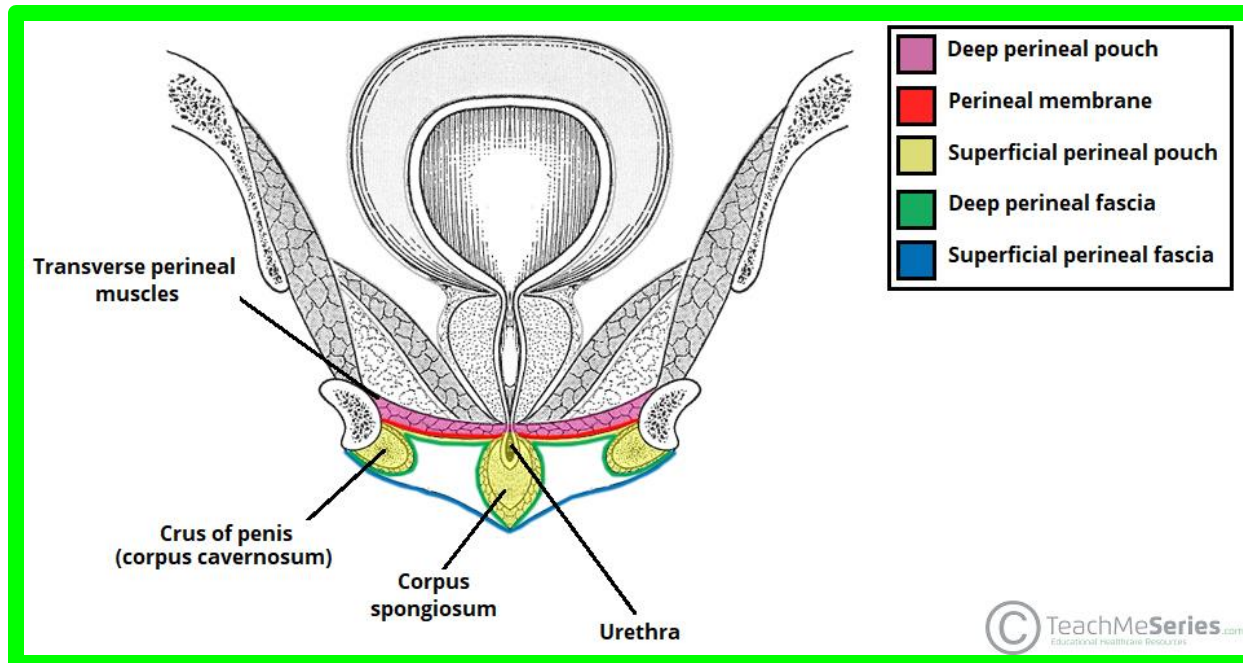
Structures Piercing Perineal Membrane



□ Superficial Perineal Pouch

** Boundaries

1. **Floor:** membranous layer of superficial fascia (**Colle's fascia**).
2. **Roof:** perineal membrane.
3. **On each side:** pubic arch.
4. **Posteriorly:** closed by the attachment of the roof and floor.
5. **Anteriorly:** opened.



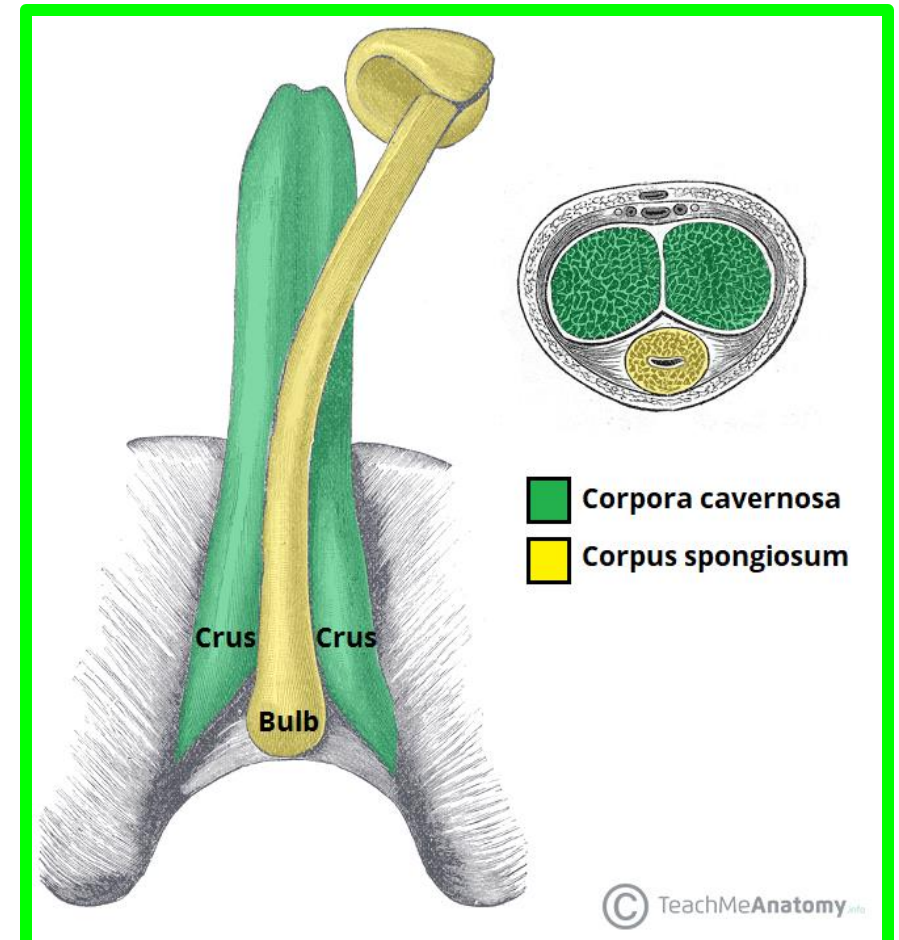
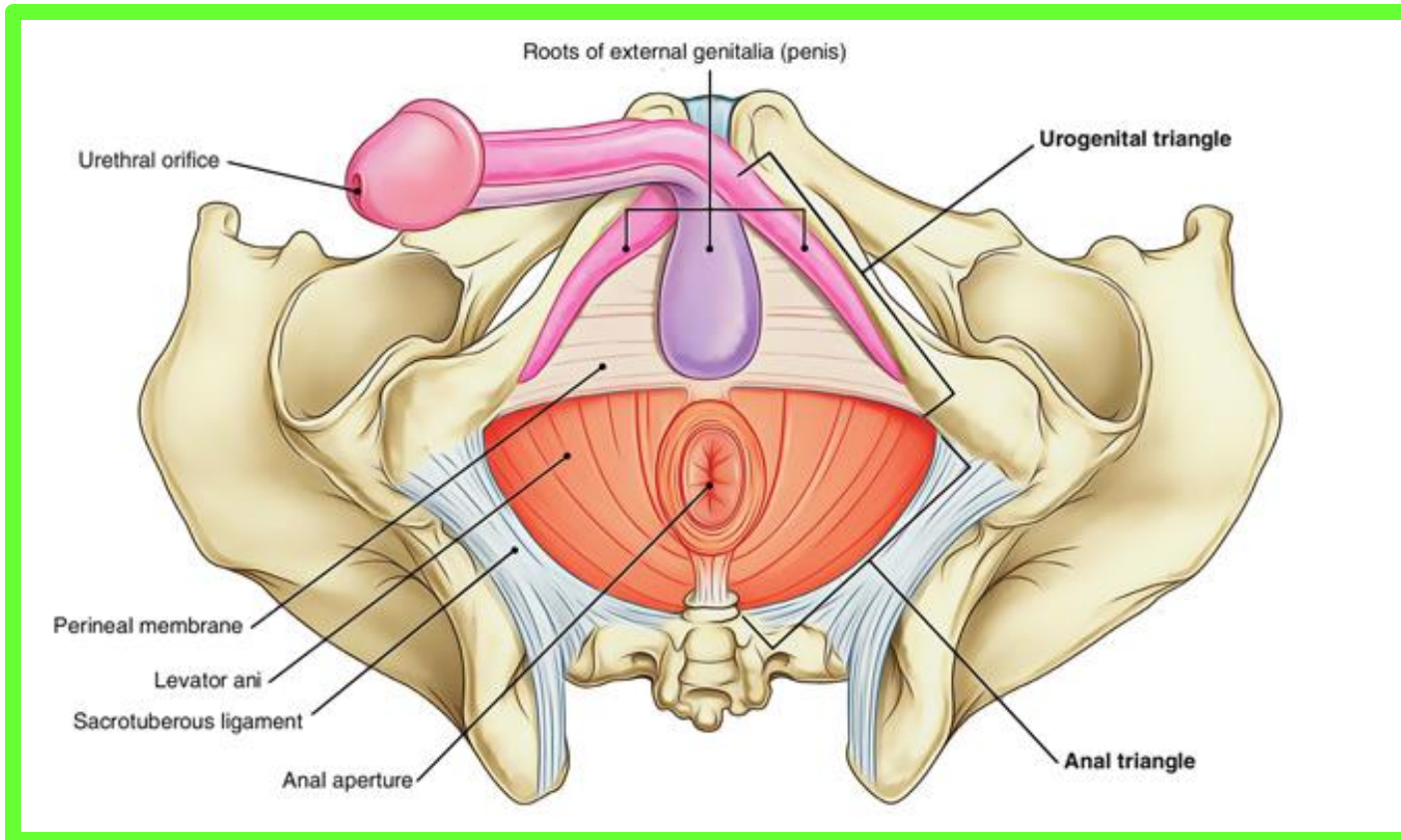
• Contents of Superficial Perineal Pouch

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A. Root of the penis

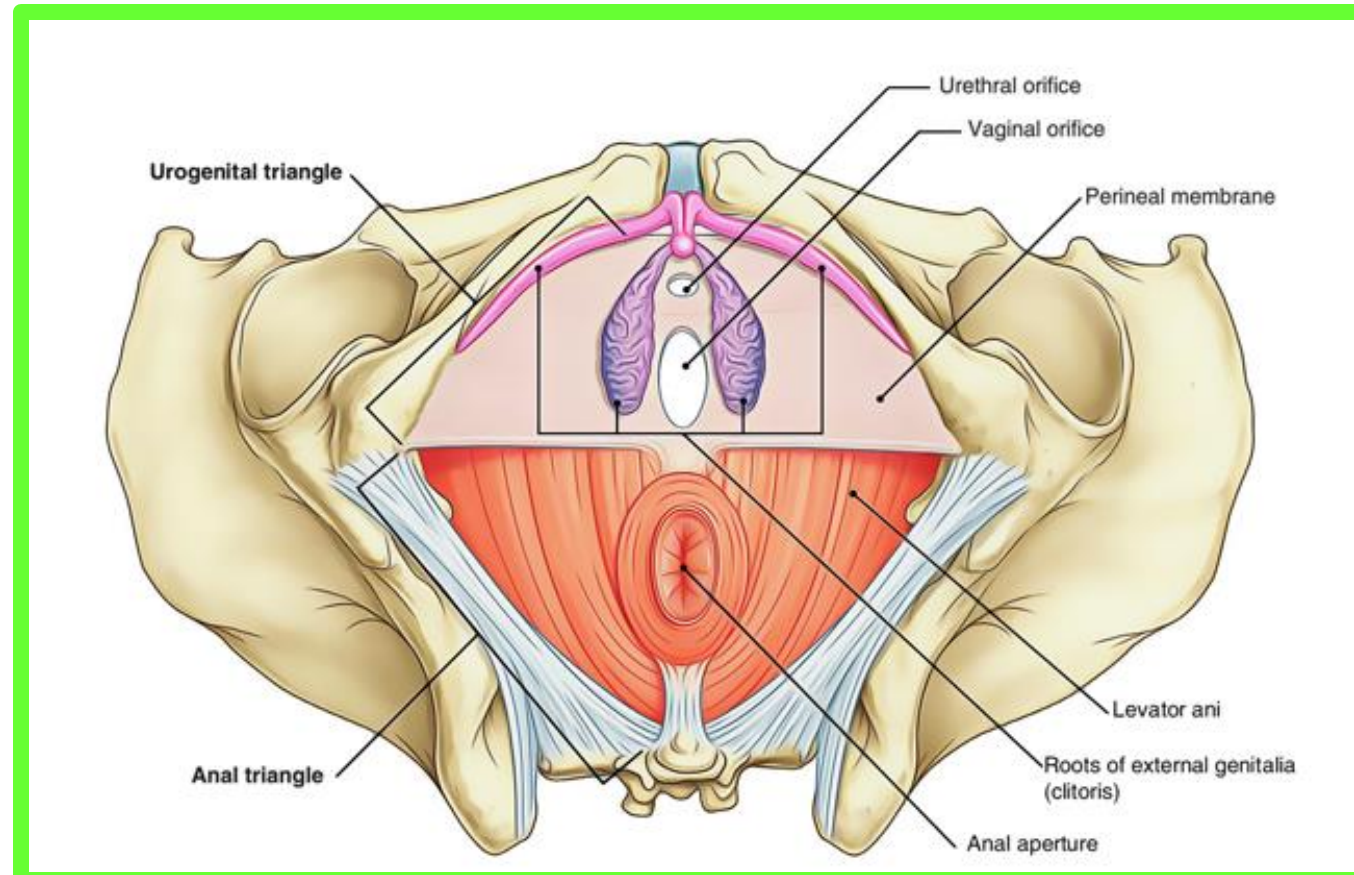
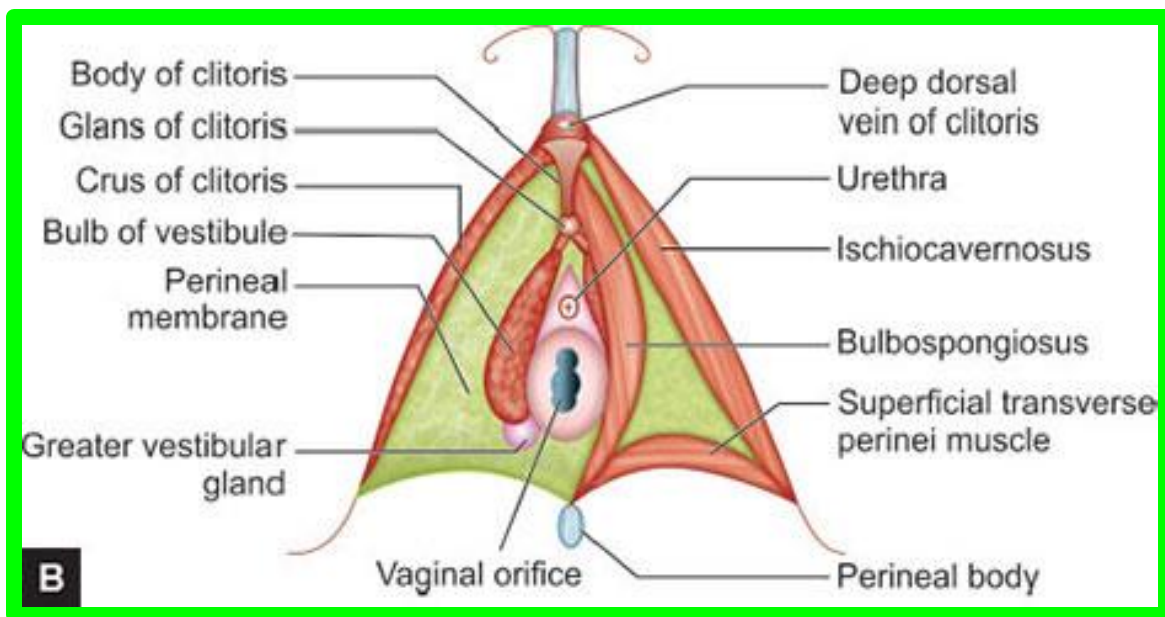
1. **Bulb of the penis:** is the posterior part of the corpus spongiosum.
2. **2 Crura of the penis:** is the posterior part of the corpora cavernosa.
3. **Penile urethra** inside the bulb of the penis.



• Contents of Superficial Perineal Pouch

N.B; In Female

- 1. Root of the clitoris. (Crus of clitoris and Bulb of vestibule)**
- 2. Vestibule of the vagina and greater vestibular glands**



• Contents of Superficial Perineal Pouch

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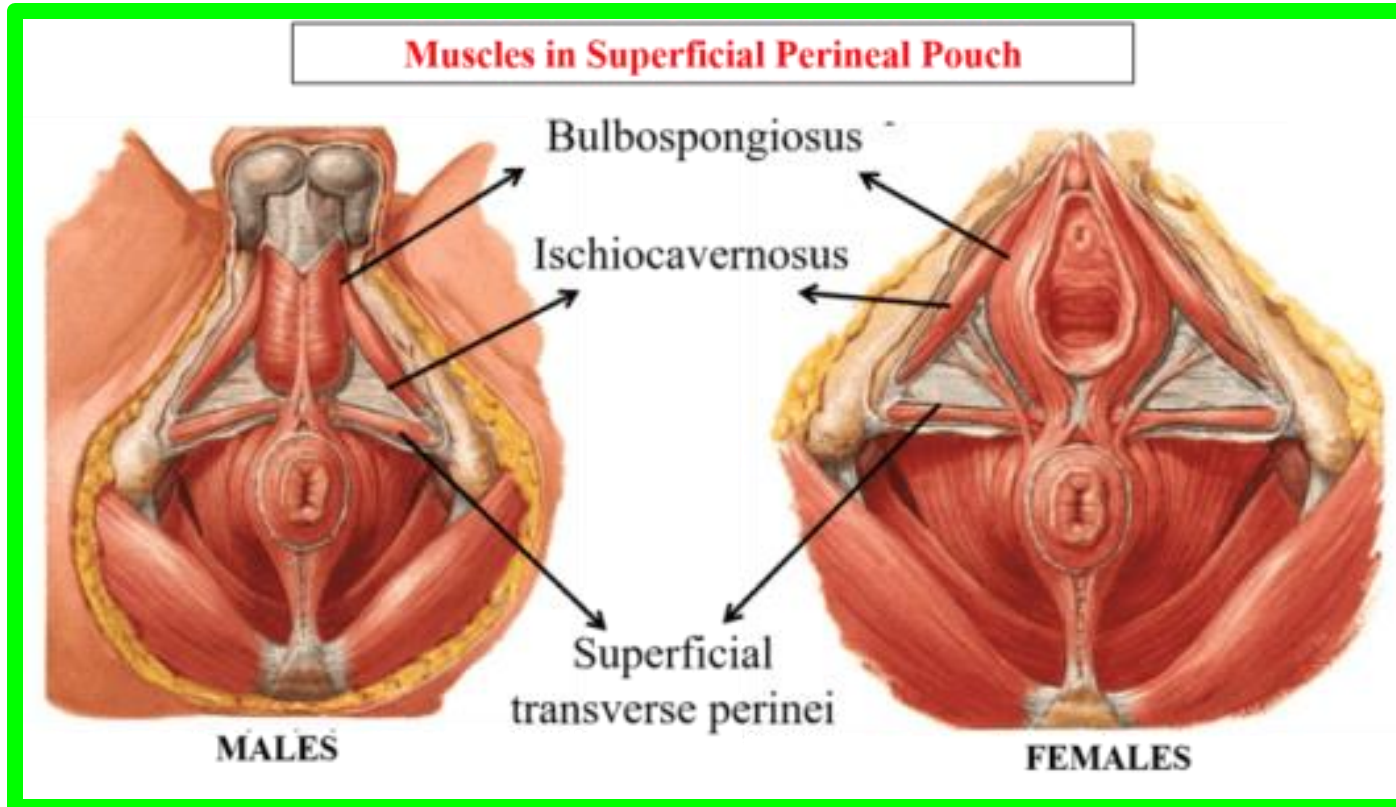
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B. Superficial perineal muscles (right and left)

1. **Superficial transversus perinei muscles.** (** Action: fixation of the perineal body.)
2. **Bulbospongiosus muscles.** ** Action; Empty the urethra (contract at the end of micturition or ejaculation).
3. **Ischiocavernosus muscles.** ** Action, maintain erection of the penis and clitoris



• Contents of Superficial Perineal Pouch

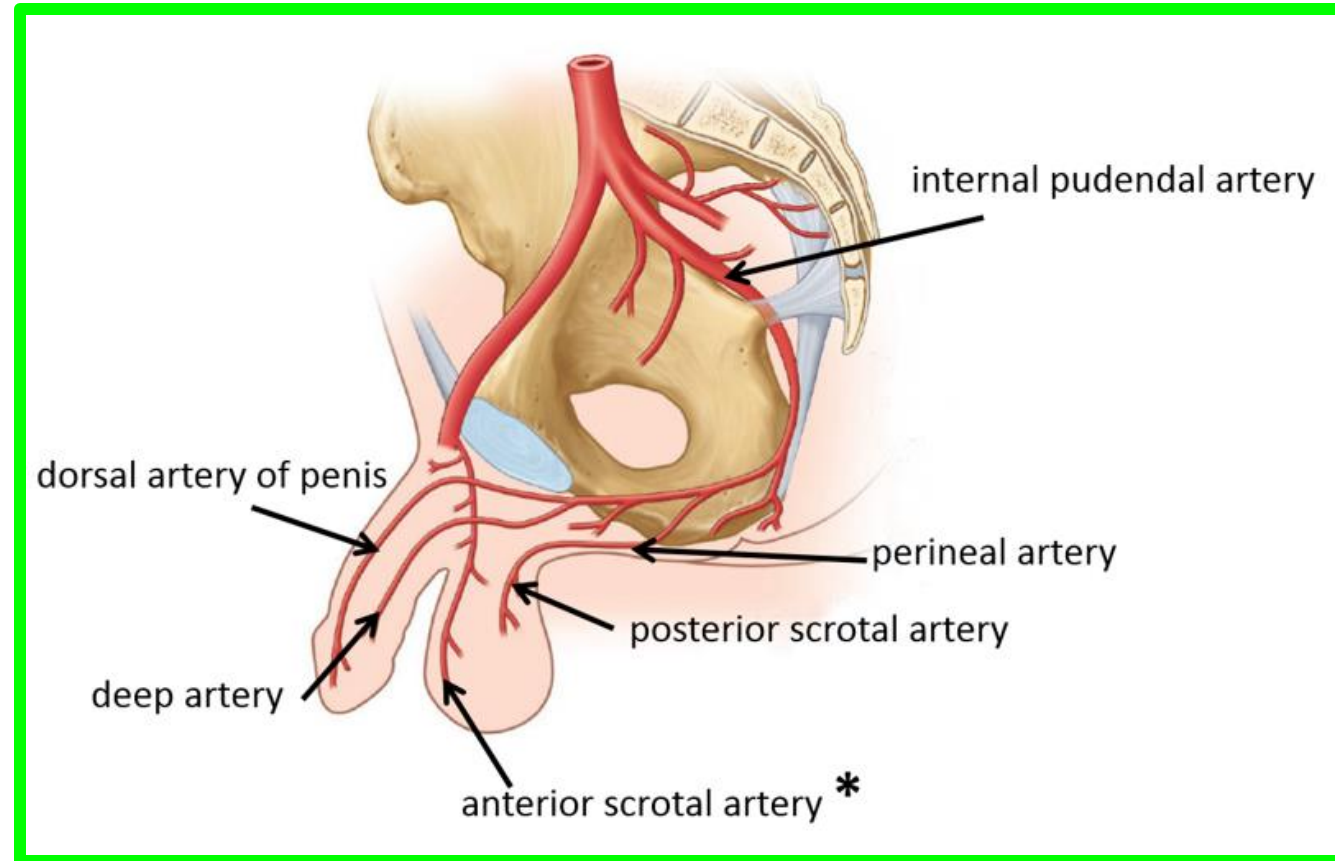
C. Blood Vessels (In male)

1. **Posterior scrotal artery:** from the perineal branch of the internal pudendal artery.

2. **Deep artery of the penis** (one of the two terminal branch of internal pudendal artery).

3. **Dorsal artery of the penis** (one of the two terminal branch of internal pudendal artery).

4. **Artery of the bulb of the penis**

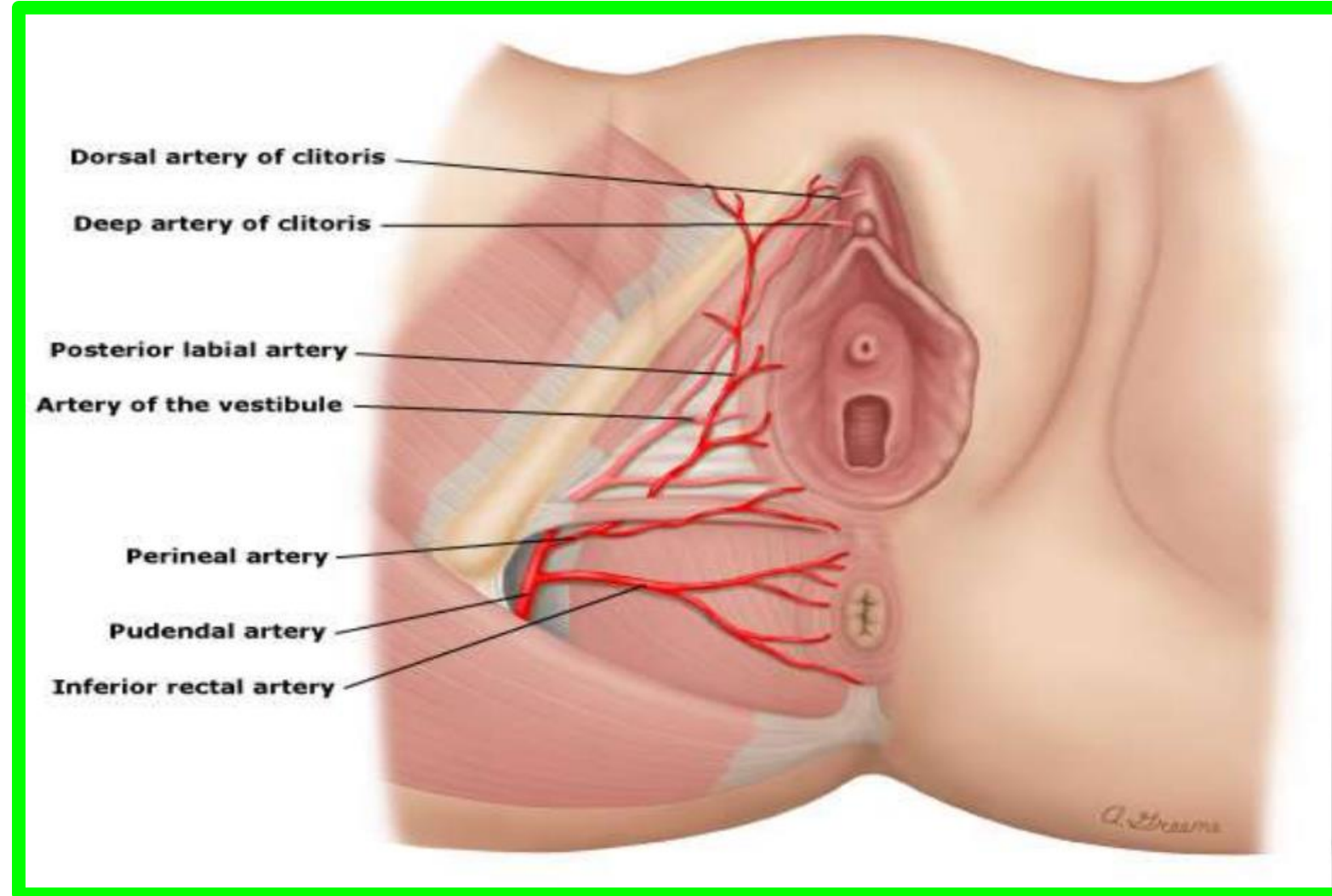


• Contents of Superficial Perineal Pouch

C. Blood Vessels (In Female)

1. Posterior labial artery,
from the perineal branch of
the internal pudendal
artery.

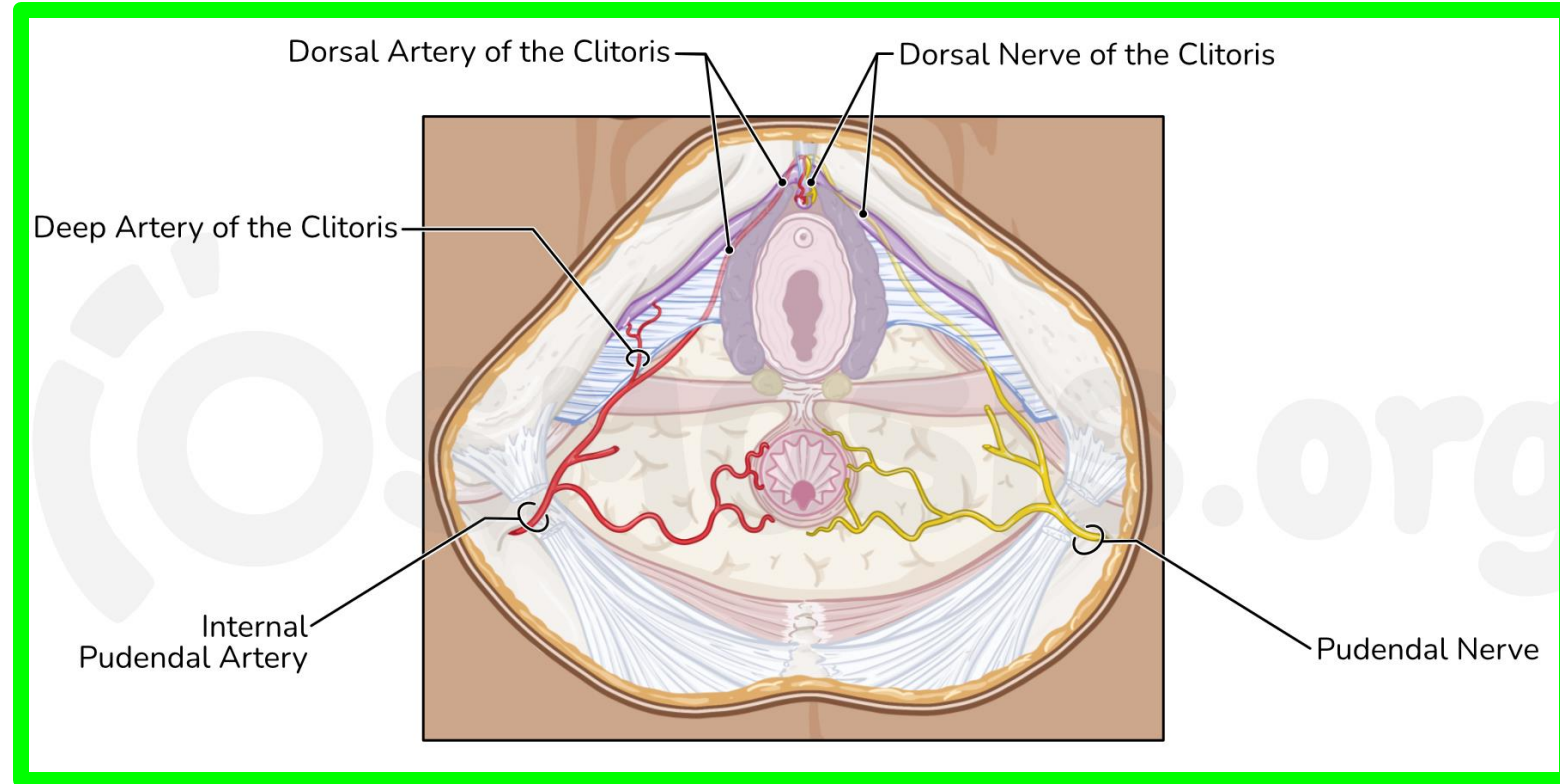
**2. Artery of the vestibule of
the vagina**



• Contents of Superficial Perineal Pouch

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C. Blood Vessels (In Female)



3. Deep artery of the clitoris (one of the two terminal branch of internal pudendal artery).

4. Dorsal artery of the clitoris (one of the two terminal branch of internal pudendal artery).

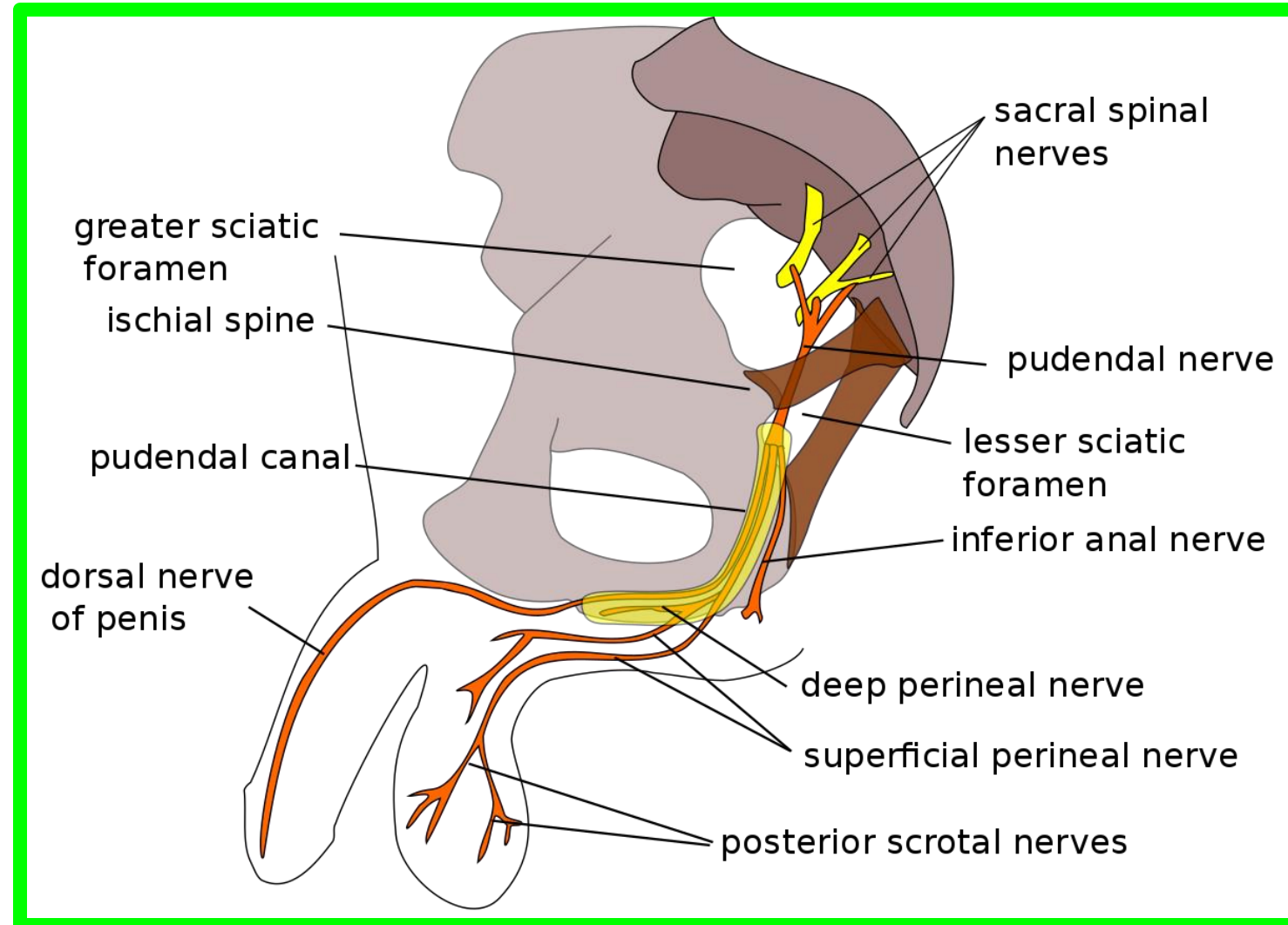
• Contents of Superficial Perineal Pouch

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D. Nerves (In Male)

1. Posterior scrotal nerve: arise from the perineal branch of **pudendal nerve** to the scrotum

2. Dorsal nerve of the penis : (one of the two terminal branch of **pudendal nerve**).



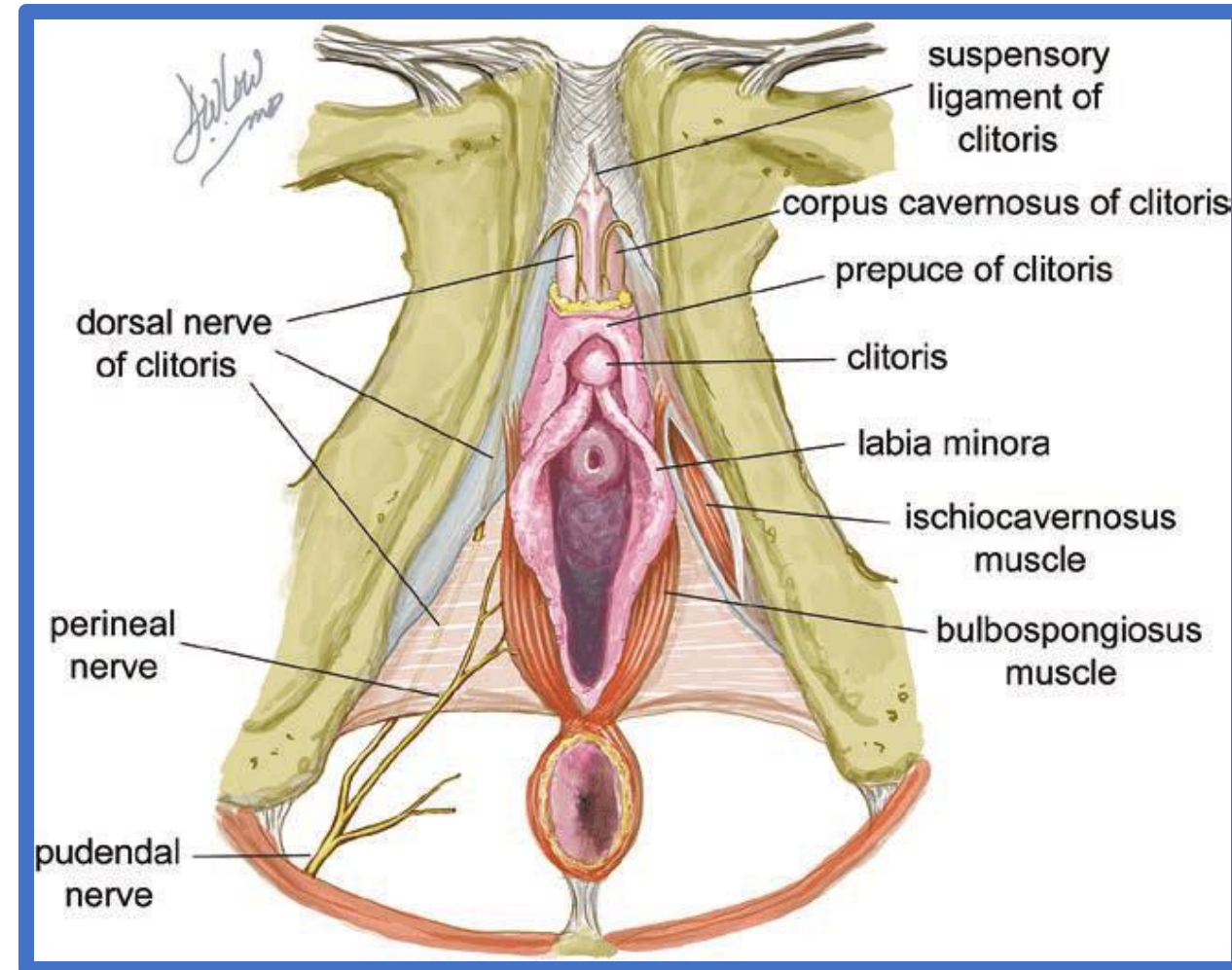
• Contents of Superficial Perineal Pouch

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D. Nerves (In Female)

1. Posterior labial nerve: arise from the perineal branch of **pudendal nerve** to the labia majora

2. Dorsal nerve of clitoris: (one of the two terminal branch of **pudendal nerve**).

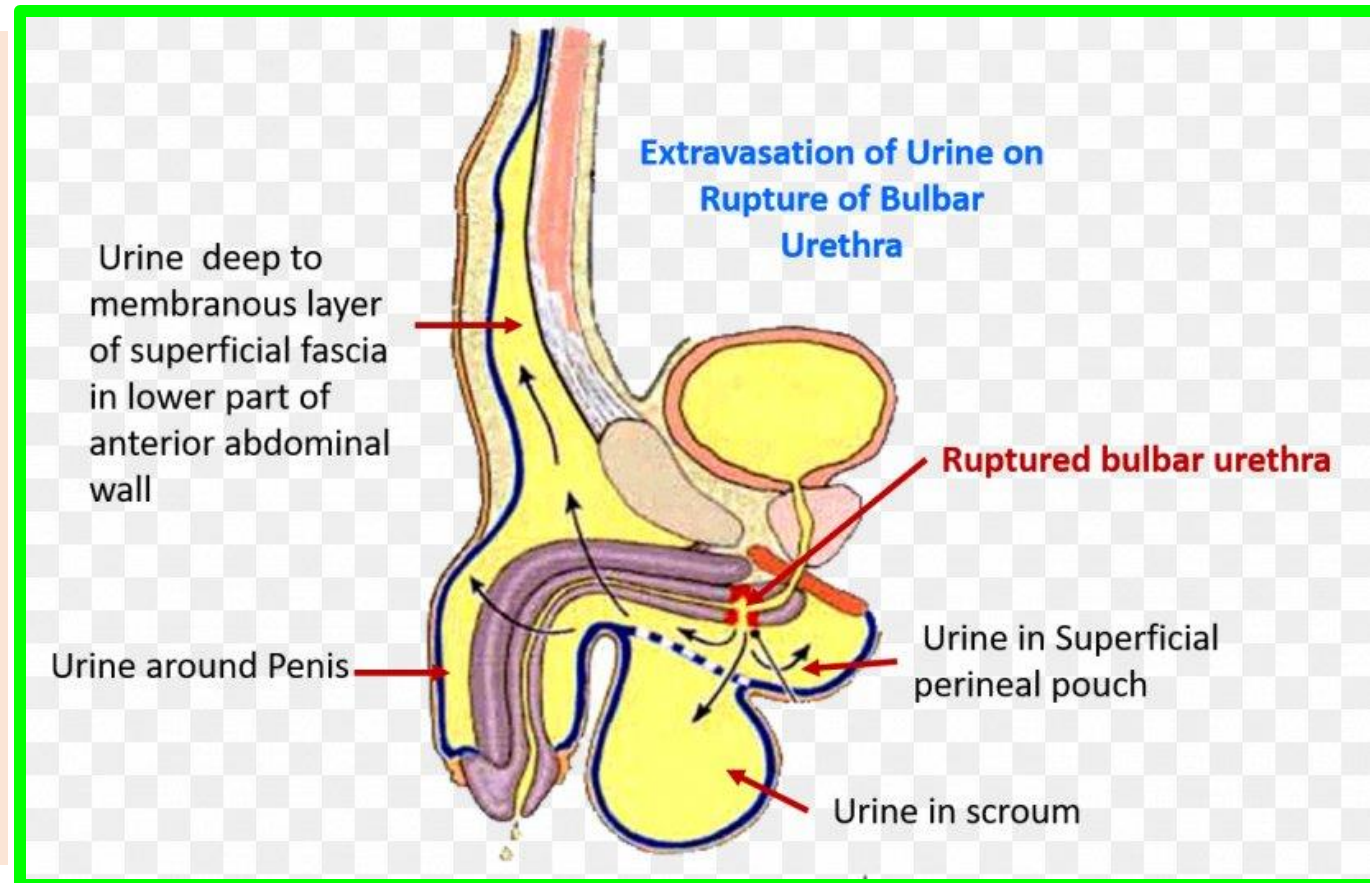


• Superficial Perineal Pouch

- ✓ **Superficial perineal pouch** is opened anteriorly where it is continuous with the space deep to the membranous layer of the superficial fascia of the anterior abdominal wall.

Rupture of the urethra leading to **extravasations of urine** into the superficial perineal pouch → to the anterior abdominal wall.

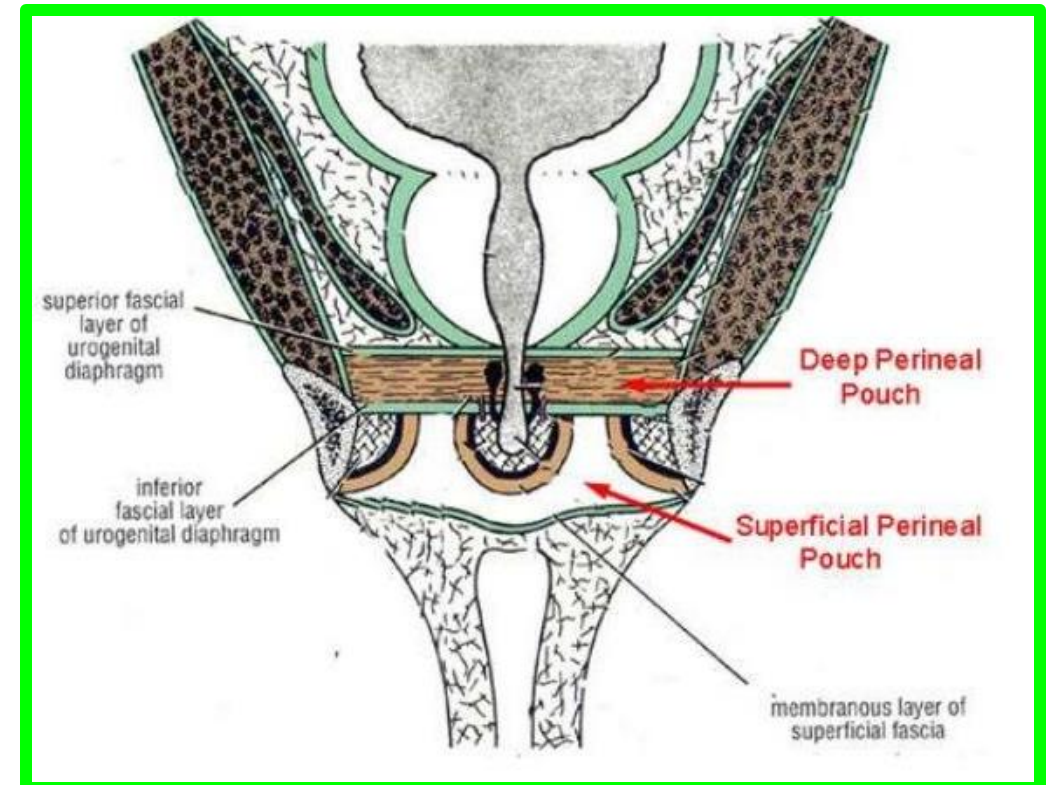
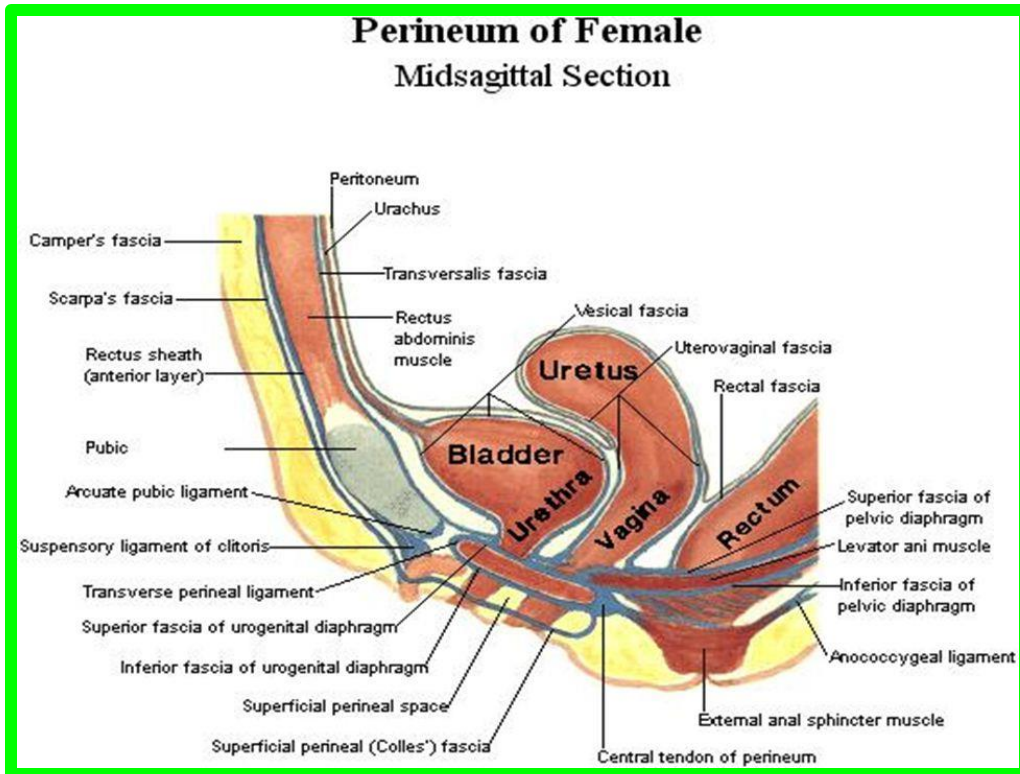
The urine also seeps to the front of the thigh till the fusion of membranous layer of superficial fascia with the deep fascia.



• Deep Perineal pouch

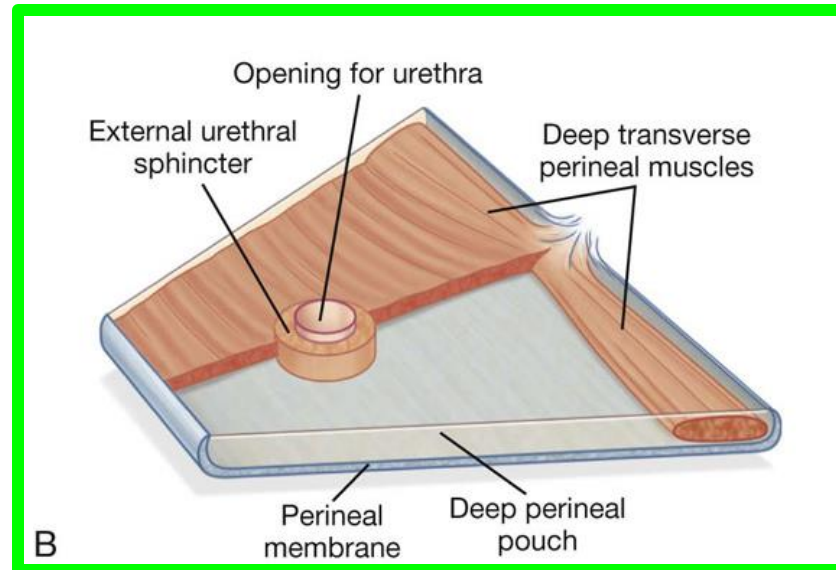
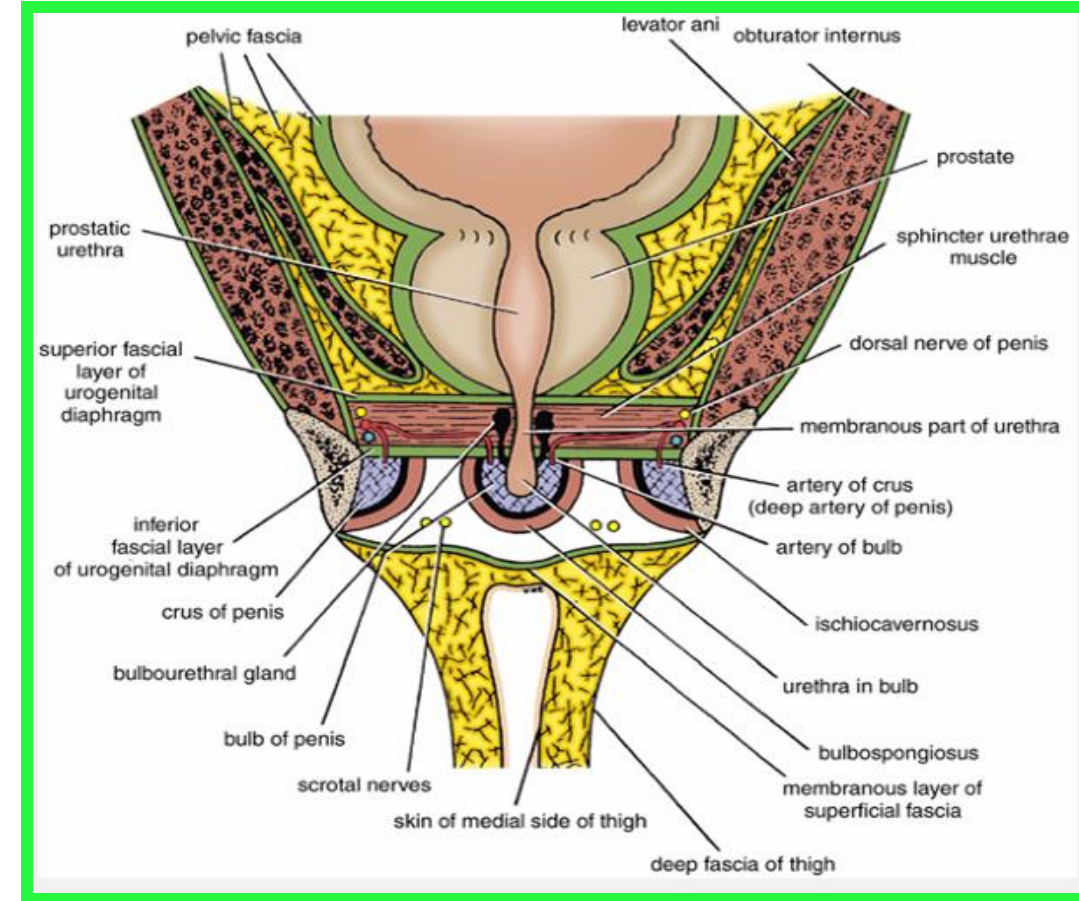
** Boundaries

1. **Roof:** superior fascia of the pelvic diaphragm.
2. **Floor:** perineal membrane (inferior fascia of the pelvic diaphragm).
3. **On each side:** pubic arch.
4. **Anteriorly and posteriorly:** closed by the fusion of the roof and floor.



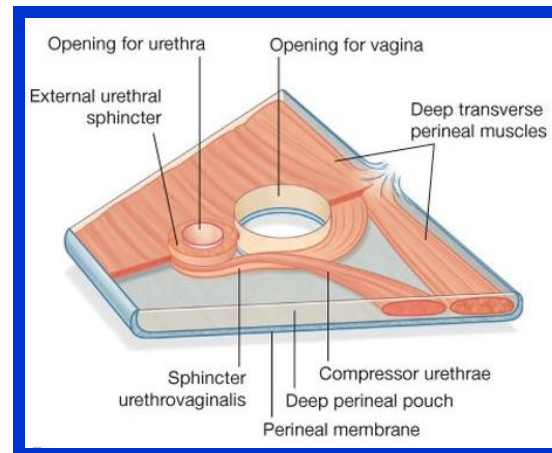
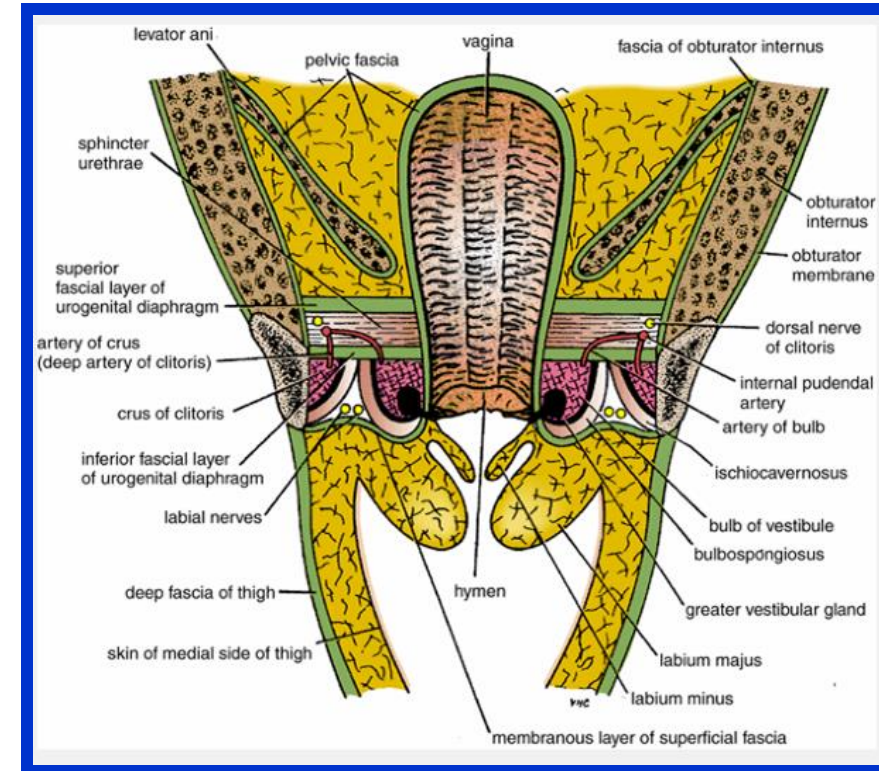
** Contents of the deep perineal pouch in male

- ❖ Membranous urethra
- ❖ The sphincter urethrae
- ❖ The bulbourethral glands
- ❖ The deep transverse perineal muscles
- ❖ The internal pudendal vessels and their branches
- ❖ The dorsal nerves of the penis



** Contents of the deep perineal pouch in female

- ❖ **Urethra:** In the median plane closely anterior to the vagina.
- ❖ **Vagina:** in the median plane.
- ❖ **The sphincter urethrae** which is pierced by the urethra and the vagina
- ❖ **The deep transverse perineal muscles**
- ❖ **The internal pudendal vessels and their branches; and**
- ❖ **The dorsal nerves of the clitoris.**



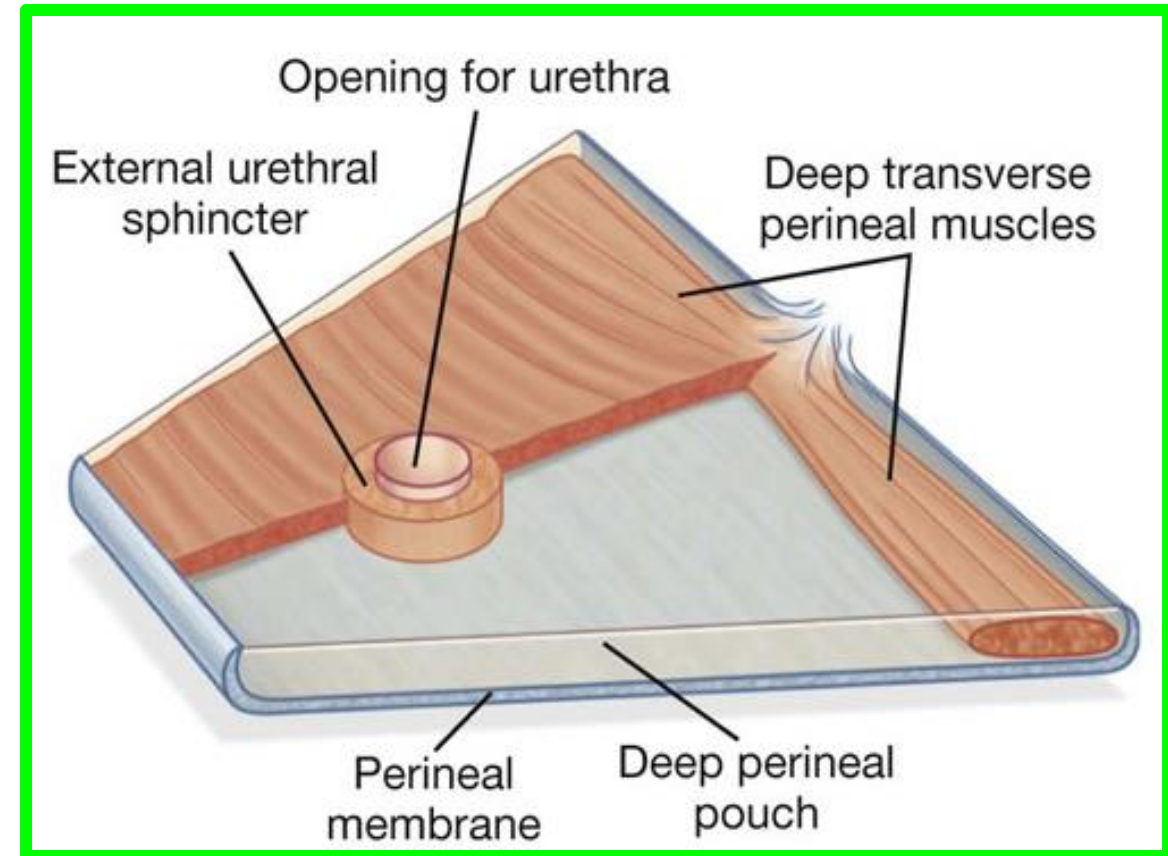
❖ Sphincter Urethrae Muscle

Surrounds the urethra in **the deep perineal pouch**. It arises from the pubic arch on the two sides and passes medially to encircle the urethra

Action

The muscle compresses the membranous part of the urethra and relaxes during **micturition**.

It is the means by which **micturition can be voluntarily stopped**



● Perineal Body

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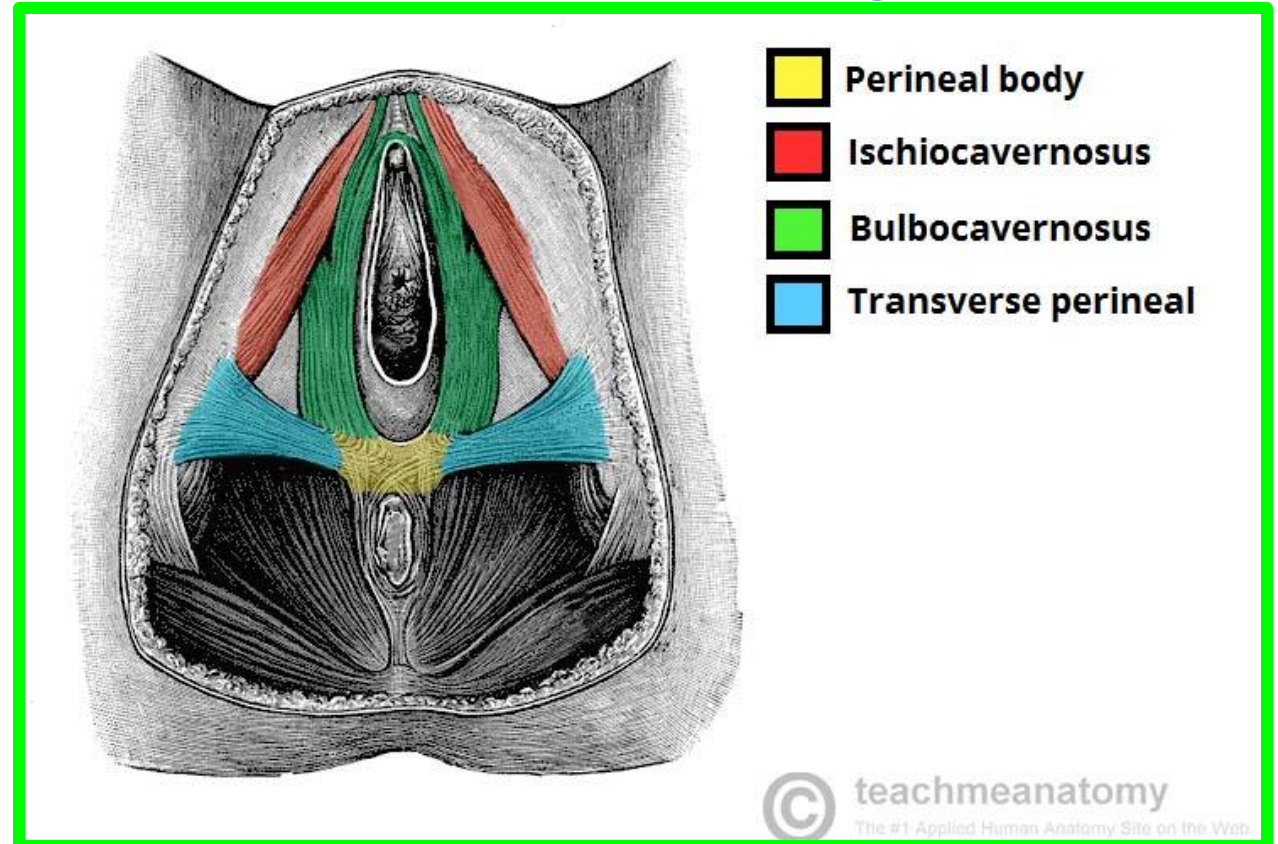
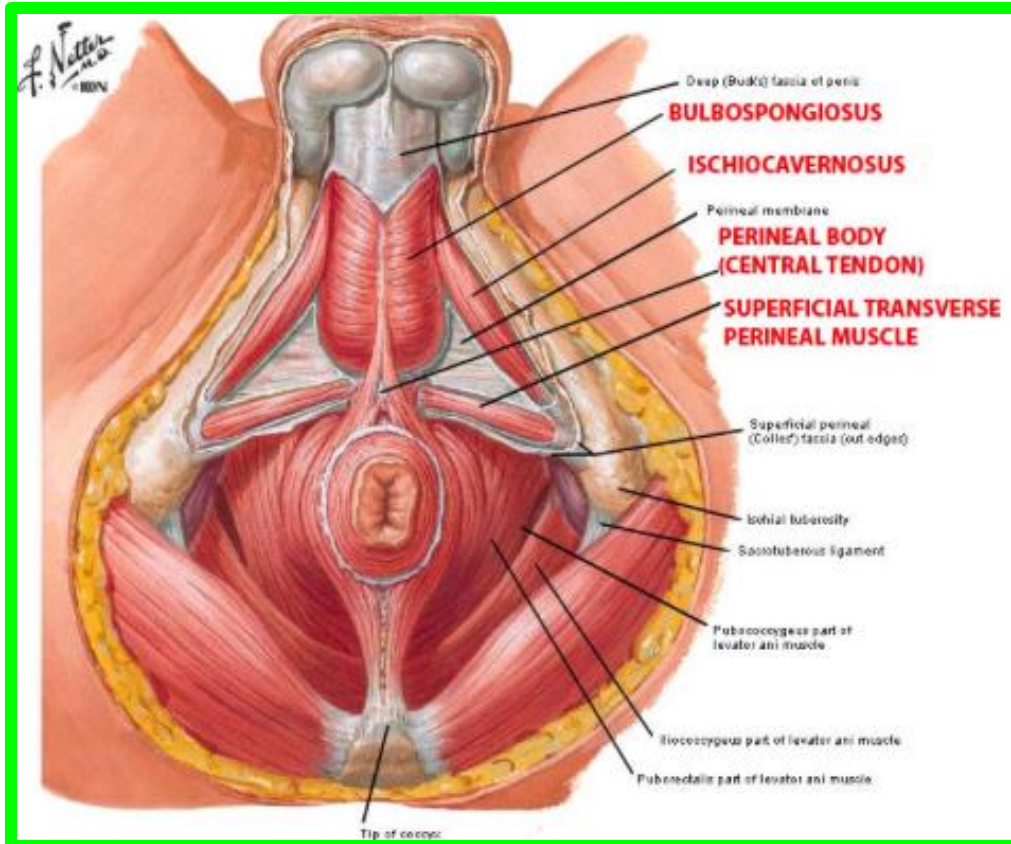
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❖ The perineal body is a median fibromuscular pyramidal mass.

** Site:

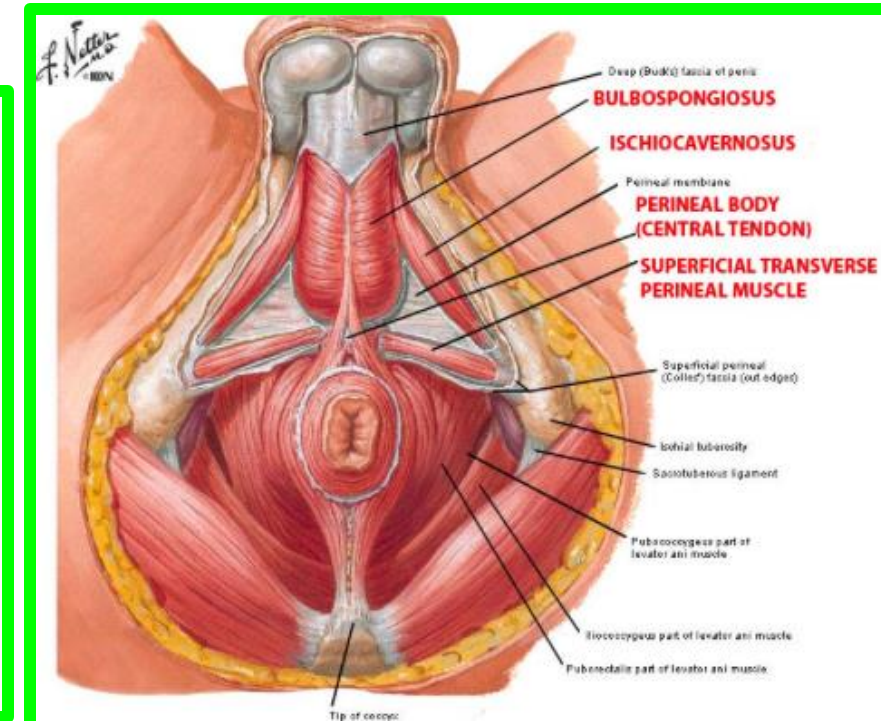
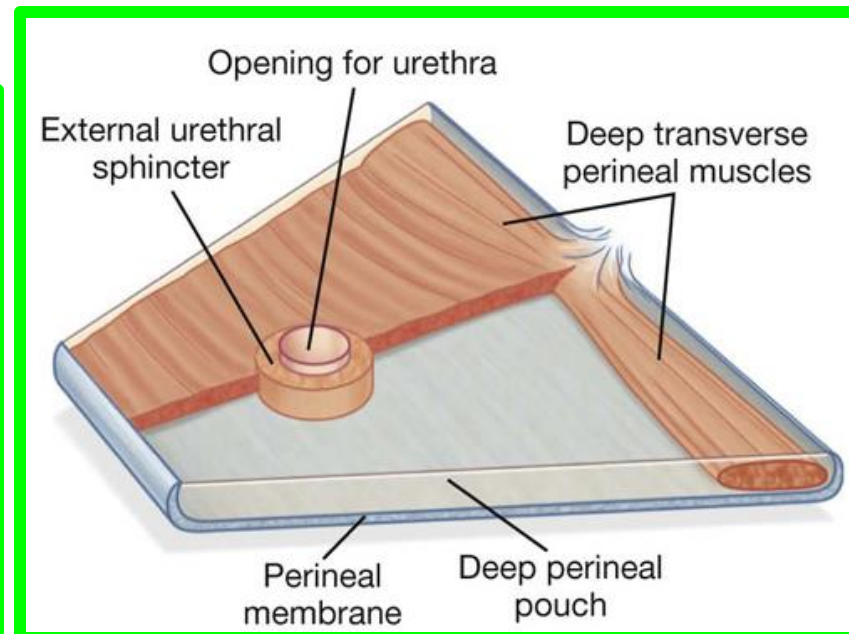
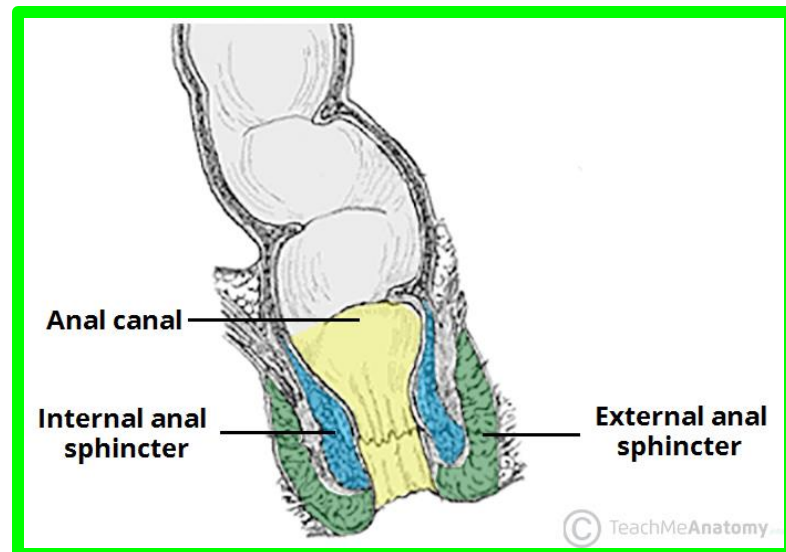
- 1) **In male:** between the **anal canal** and **bulb of the penis**.
- 2) **In female:** between the **anal canal** and **lower part of the vagina**.



● Perineal Body

** Muscles attached to the perineal body:

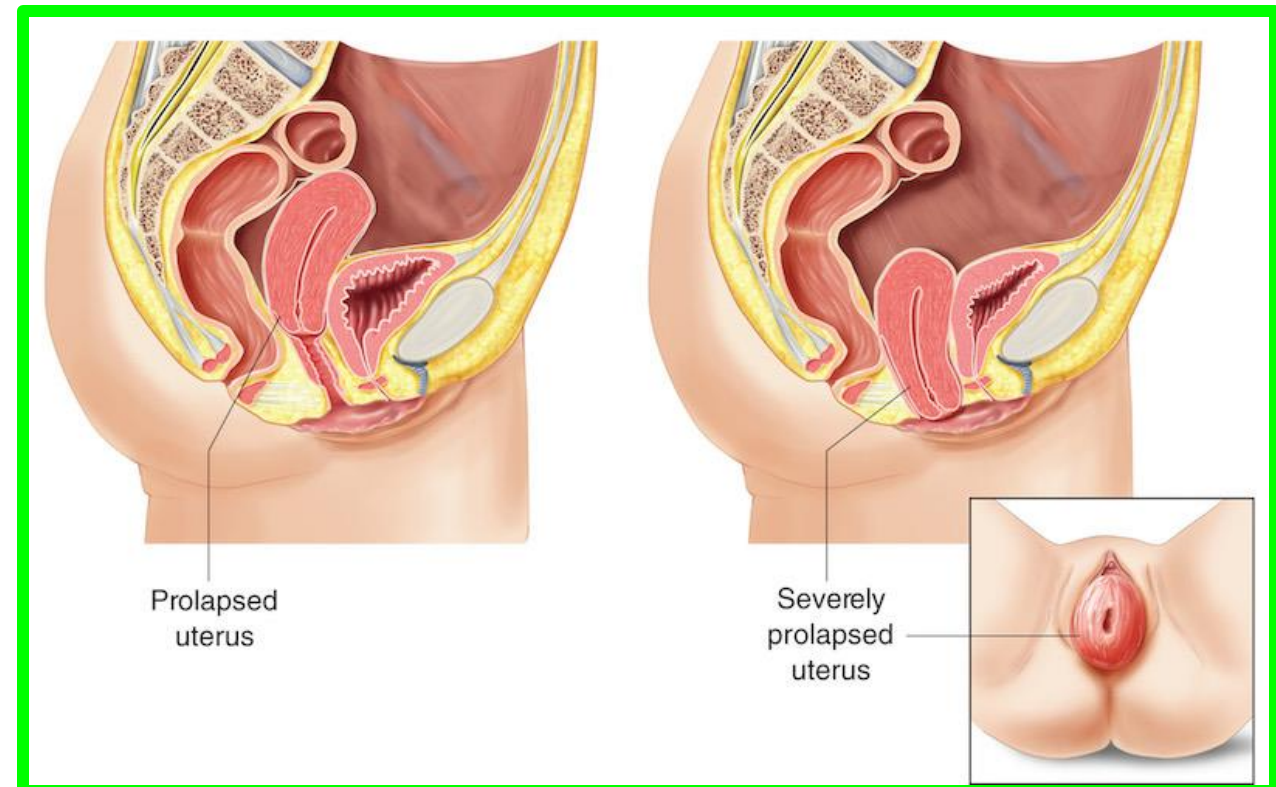
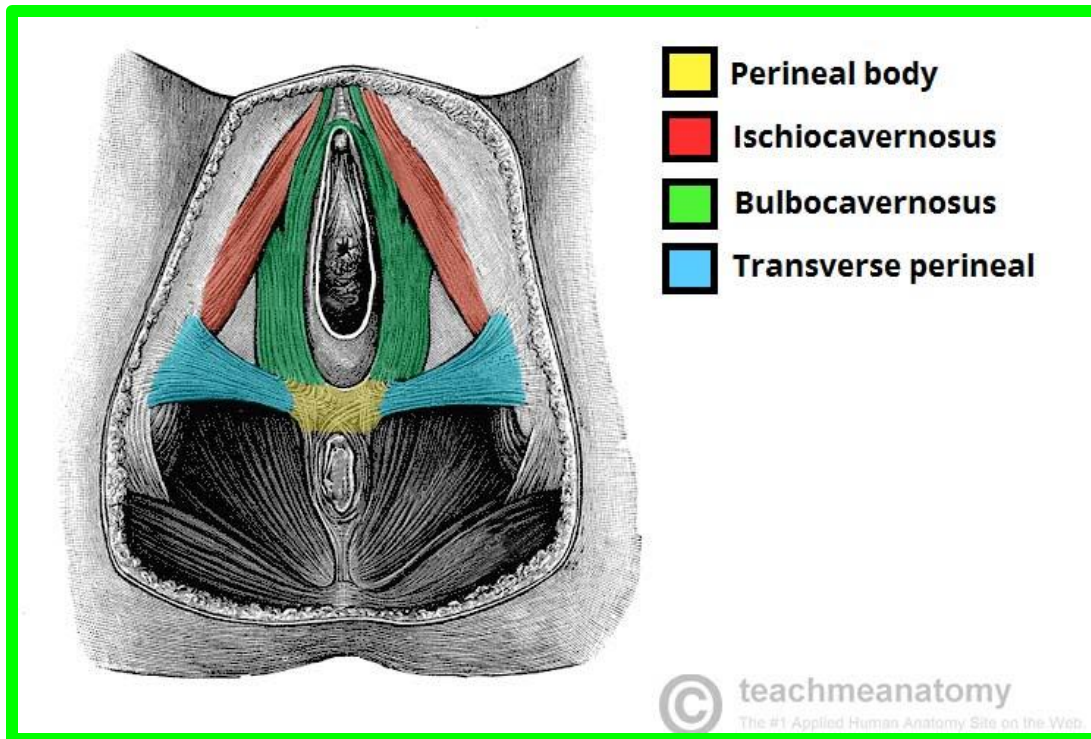
1. External anal sphincter.
2. Sphincter of the urethra.
3. **Superficial transversus perinei muscles** (of both sides).
4. **Deep transversus perinei muscles** (of both sides).
5. Anterior parts of the levator ani (of both sides).
6. **Bulbospongiosus.**



● Perineal Body

** Applied anatomy:

- ✓ The perineal body is **essential to the integrity of the pelvic floor.**
- ✓ **Rupture of the perineal body** leads to widening of the gap between the anterior borders of the levator ani muscles. **This predisposes to the prolapse of the uterus.**



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