

❑ FEMALE GENITAL ORGANS

The Uterine tube, Ovaries & Vagina

❑ Ischiorectal Fossa

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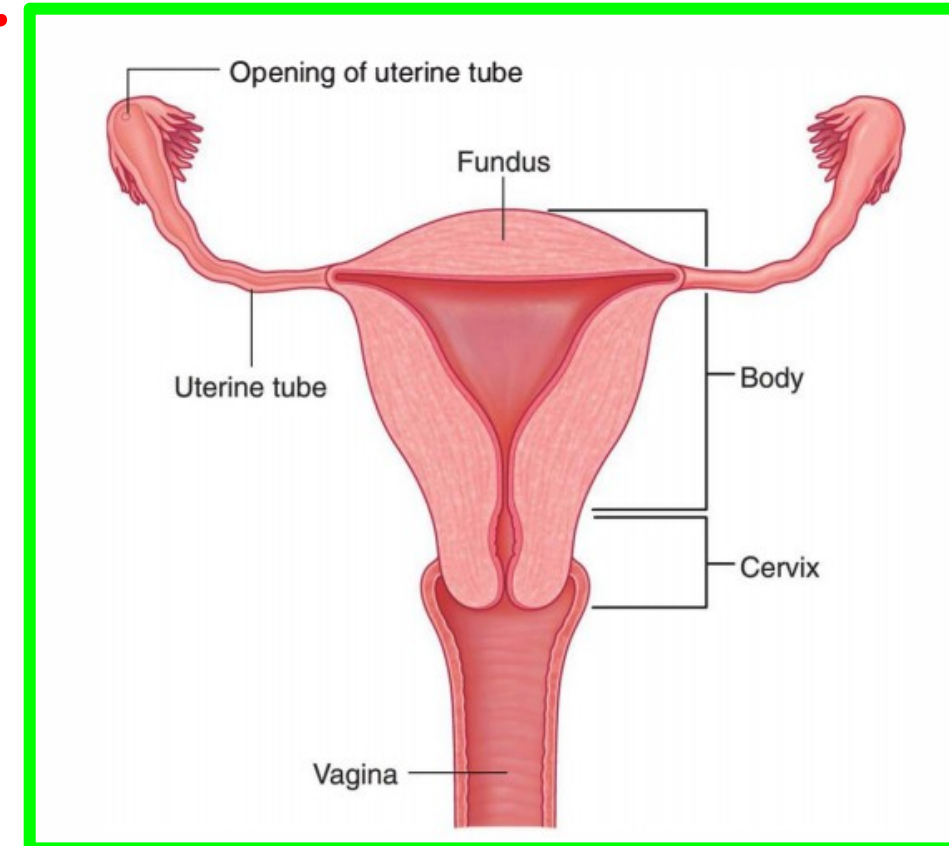
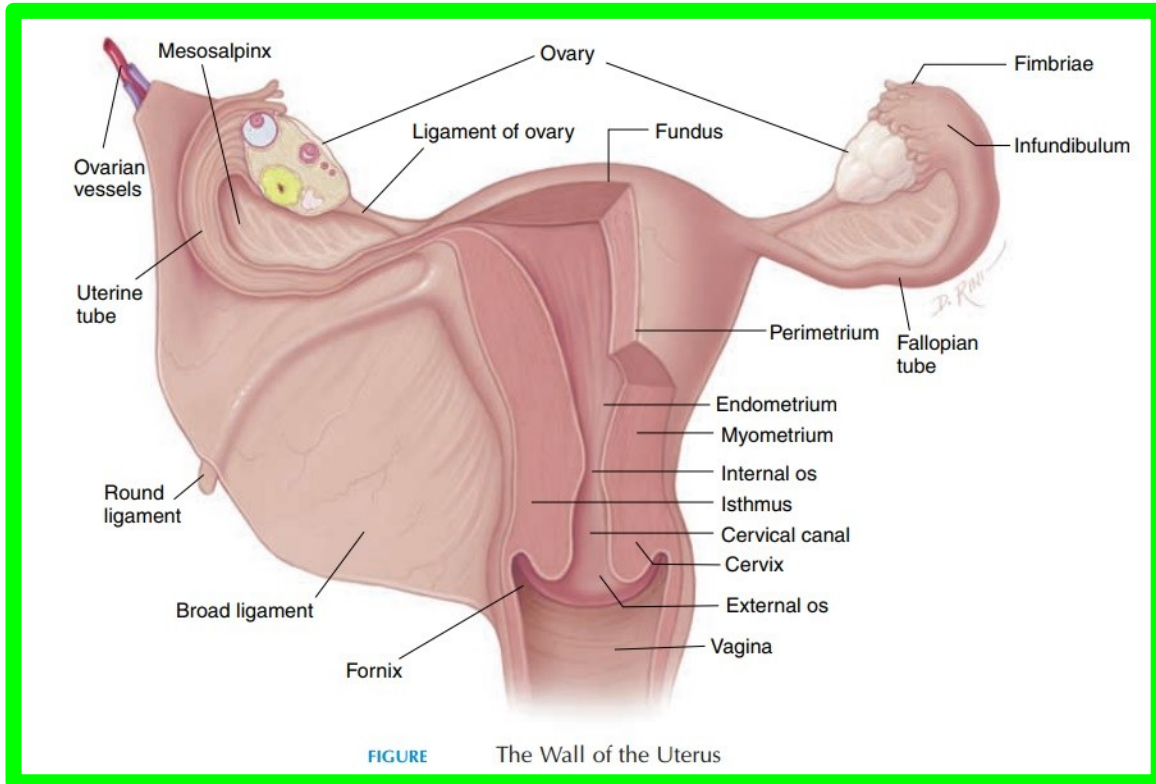
2024-2025

Sunday 18 May 2025

Uterine Tube

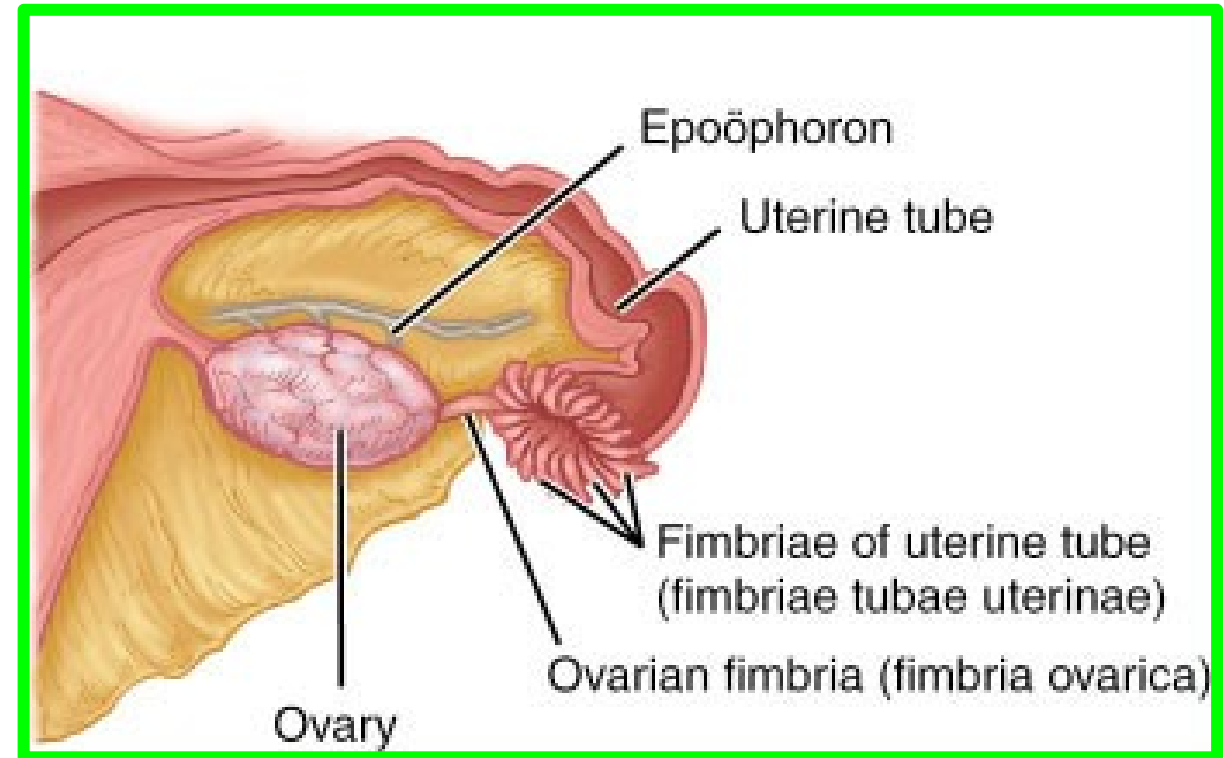
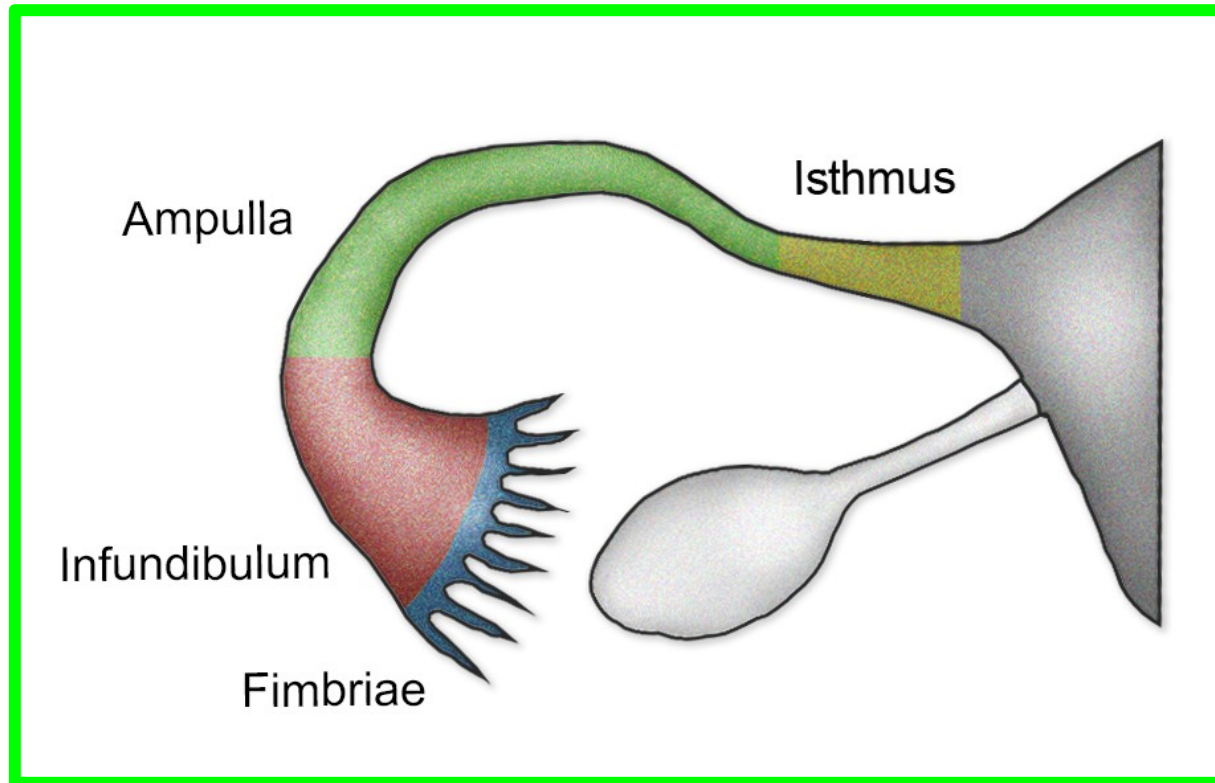
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- ❖ The two tubes run in the free border of the broad ligament.
 - ❖ It is about **10 cm** long and has **2 ends**.
- a- The medial end opens in the uterine cavity at the junction of the fundus with the body.
- b- The lateral end opens in **the peritoneal cavity**.



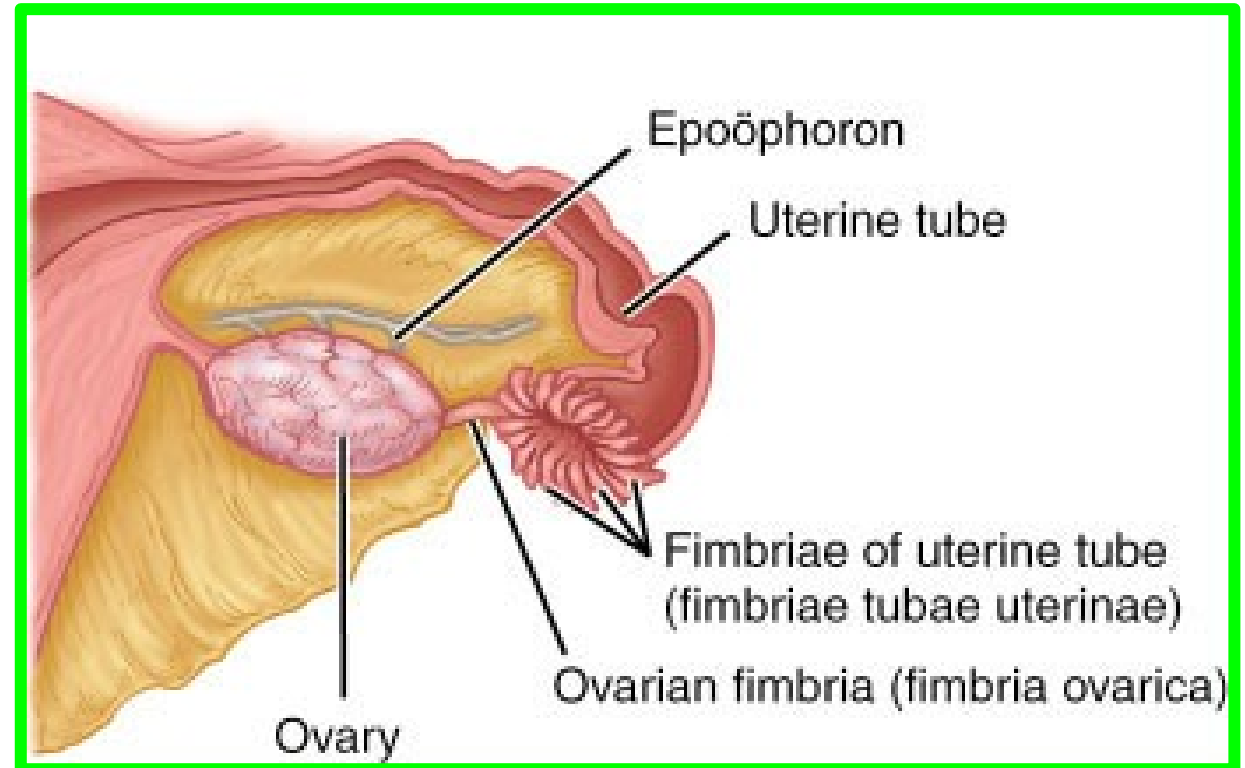
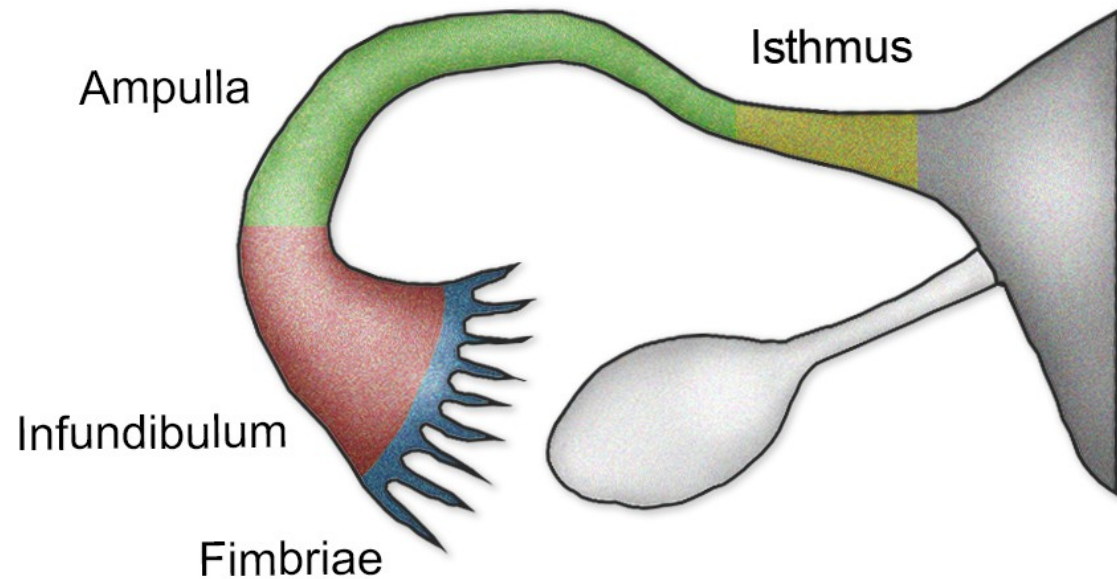
Uterine Tube

- ** Parts of the tube:** From the lateral to the medial end,
- 1- Infundibulum:** a funnel-shaped which open in the peritoneal cavity.
 - It has a number of processes called **fimbriae**. One of these fimbriae is large and extends to the ovary and called **ovarian fimbria**.
 - 2- Ampulla:** a dilated, tortuous and thin-walled.



Uterine Tube

- 3- **Isthmus**: a narrow straight part, constituting the **medial 1/3 of the tube**.
- 4- **Intramural part**: the part inside the uterine wall (narrowest part).



Uterine Tube

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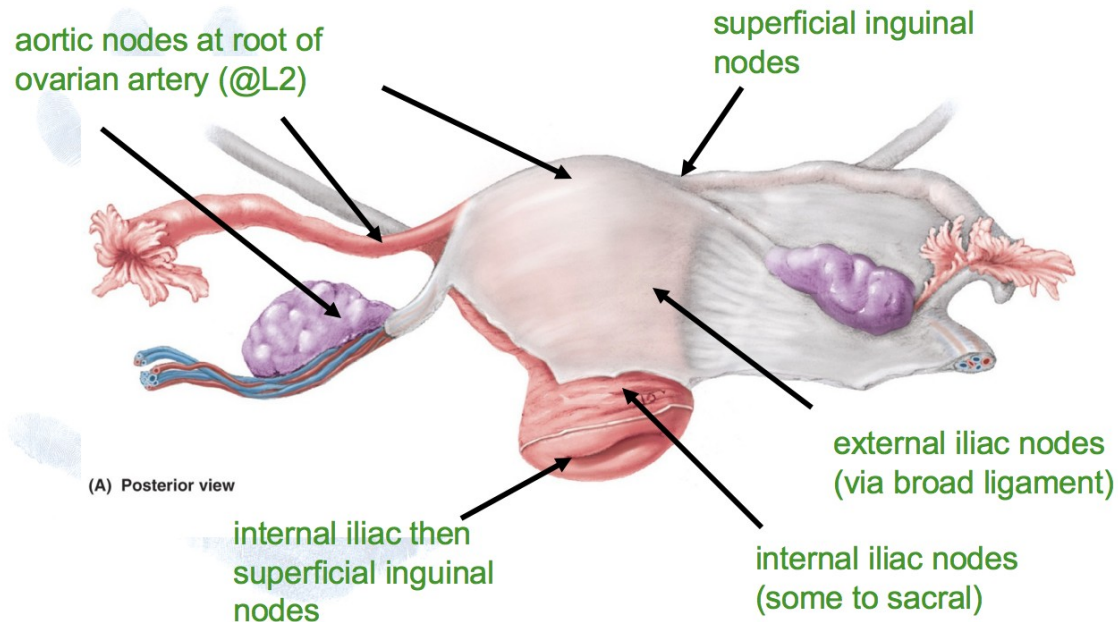
**** Arterial supply:** 1) The lateral part by **the ovarian artery**.
2) The medial part by **the uterine artery**.

**** Venous drainage:** by veins accompanying the arteries.

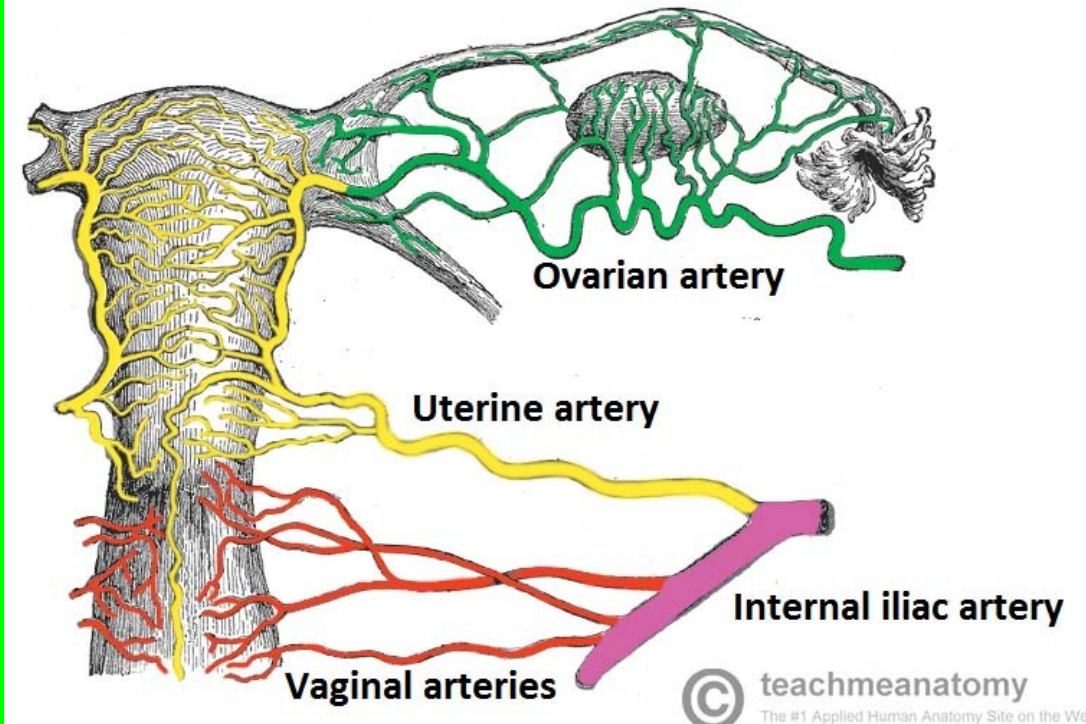
**** Lymphatic drainage:** to the preaortic and para-aortic **lymph nodes**.

**** Nerve supply:** - Sympathetic from **T 10 to L 2**. - Parasympathetic **S2,3,4**.

Lymphatic drainage



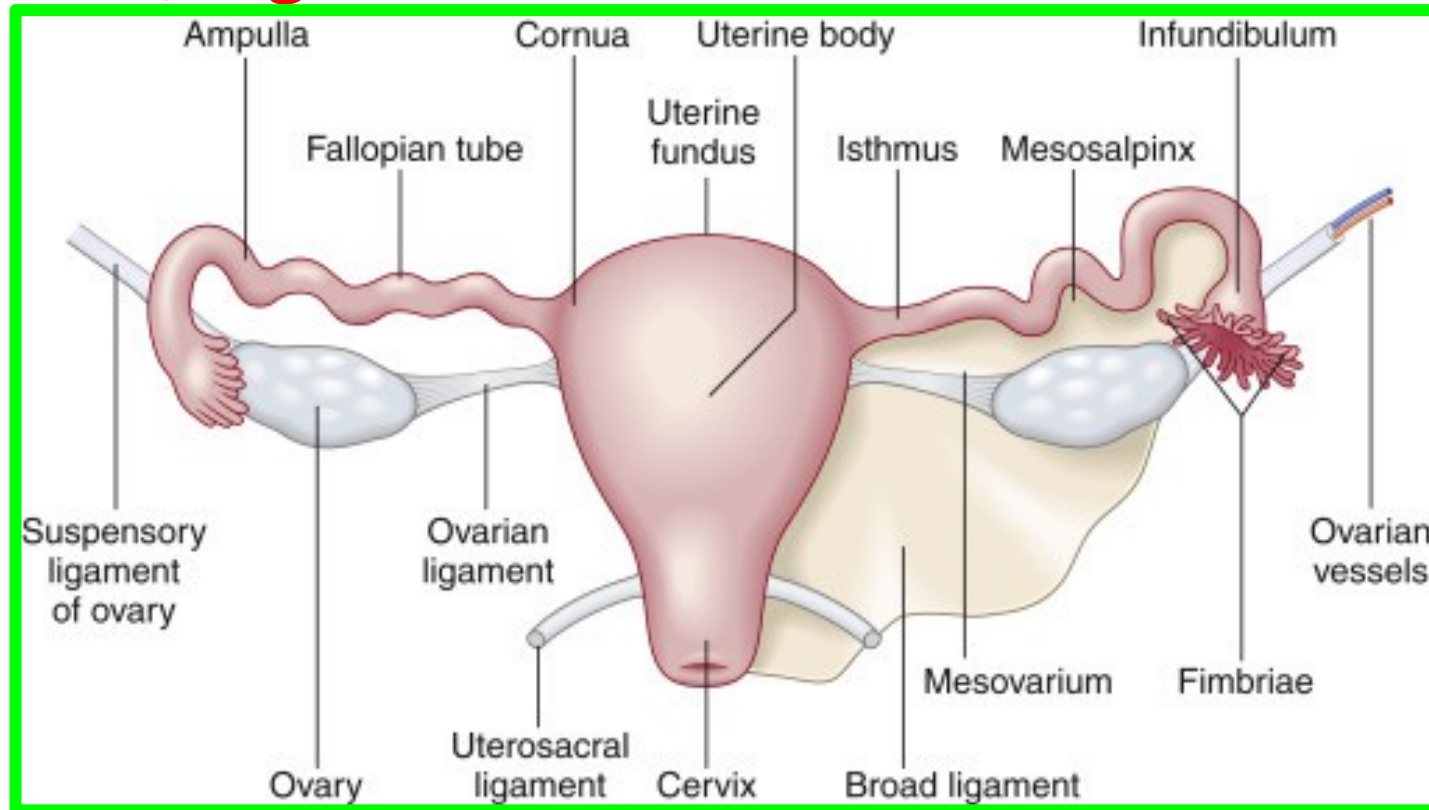
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Ovaries

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- ✓ One on each side, these are **the primary female sex organs**.
- ✓ Each ovary is attached to the upper surface of the broad ligament by the mesovarium.
- ** **Dimensions** (1 cm thickness) (2 cm breadth) (3 cm Length)
- ** **Weight** from 2 to 3.5 gm

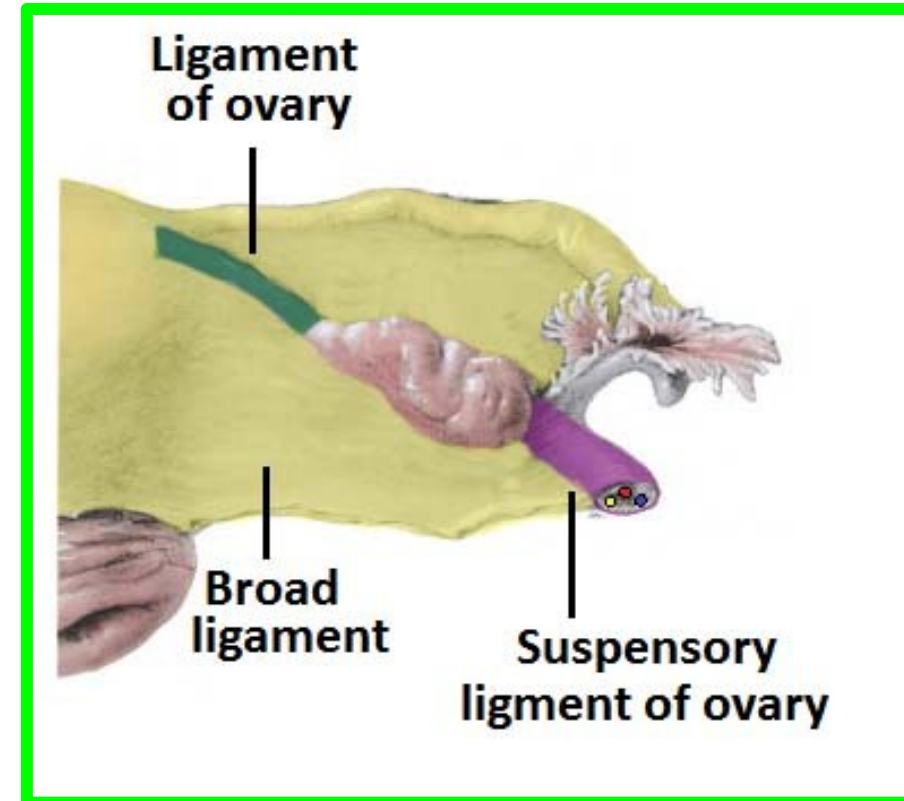
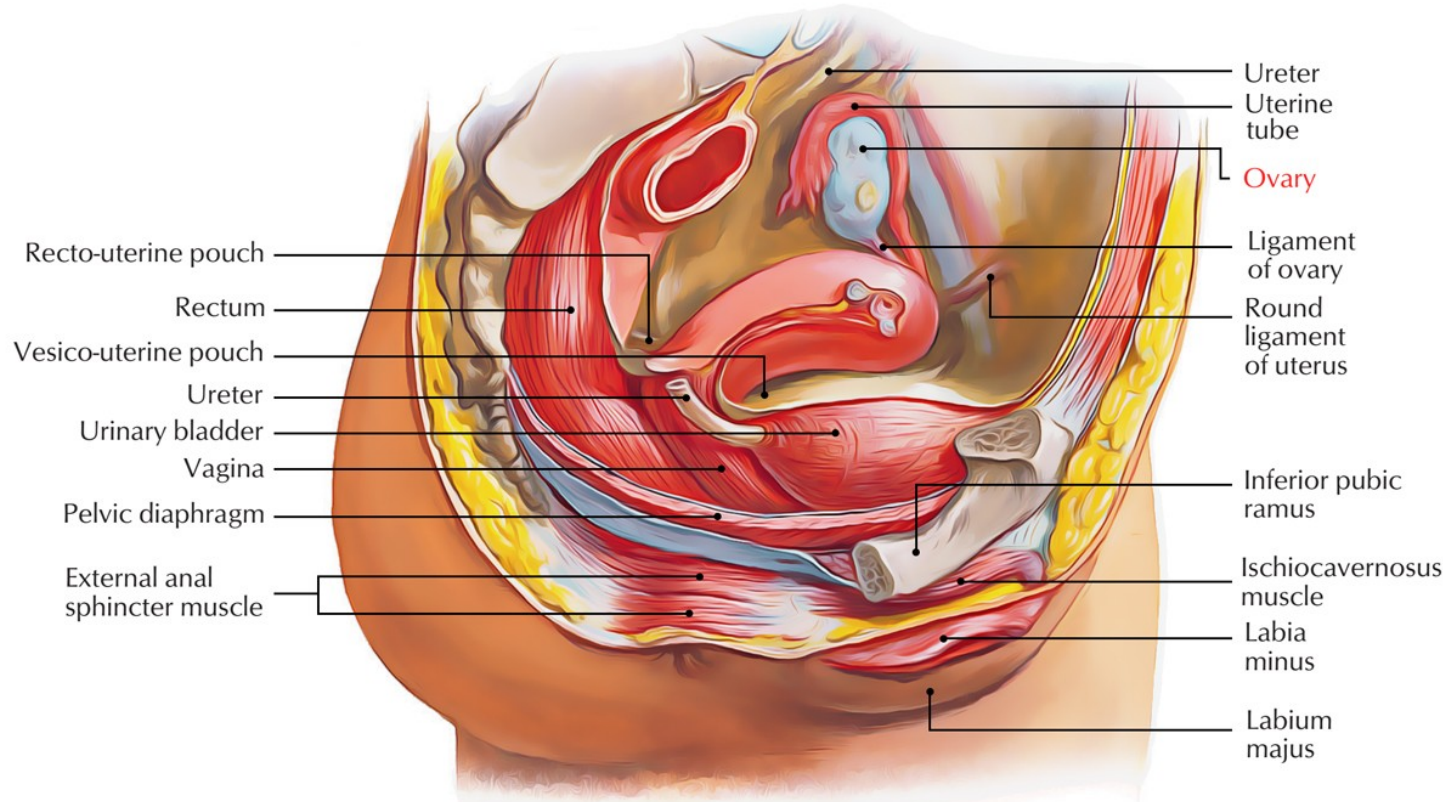


**** General features and Relations, The ovary has:**

A- 2 surfaces:

1- Lateral surface: lies in the floor of the ovarian fossa. (On lateral pelvic wall)

2- Medial surface: is covered by the uterine tube.



Ovaries

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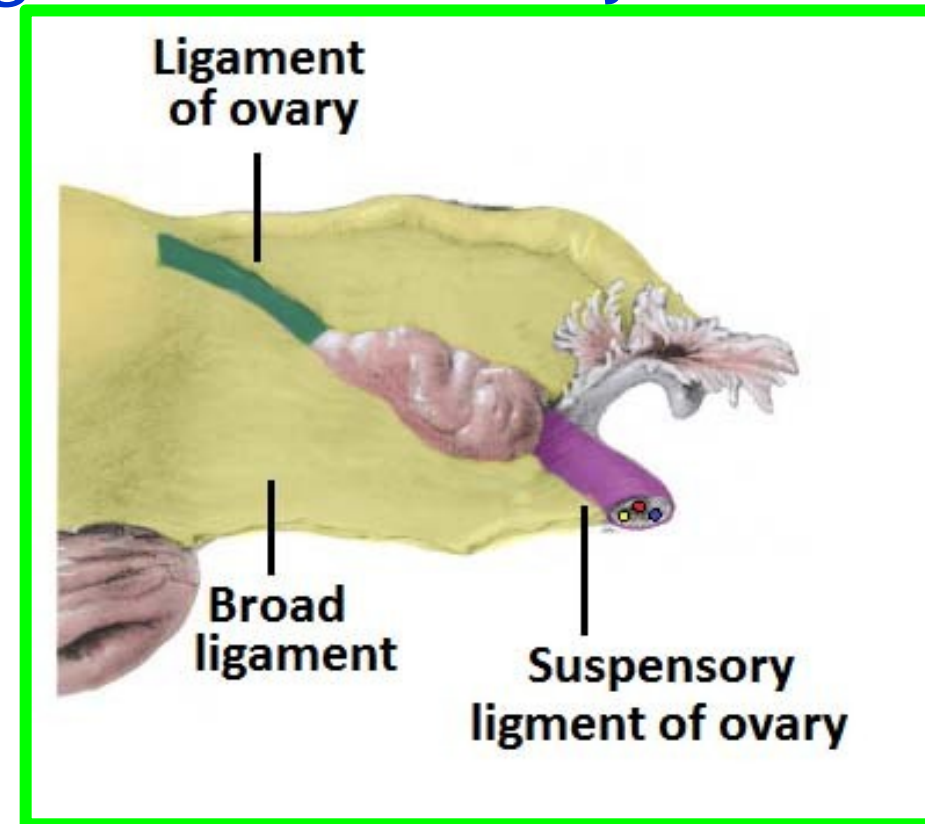
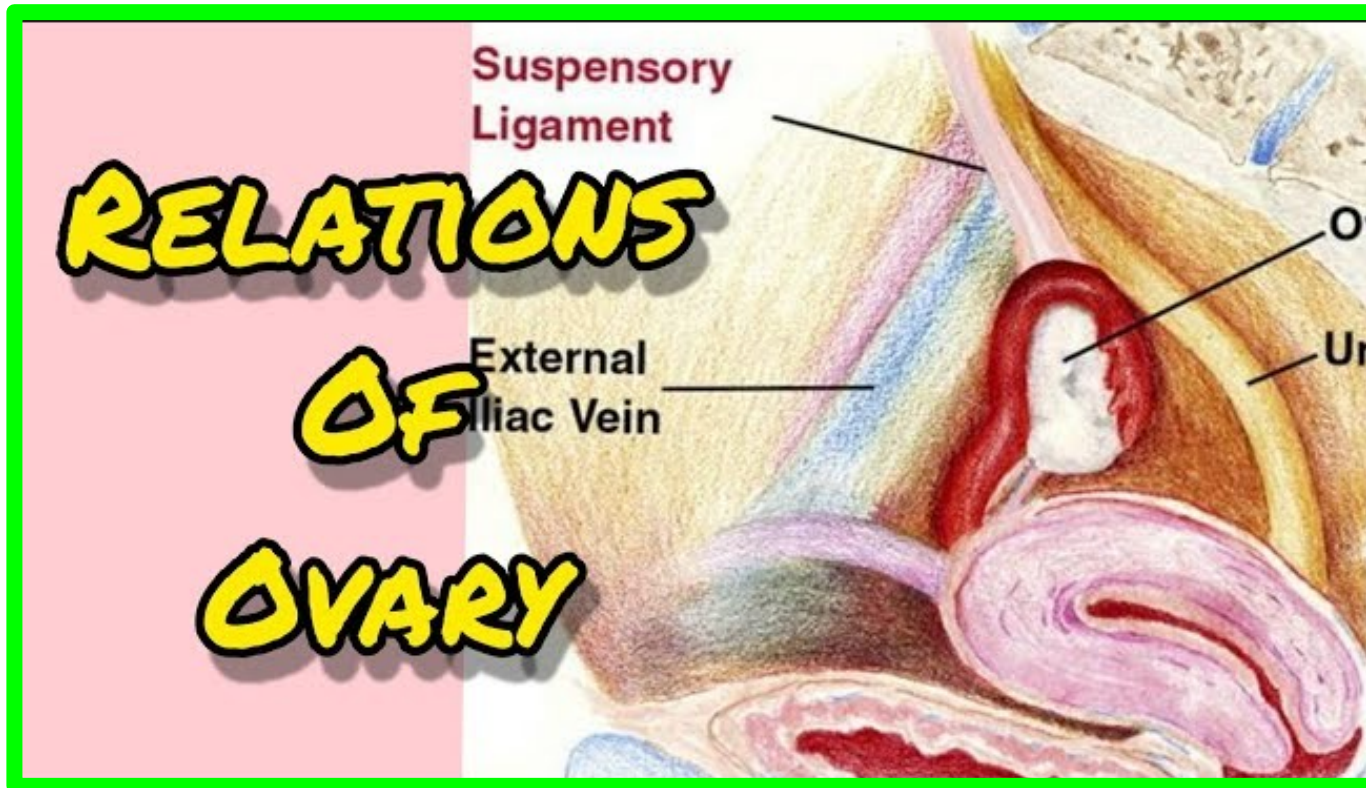
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B- 2 ends:

1- Tubal (Upper) end: gives attachment to

- 1) Ovarian fimbria of the tube.
- 2) The suspensory ligament of the ovary.

2- Uterine (Lower) end: gives attachment to the ligament of the ovary.



Ovaries

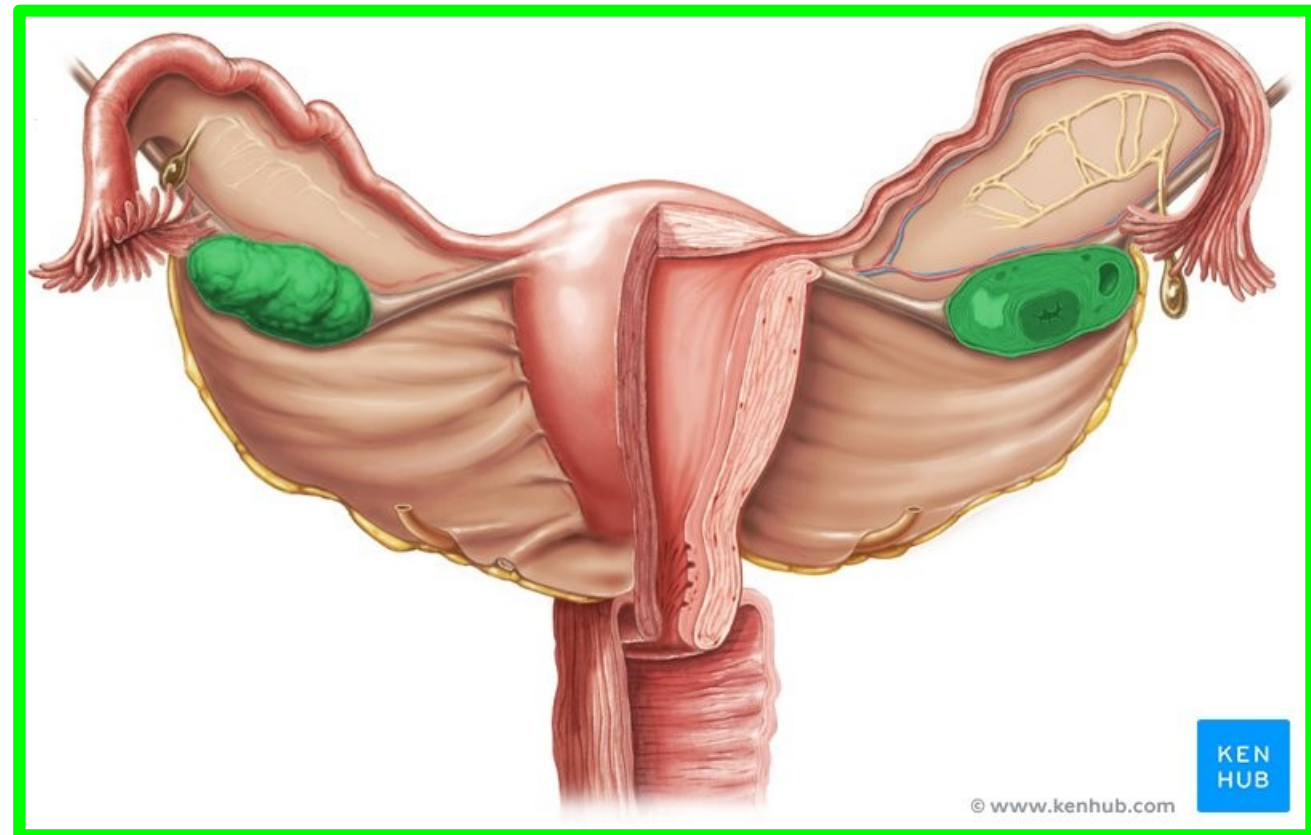
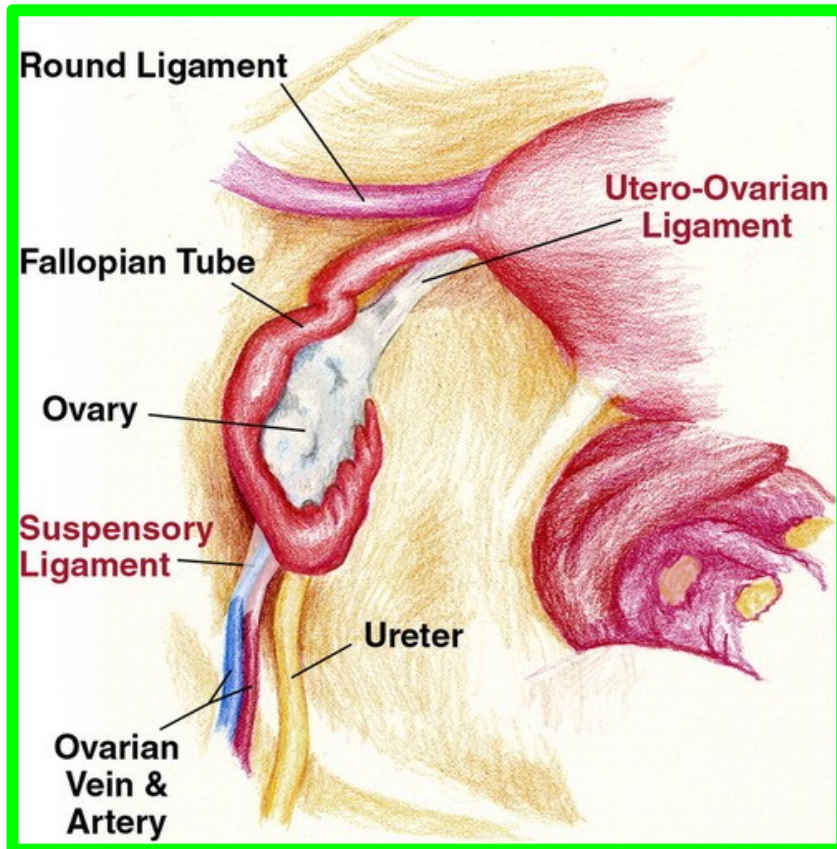
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C- 2 borders:

1- **Free border:** directed backward.

2- **Attached border:** attached to the upper layer of the broad ligament by the **mesovarium**.

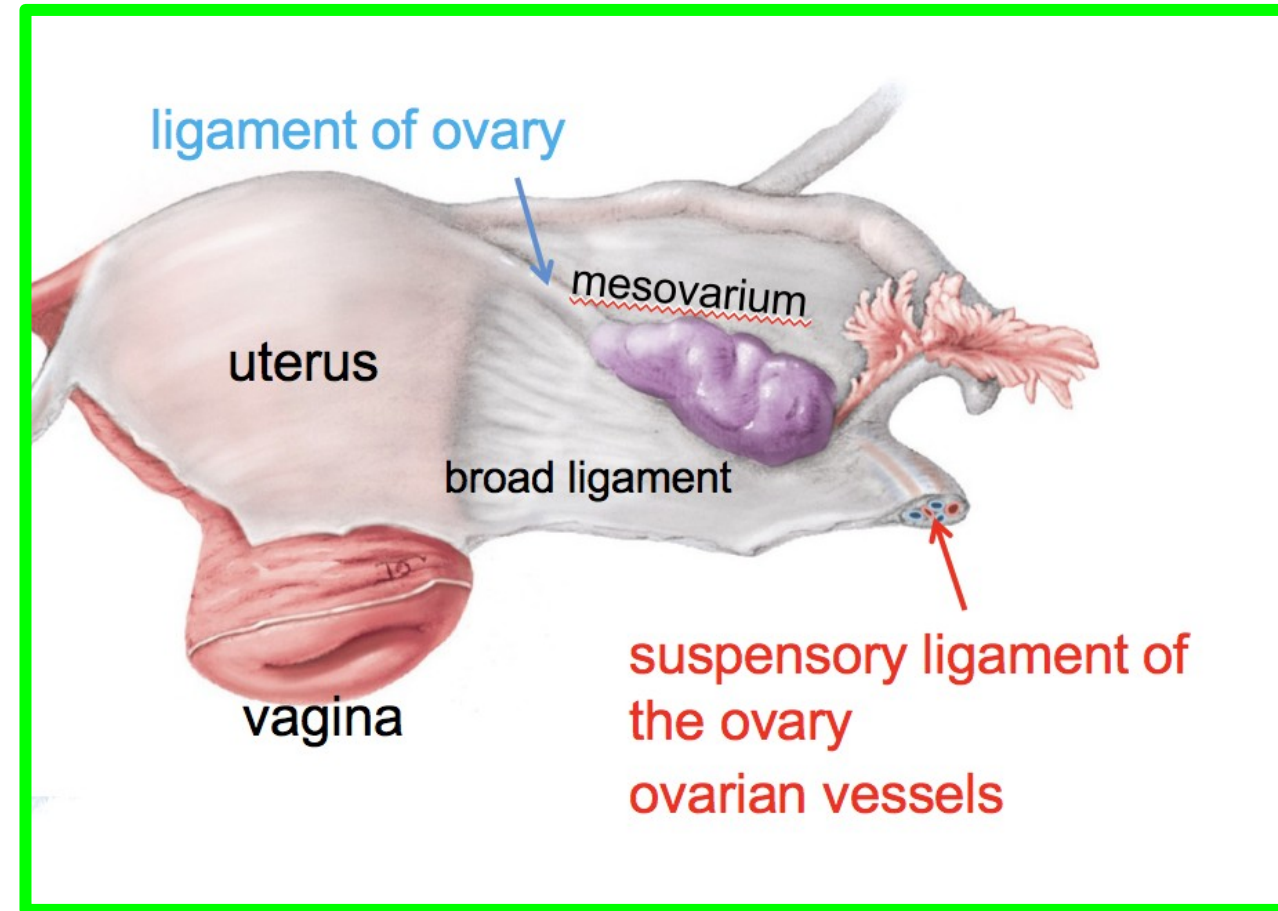


**** Ligaments of the ovary**

1- Suspensory ligament of the ovary, it extends from the ovary to the side wall of the pelvis and contains the ovarian vessels and nerves.

2- Round ligament of the ovary. It connects the ovary with the uterus below and behind the uterine tube.

3- Mesovarium (peritoneal relation) between the upper surface of the broad ligament and ovary. It contains the ovarian vessels and nerves.



Ovaries

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**** Arterial supply:** the **ovarian artery** from abdominal aorta.

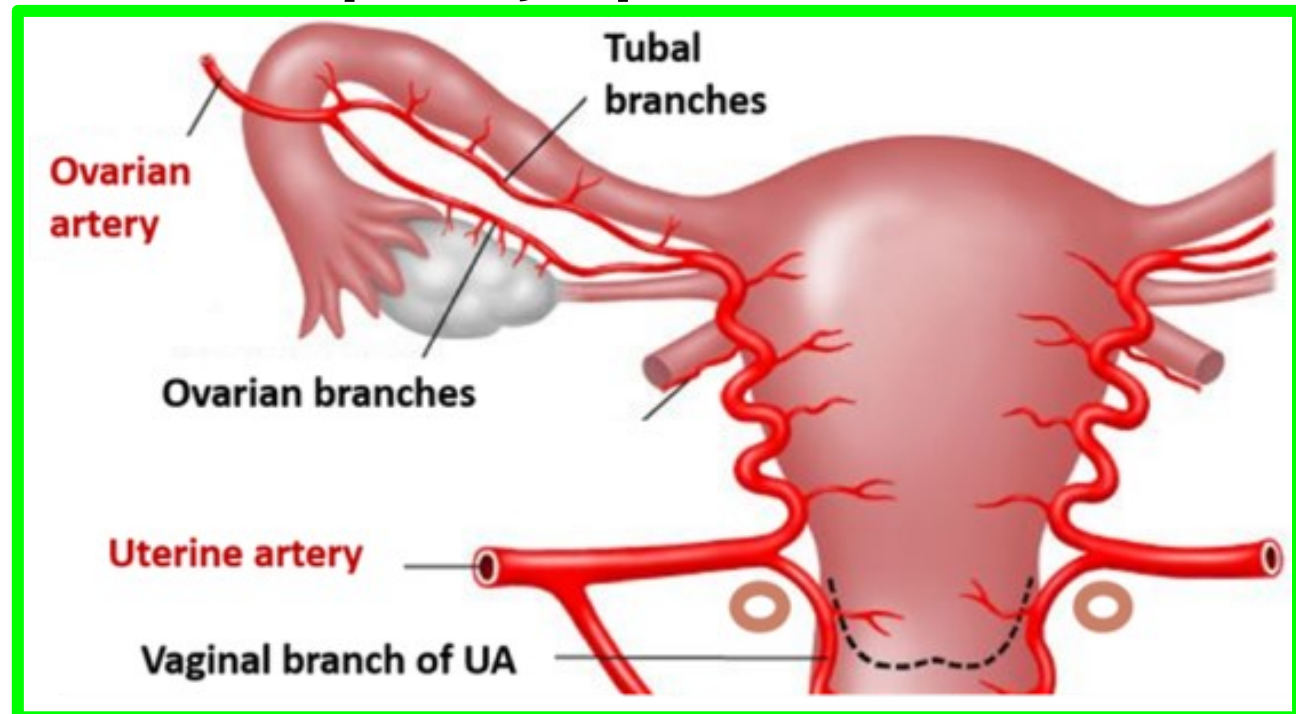
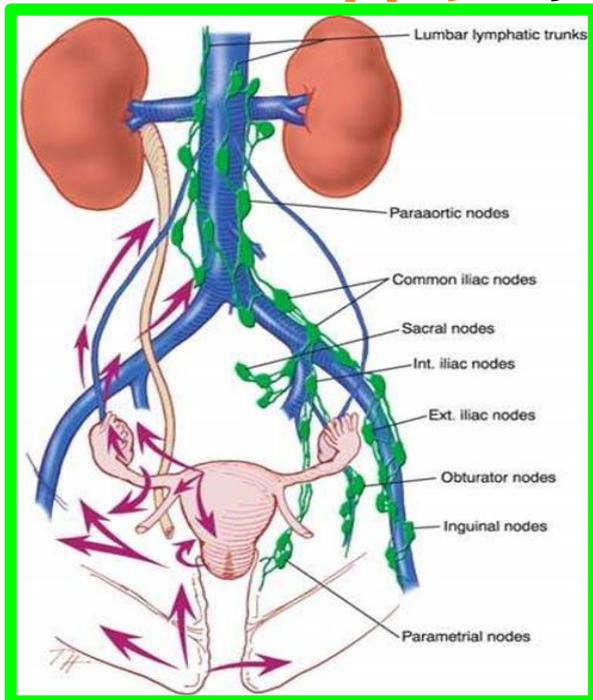
**** Venous drainage:** The ovarian veins.

1) The **right ovarian vein** drains into the **inferior vena cava**;

2) The **left ovarian vein** drains into the **left renal vein**.

**** Lymphatic drainage:** Into **para-aortic lymph nodes**.

**** Nerve supply:** sympathetic from **T10, 11** while parasympathetic from **S2, 3, 4**.



Vagina

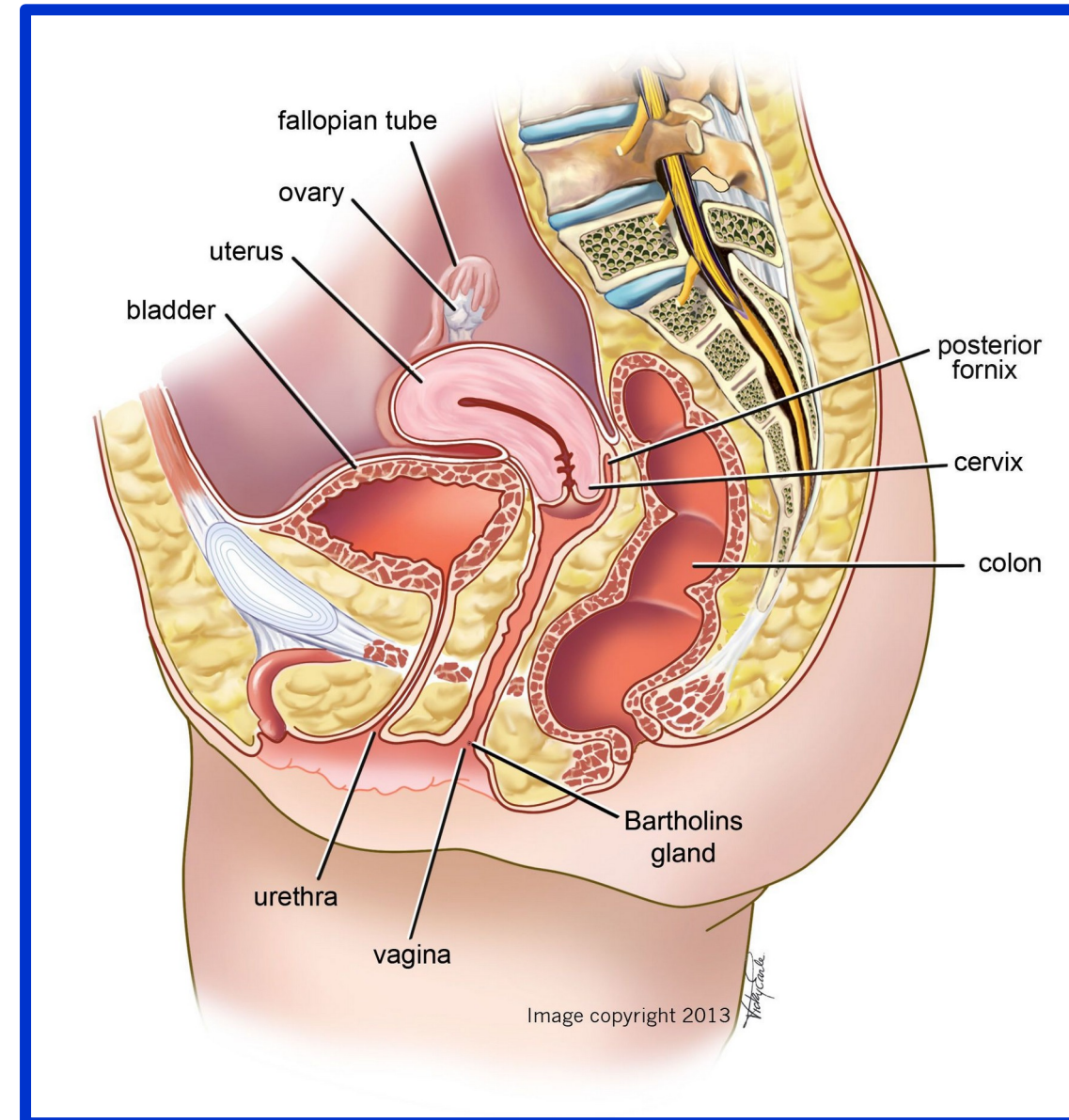
❑ This is the canal connecting the uterus with the vestibule,

**** Direction;** - From below, it is directed upwards and slightly backwards.

**** Walls;** 2 walls (anterior and posterior) which are contact with each other.

**** Diameter;** lower part 2.5 cm while the upper part 5 cm.

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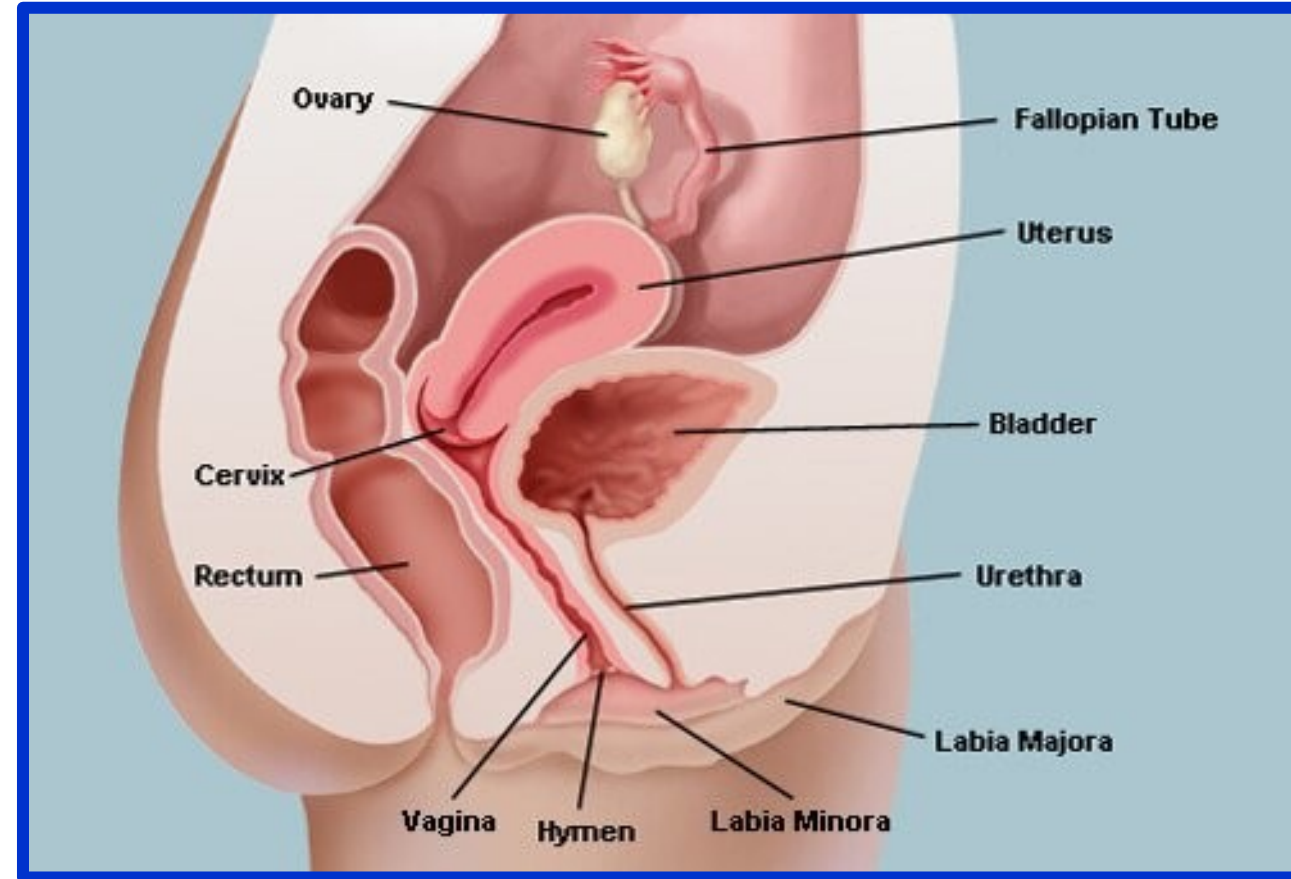


Vagina

** Relations:

1- The anterior wall of the vagina is short (7.5 cm).

✓ It is closely related to the base of the urinary bladder and urethra.



2- The posterior wall of the vagina is longer (9 cm).

a- Upper 1/4 is covered by peritoneum of the rectovaginal pouch.

b- Middle 2/4 is directly related to the rectum.

c- Lower 1/4 is separated from the anal canal by the perineal body.

Vagina

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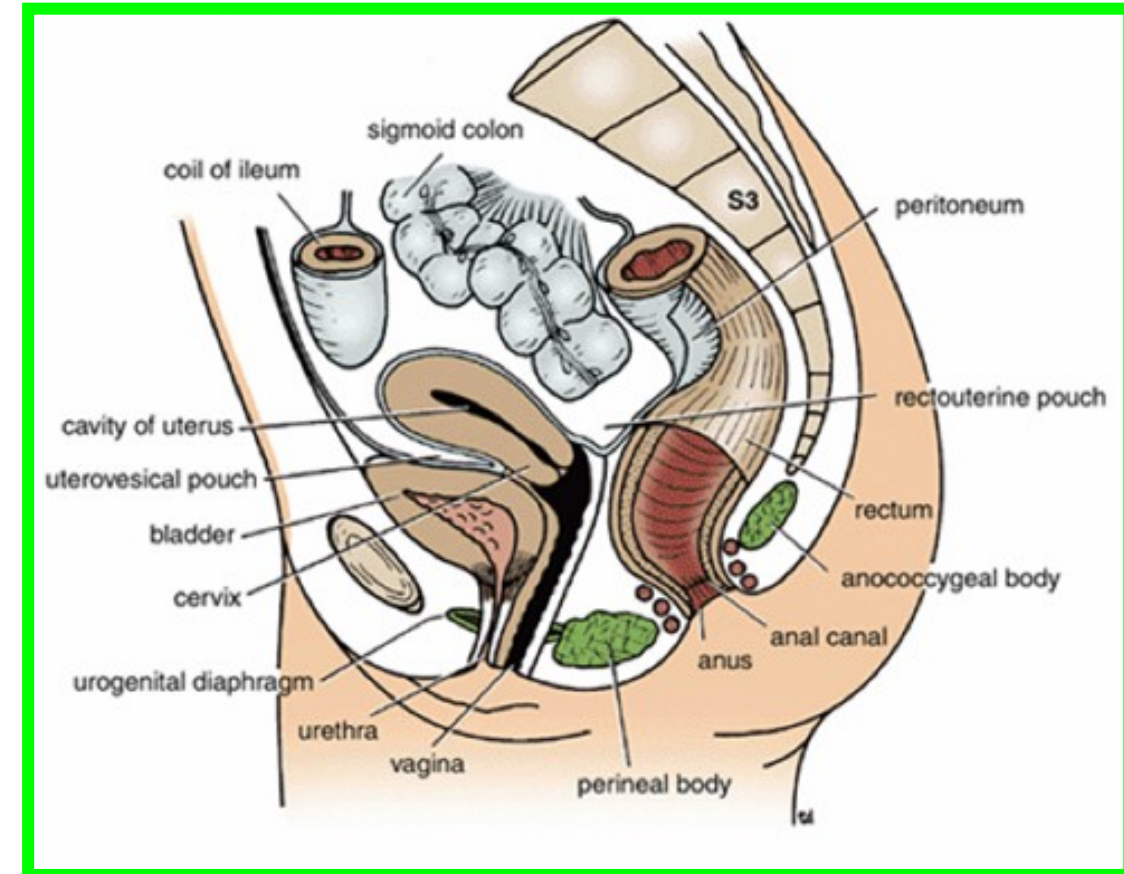
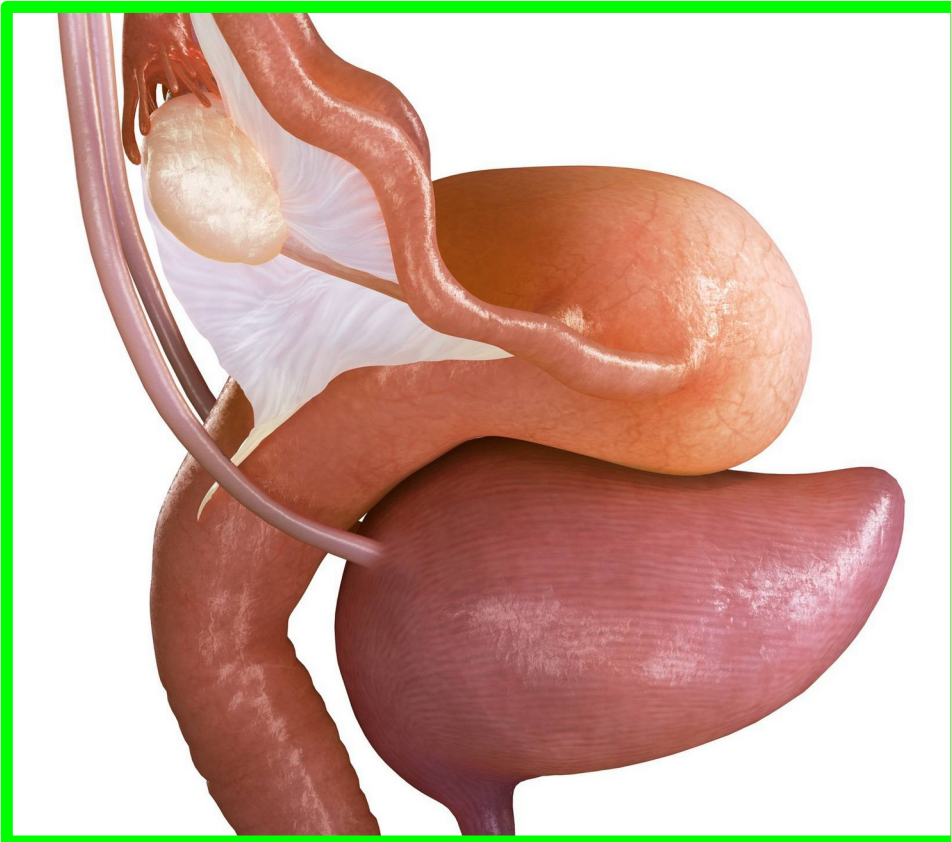
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3- Laterally:

a- Upper part is related to the ureter.

b- Middle part is to the levator ani. (**Sphincter vaginae**)

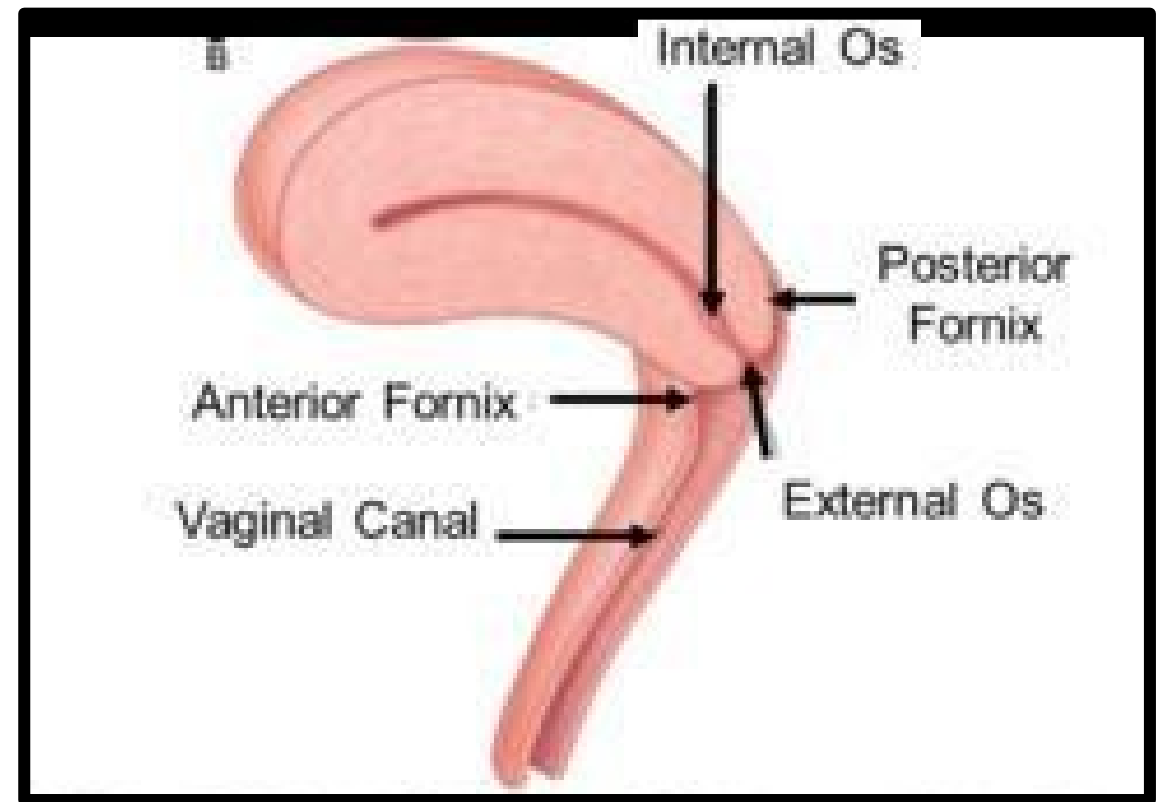
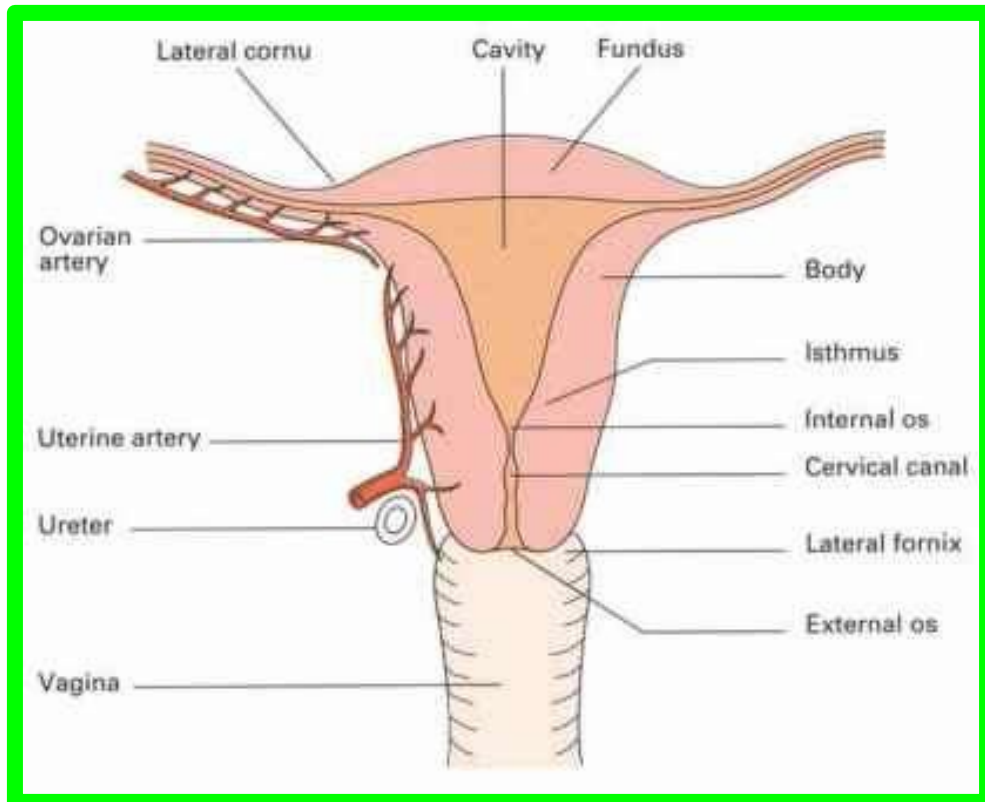
c- Lower part transverses the deep and superficial perineal pouches.



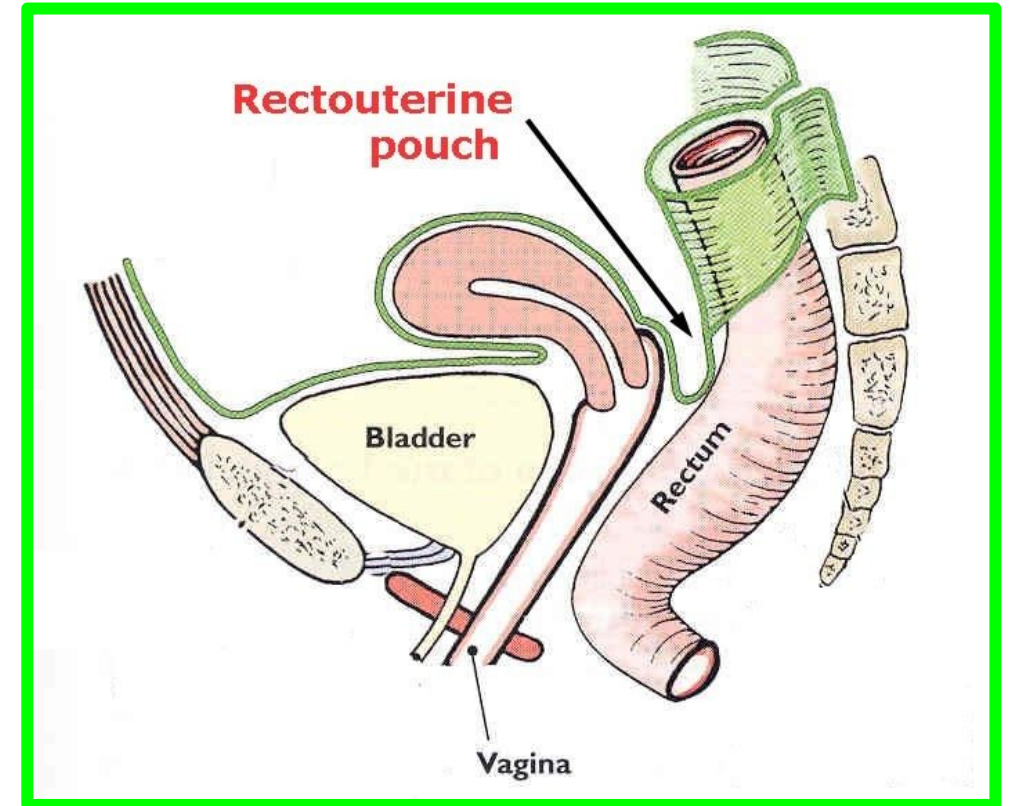
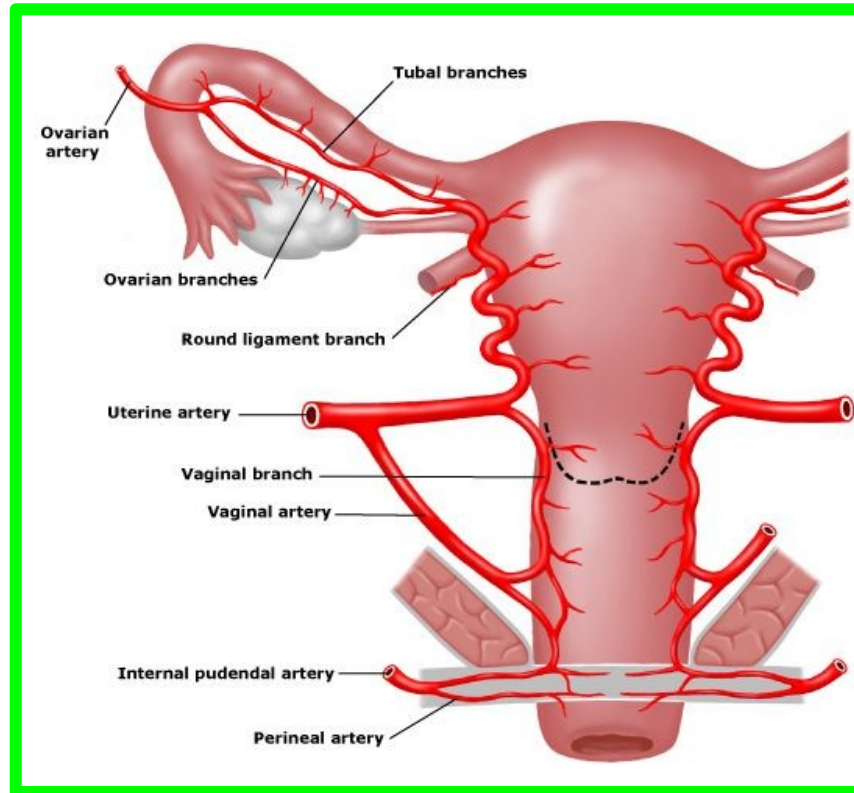
Vagina

** Fornices of the vagina:

- ❑ These are the recesses of the upper part of the vagina which surrounds the vaginal part of the cervix (anterior, posterior and 2 Lateral).



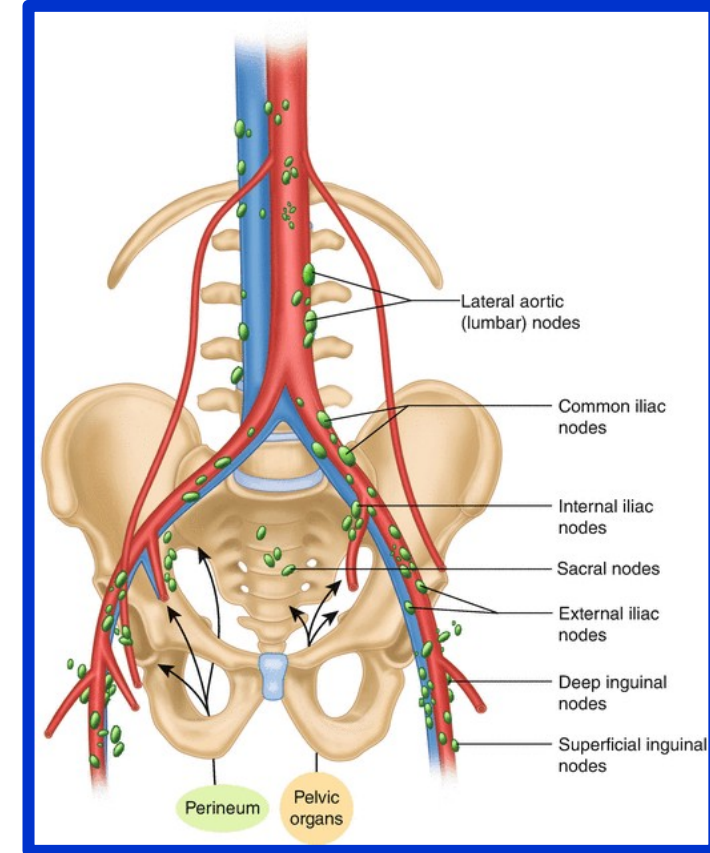
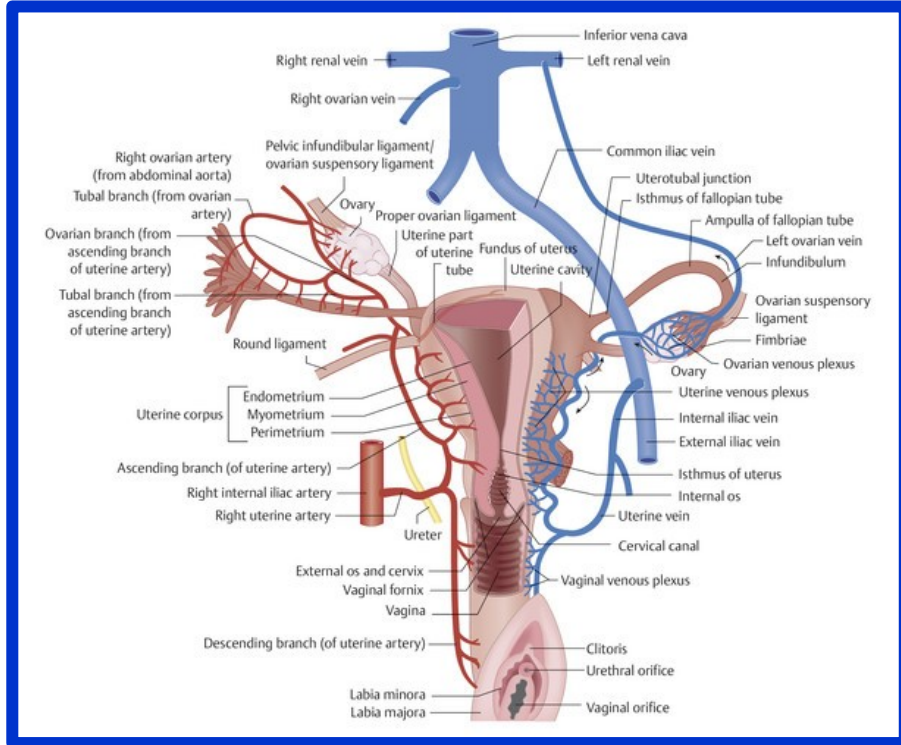
**** Peritoneal covering of the vagina:**
Only the upper part of the posterior wall by peritoneum of rectovaginal pouch.



**** Arterial supply:**

- 1) Vaginal artery.
- 2) Uterine artery.
- 3) Internal pudendal artery.
- 4) Middle rectal artery.

**** Venous drainage: to the vaginal venous plexus → internal iliac vein.**



**** Lymphatic drainage:**

a- The upper part drains into the external iliac lymph nodes.

b- The middle part drains into the internal iliac lymph nodes.

c- The lower part drains into the superficial inguinal lymph nodes.

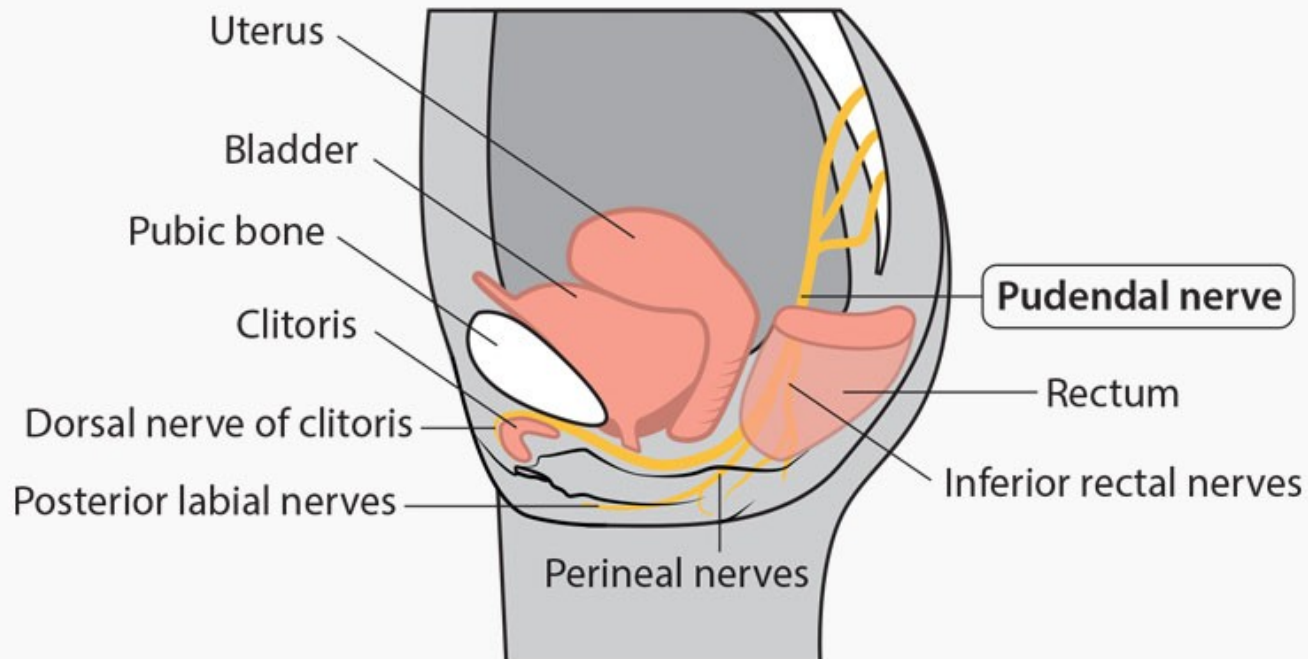
Vagina

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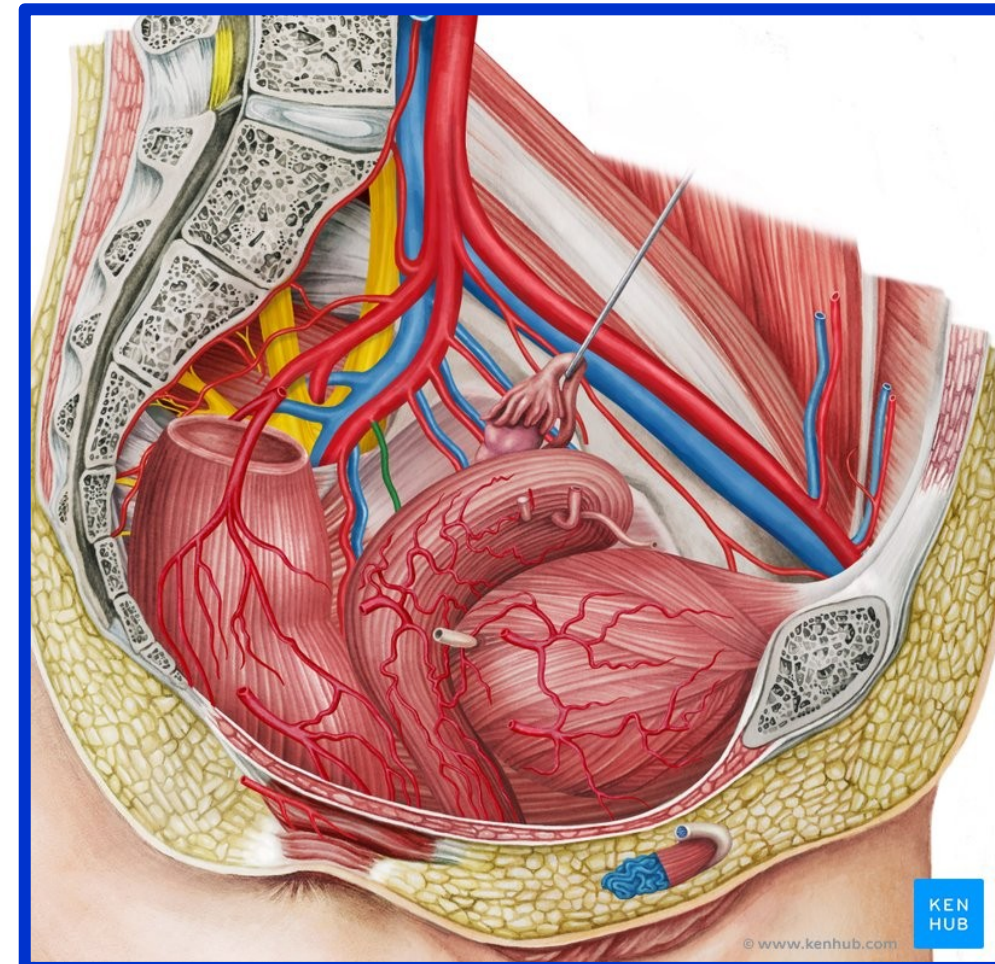
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** Nerve supply:

- ❖ Upper 2/3 supplied by sympathetic and parasympathetic.
- ❖ Lower 1/3 pain sensitive and supplied by pudendal nerve.



Female Pudendal Nerve

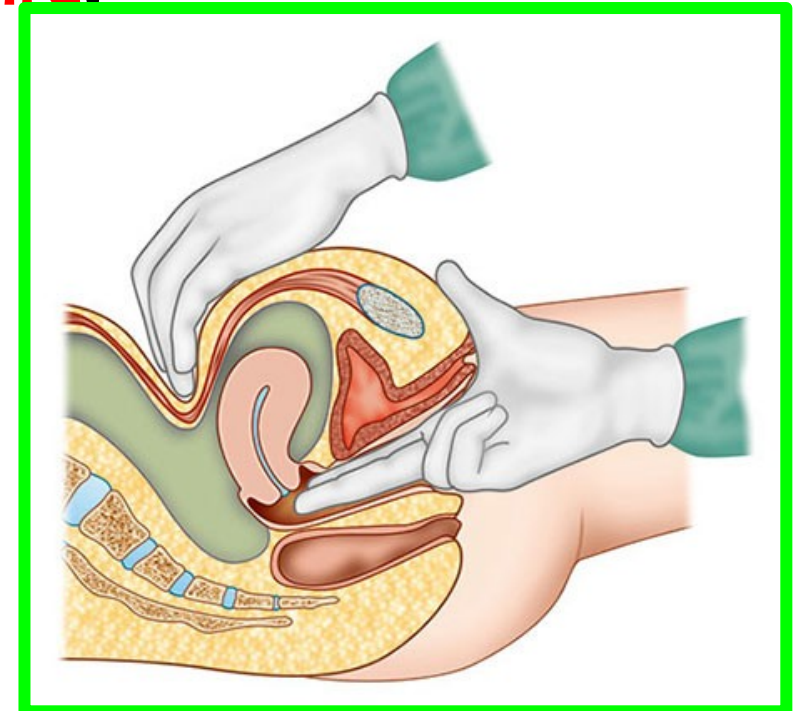


Vagina

** Applied anatomy:

1- Vaginal examination:

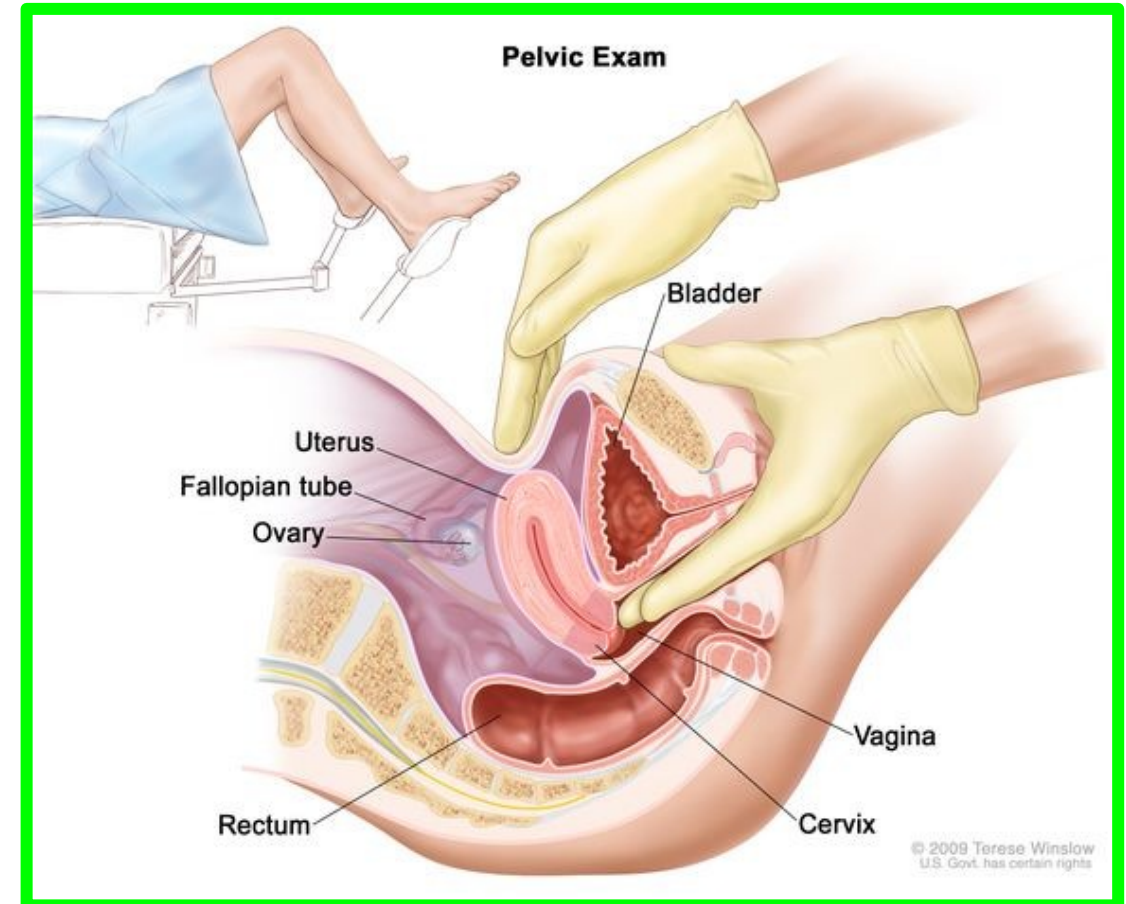
- This is done by inserting both index and middle fingers through the vagina.
- The structures felt are:
 - ✓ Cervix of the uterus and Fornices of the vagina
 - ✓ Anteriorly: The base of **urinary bladder** and **urethra**.
 - ✓ Posteriorly: Rectovaginal (**Douglas**) **pouch**.



Vagina

2- Bimanual examination: With the two fingers of the right hand inserted high up into the vagina, pressure is done by the left hand on the suprapubic part of the anterior abdominal wall.

❖ By this method, the size and characteristics of the uterus can be evaluated.

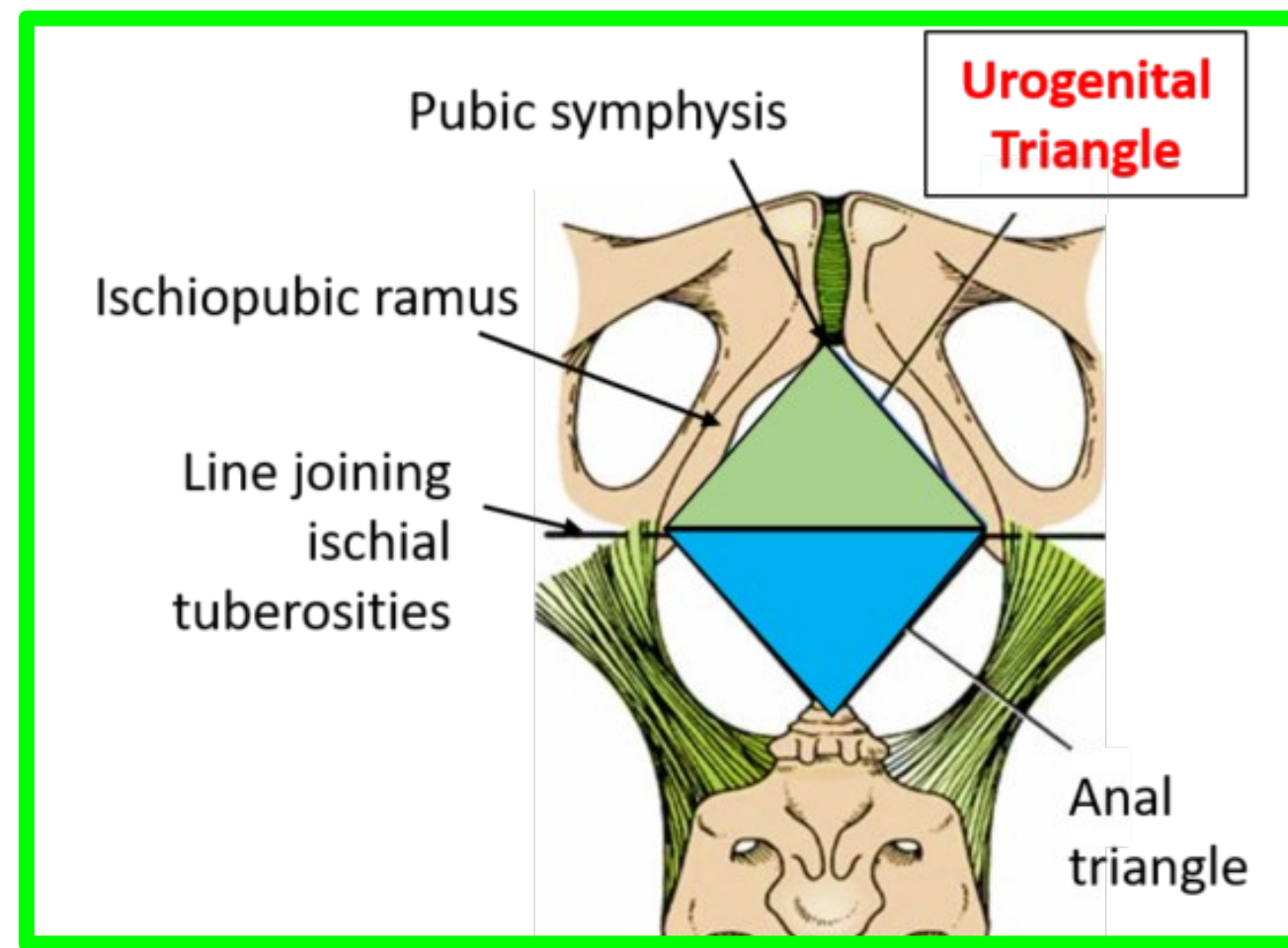


Ischiorectal Fossa

ANAL TRIANGLE

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

- ❖ Urogenital triangle
- ❖ Anal triangle.



- 1) Urogenital triangle anteriorly, contains superficial and deep perineal pouch.
- 2) Anal triangle posteriorly, contains anal canal and ischiorectal Fossa.

Ischiorectal Fossa

**** Shape:** a wedge-shaped

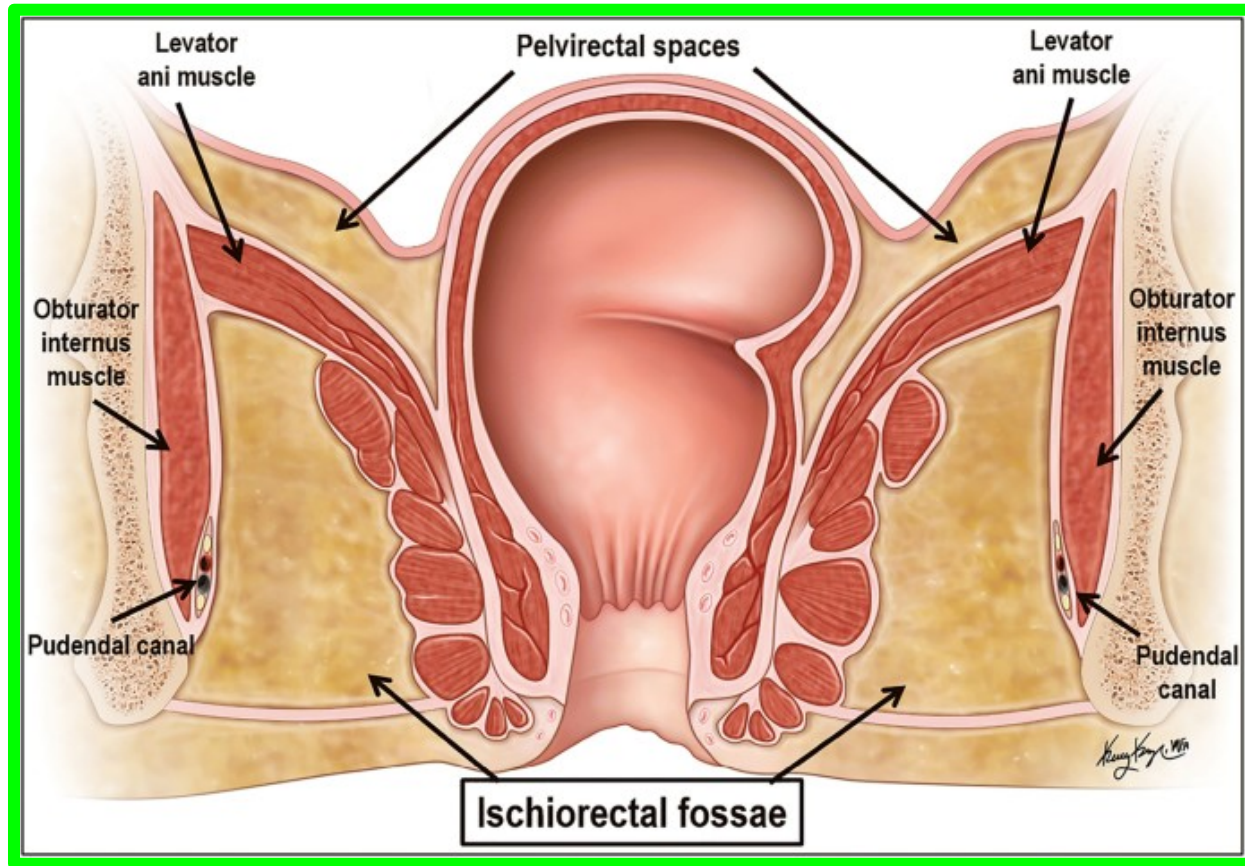
**** Position:** space on each side of the anal canal.

**** Boundaries (walls):**

1. Lateral wall: vertical.

❖ It is formed by the obturator internus, obturator fascia and ischial tuberosity.

❖ The obturator fascia is split to form the pudendal canal (its contents pudendal nerve and internal pudendal vessels).



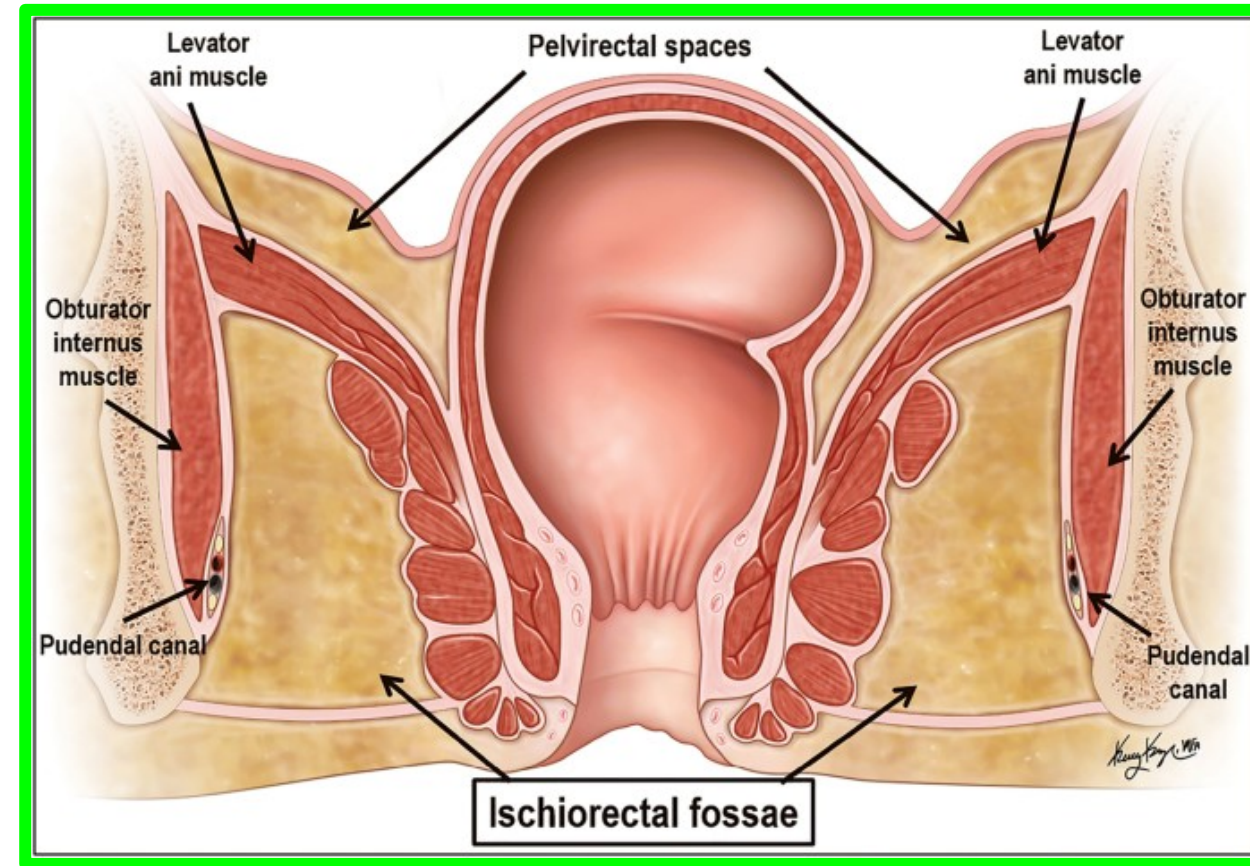
Ischiorectal Fossa

2- Medial wall: sloping

- Upper part: the levator ani muscle.
- Lower part: the external anal sphincter.

3- The base: is directed downward and is formed by the peri-anal skin and fascia.

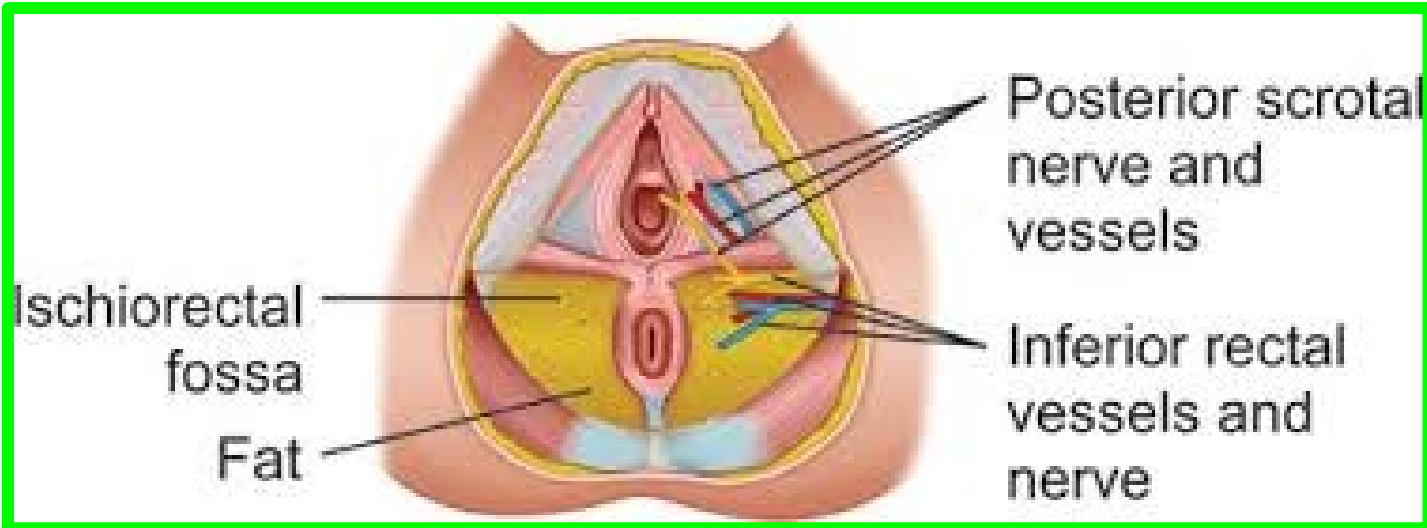
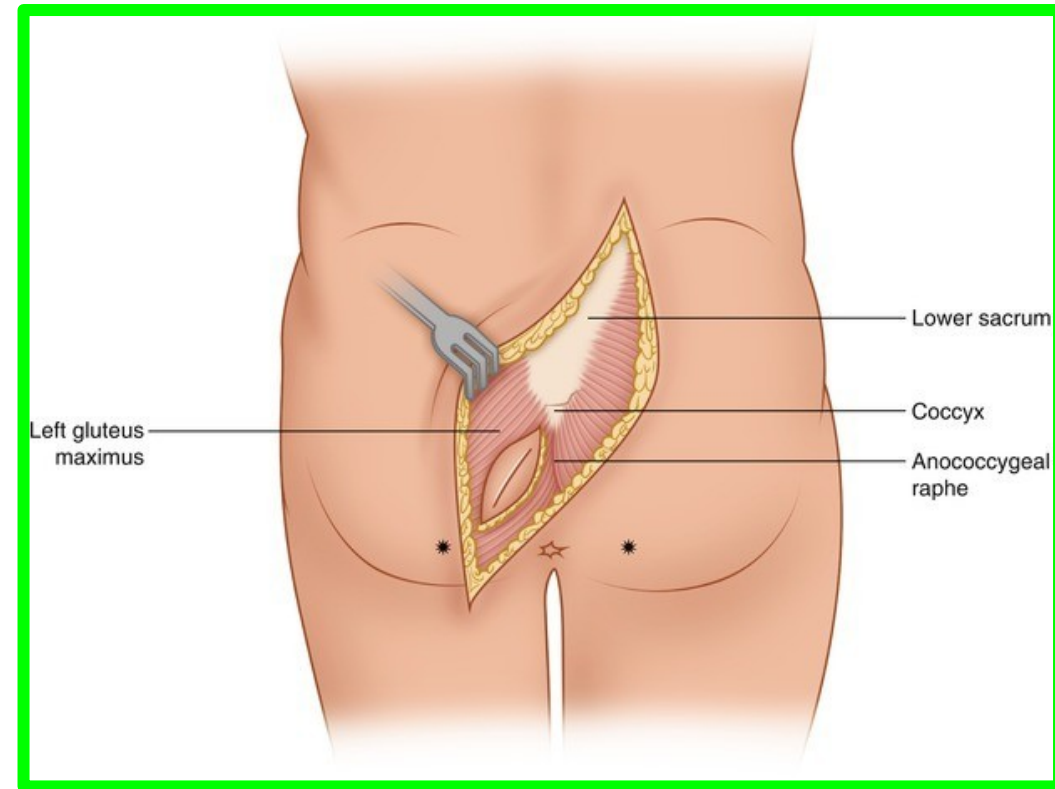
4- The apex: is directed upward and is formed by the meeting obturator internus and levator ani muscles.



Ischiorectal Fossa

5- Anterior boundary: superficial and deep perineal pouches and their contents.

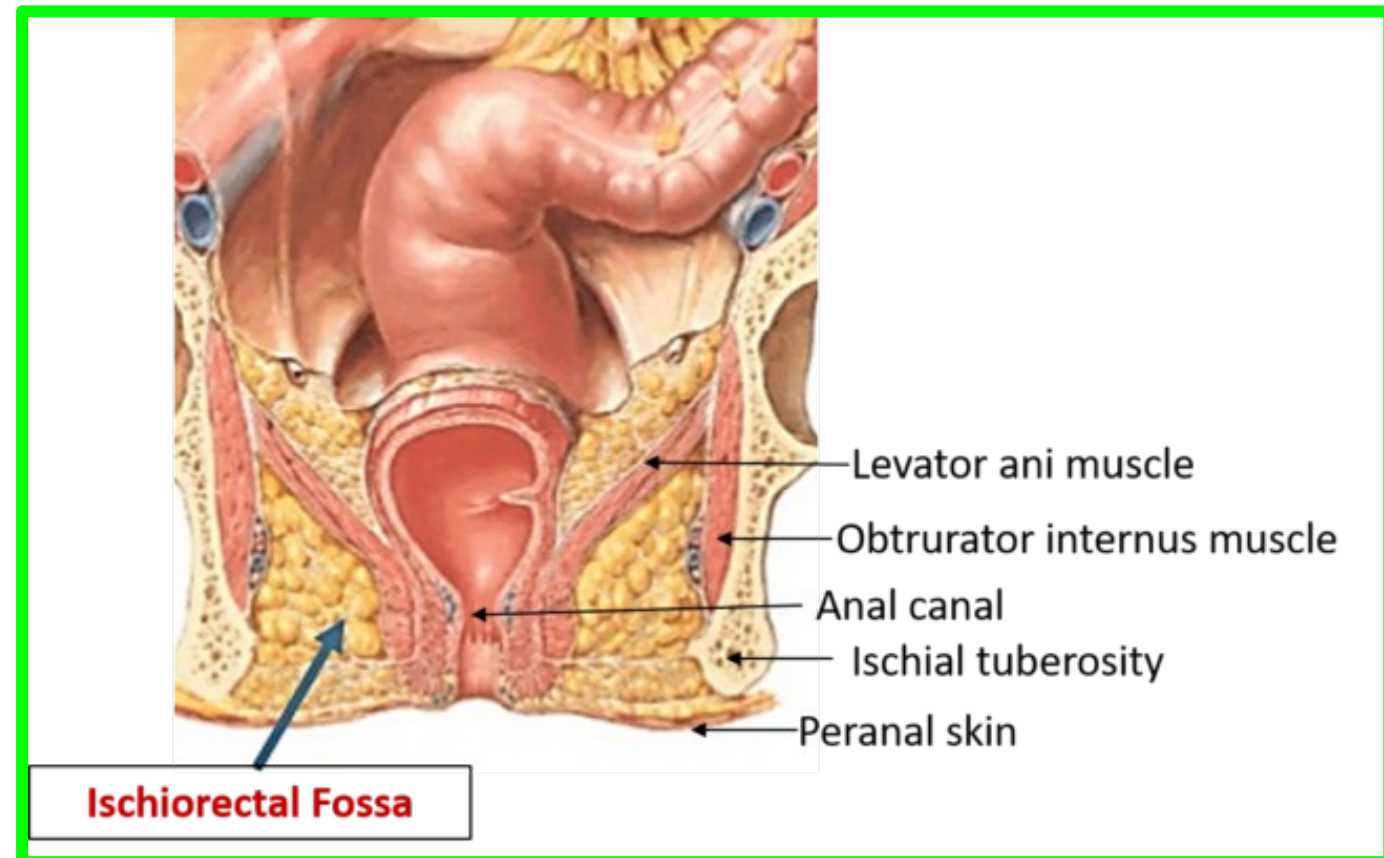
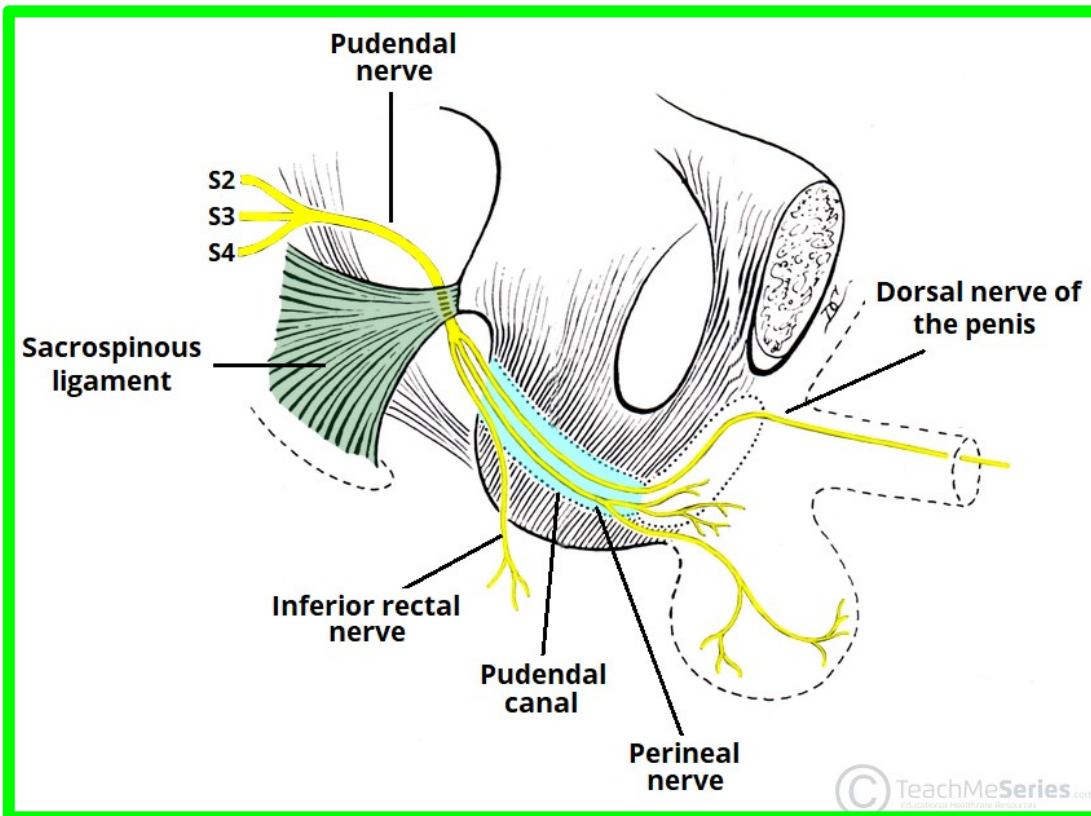
6- Posterior boundary: sacrotuberous ligament and gluteus maximus muscle.



Ischiorectal Fossa

** Contents:

- 1- **Ischiorectal pad of fat:** allows distension of the anal canal during defecation.
- 2- **Pudendal canal and its contents** (pudendal nerve and internal pudendal vessels).

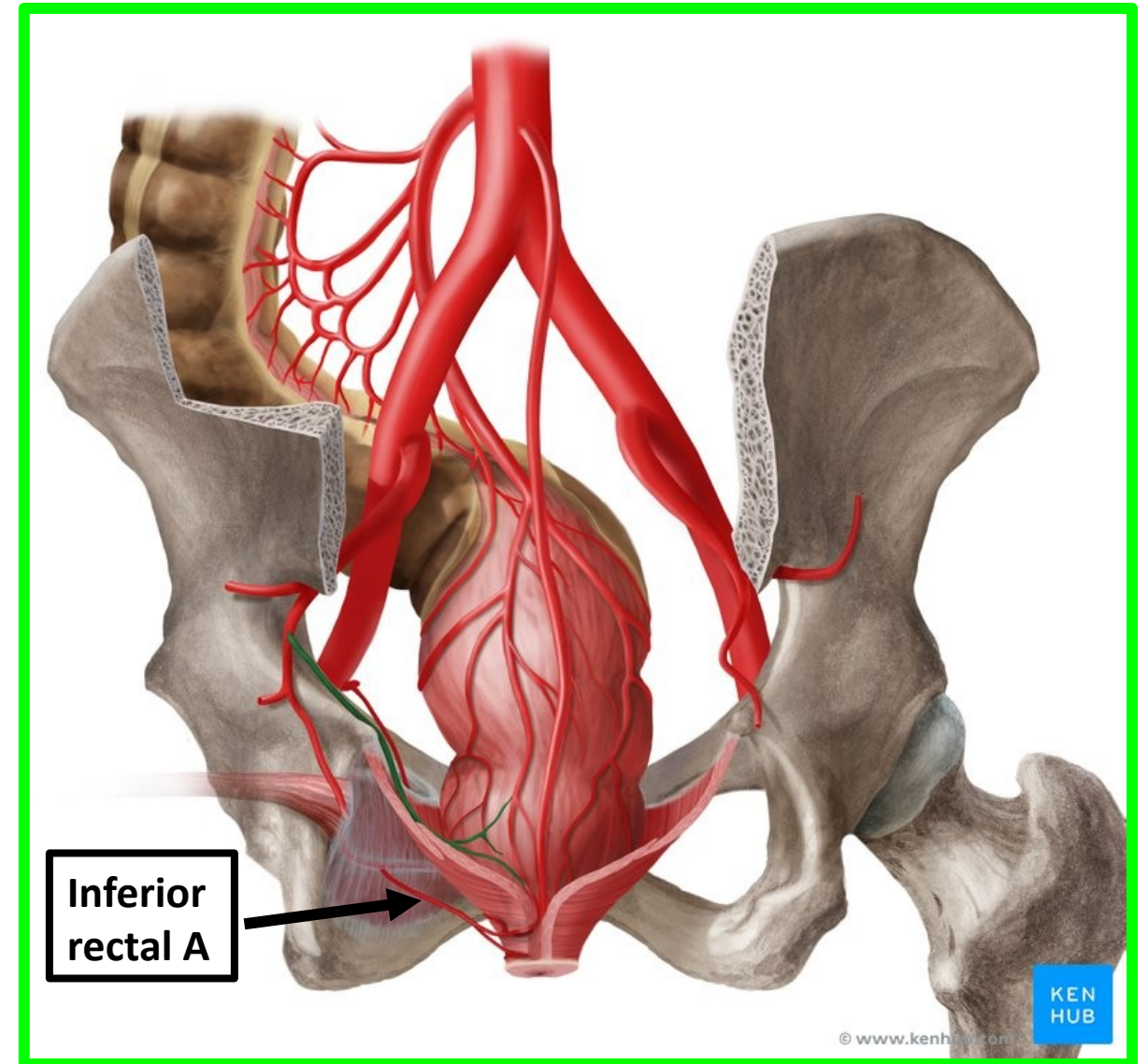


Ischiorectal Fossa

** Contents:

3- Inferior rectal vessels:

- ❖ The artery arises from the **internal pudendal artery** in the **pudendal canal**.
- ❖ It crosses the fossa to reach the anal canal.



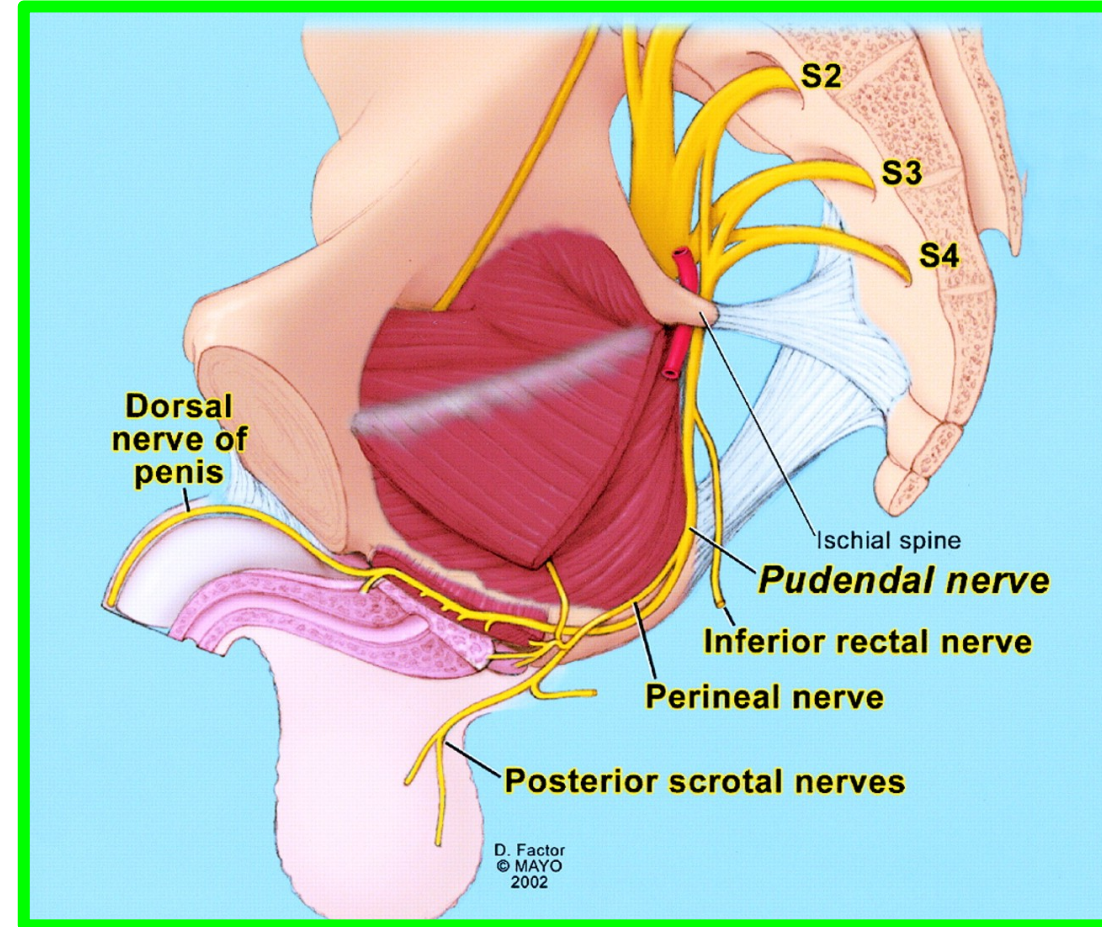
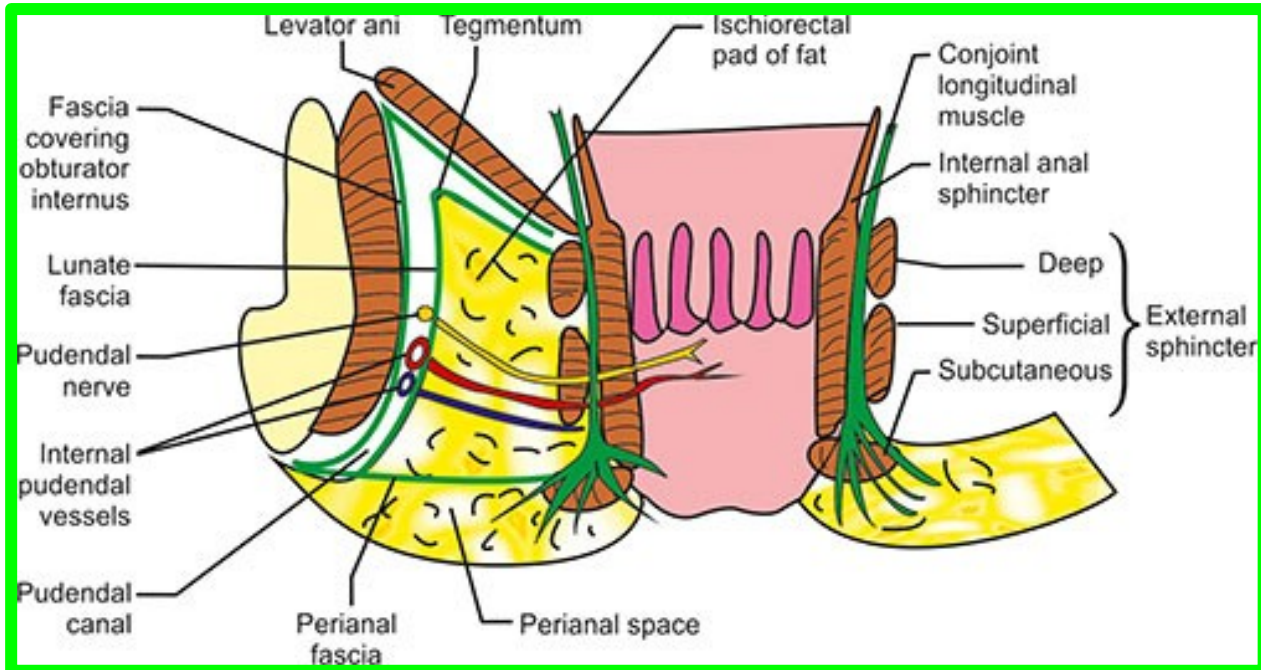
Ischiorectal Fossa

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** Contents:

4- Inferior rectal nerve:

- ❖ It is a branch of the pudendal nerve in the pudendal canal.
- ❖ It crosses the fossa to supply the levator ani, and external anal sphincter.

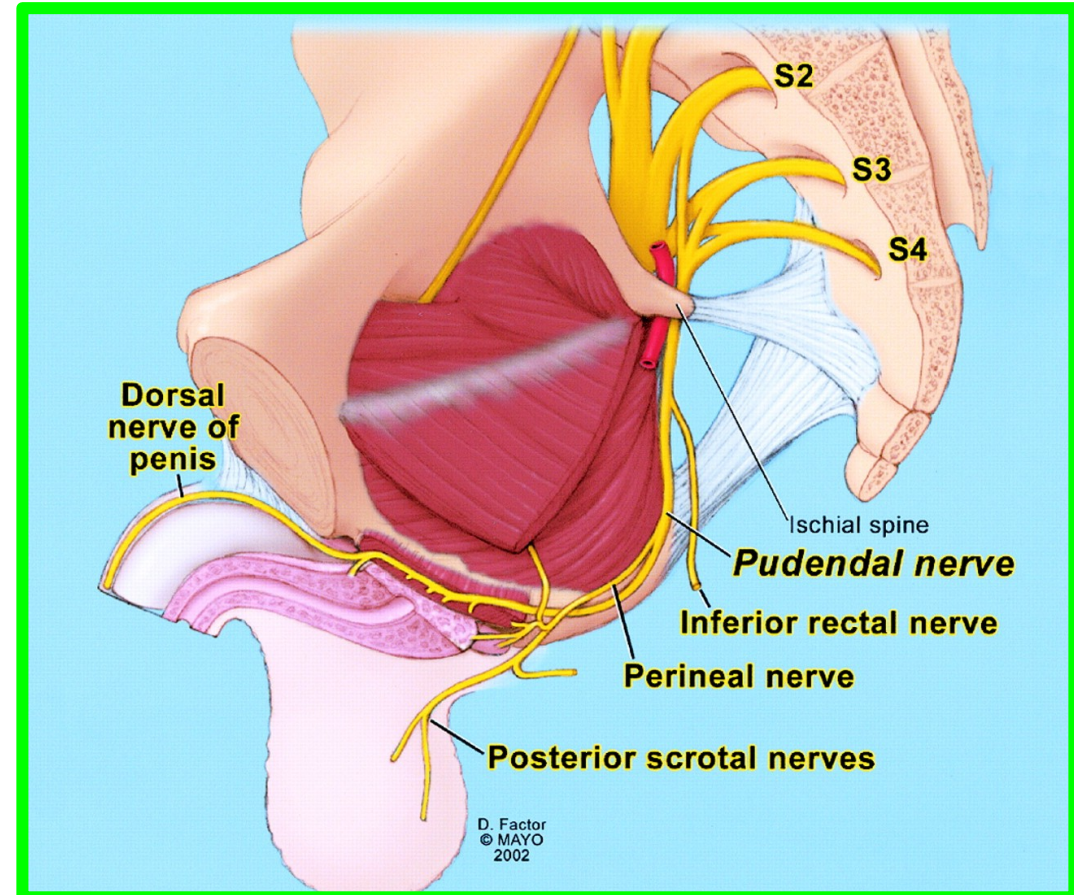
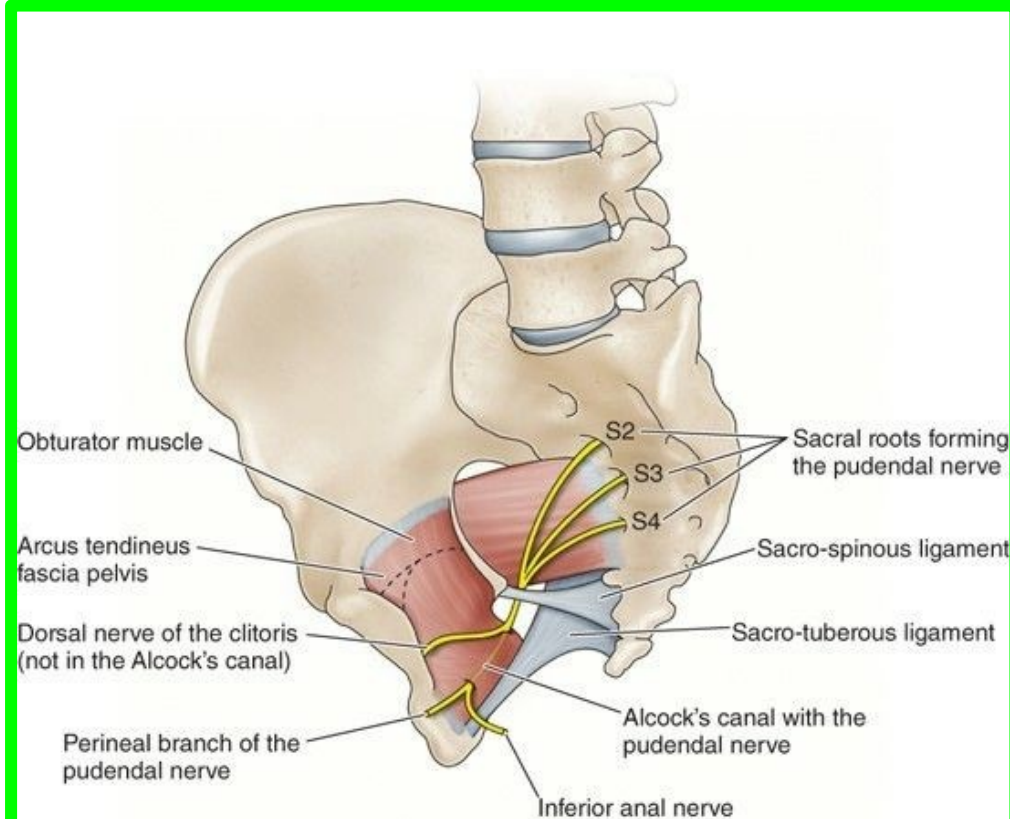


Ischiorectal Fossa

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** Contents:

- 5- Perineal branch of the 4th sacral nerve.
- 6- Posterior scrotal nerves and vessels: to the scrotum (in male)
- 7- Posterior labial nerves and vessels: to the labia majora (in female).



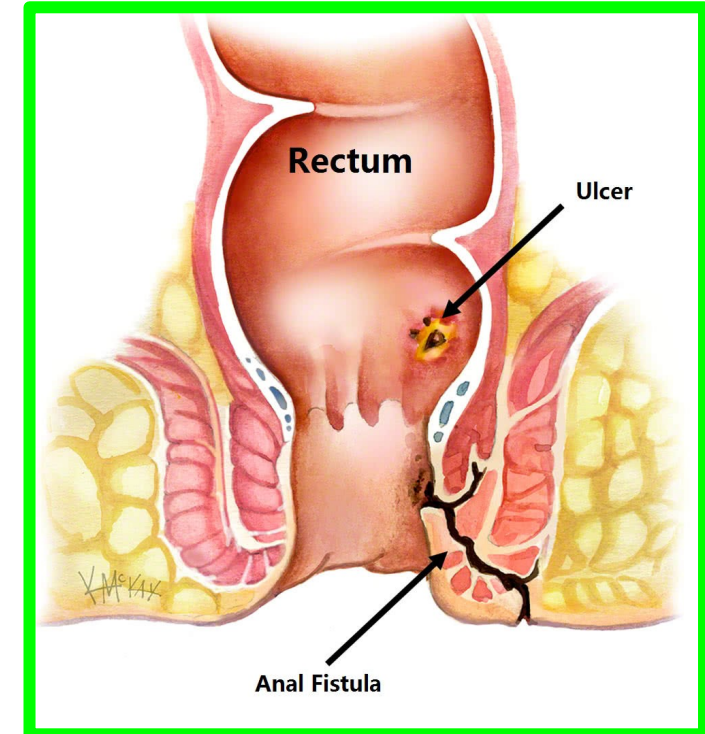
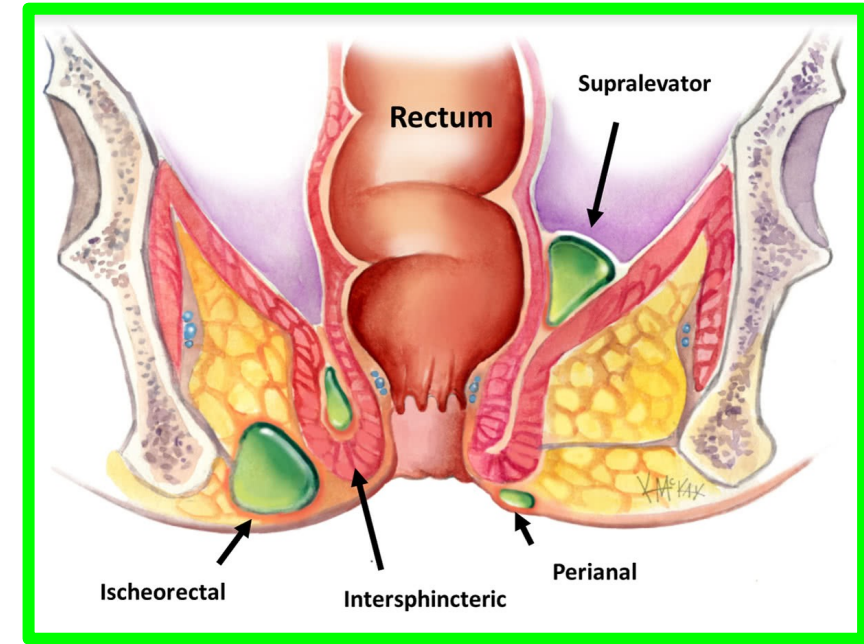
Ischiorectal Fossa

** Applied anatomy:

1- Infection of the ischiorectal fossa leading to an **ischiorectal abscess**.

2- If the abscess opens into the anal canal, it produces **anal fistula**.

3- If the abscess opens into the skin, it produces **an external sinus**.



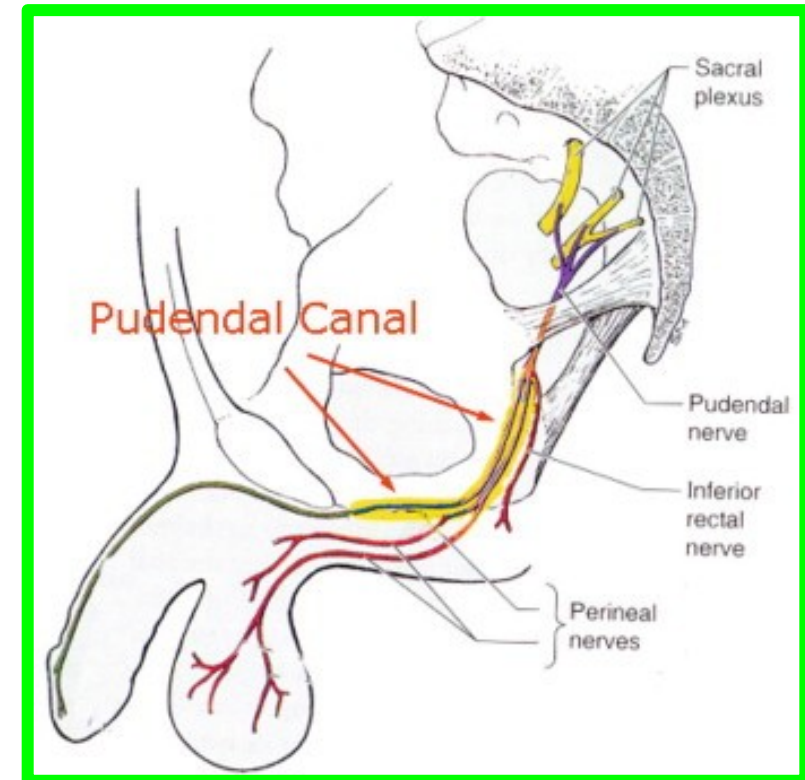
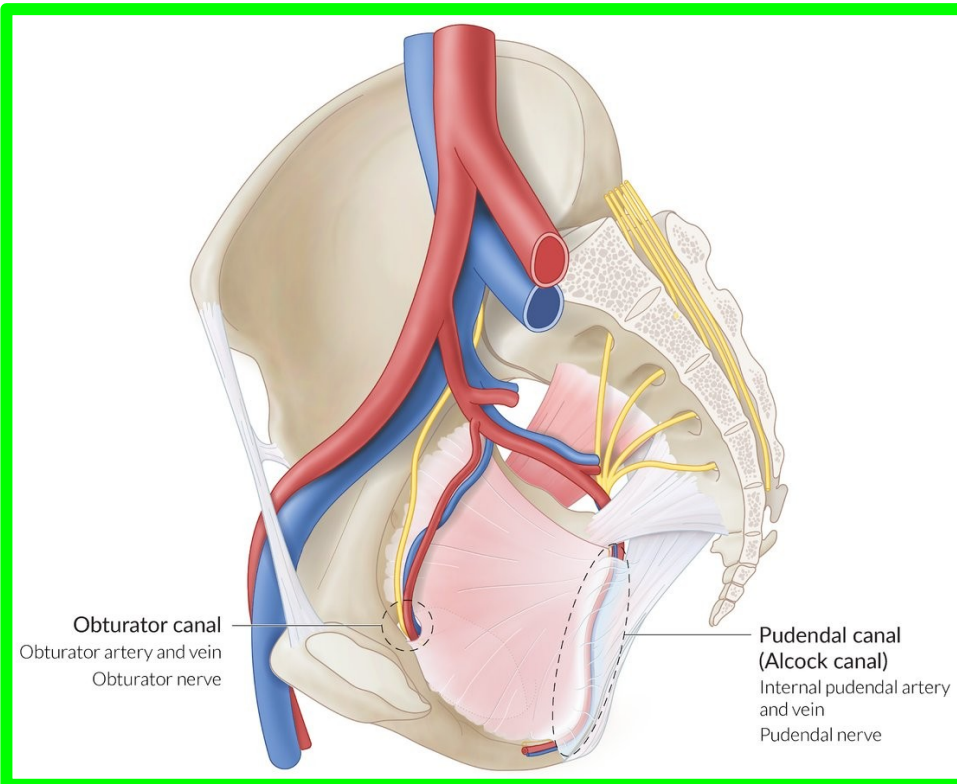
Ischiorectal Fossa

Pudendal canal

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- ** Definition:** It is a tunnel in the lateral wall of the ischiorectal fossa.
- ** Formation:** It is formed by splitting of the obturator fascia.
- ** Begins:** at the lesser sciatic foramen.
- ** Ends into** the deep perineal pouch.
- ** Contents:** Pudendal nerve and internal pudendal vessels.





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