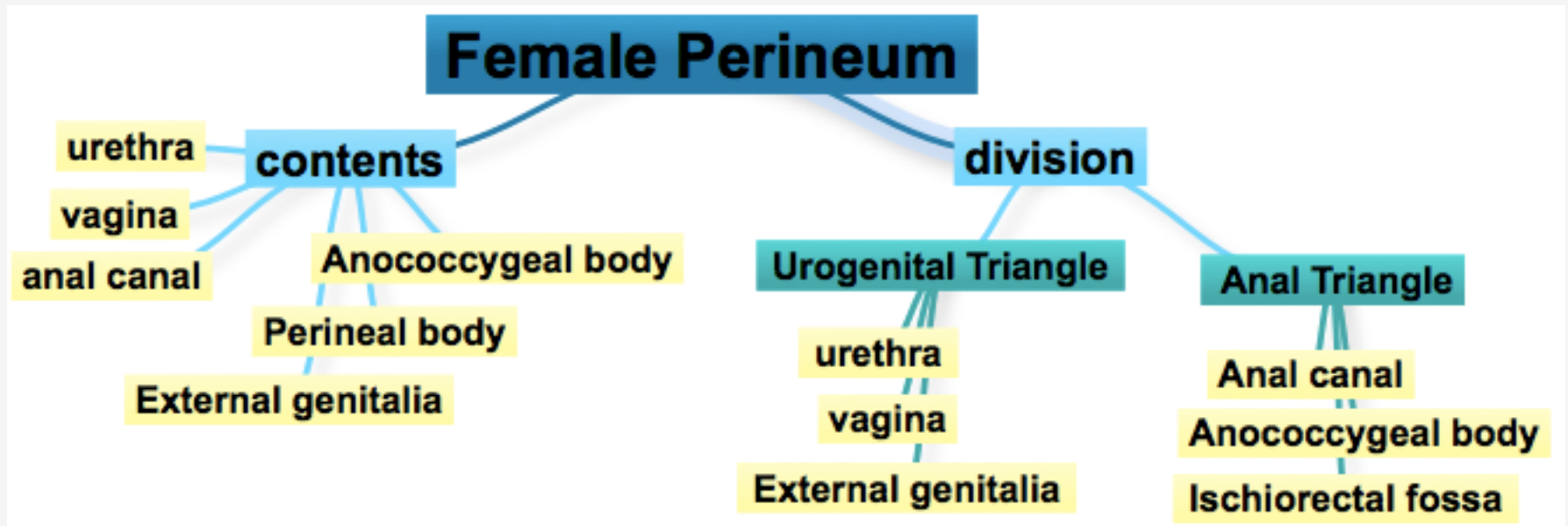




4 Female Perineum and External Genitalia

MIND MAP



[perineal membrane & deep perineal pouch](#)



Perineum

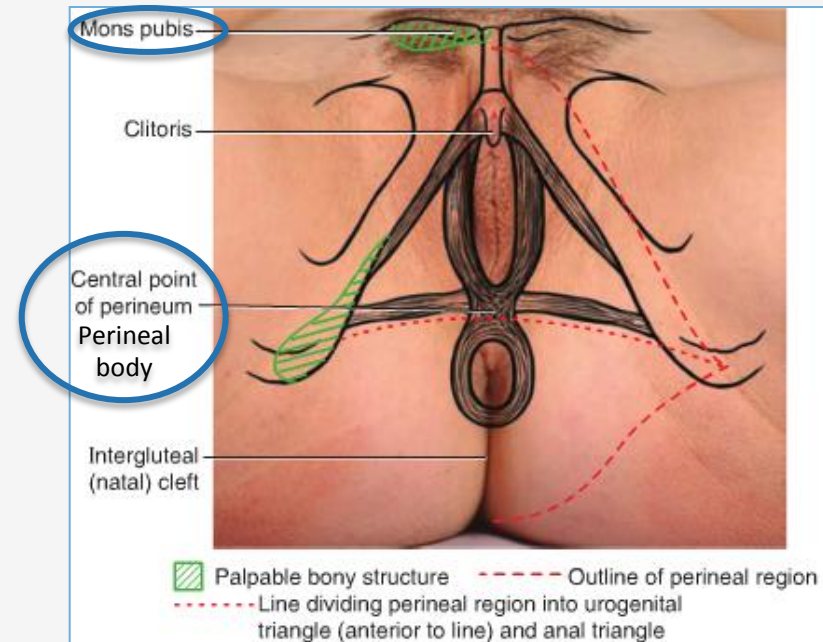
Is the **region of the body below the pelvic diaphragm (The outlet of the pelvis)**.
It is a **diamond shaped area between the thighs**.

Boundaries

Anteriorly **Mons pubis**
Laterally **Medial surfaces of the thighs**
Posteriorly **Intergluteal folds**

Contents

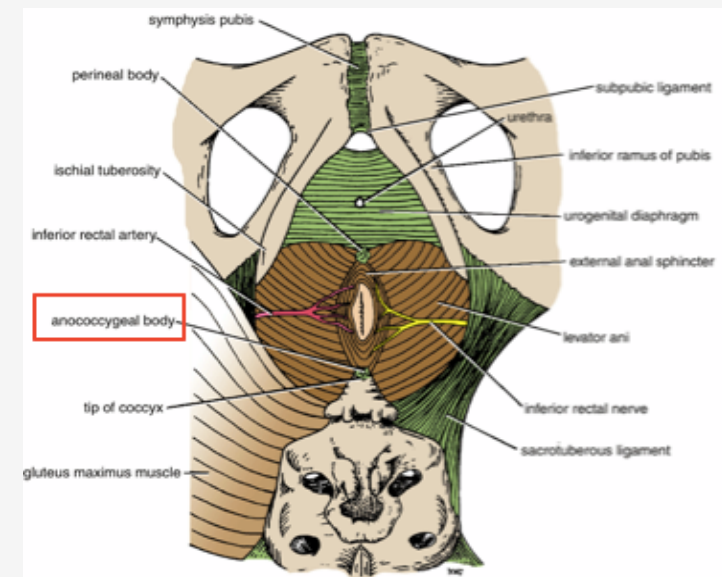
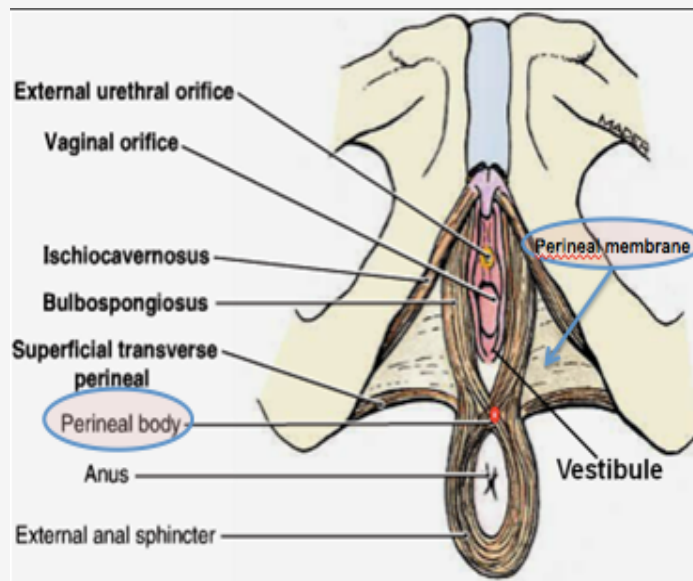
Lower ends of **urethra, vagina & anal canal**
External genitalia
Perineal body & Anococcygeal body



Perineal & Anococcygeal body



	Perineal body	Anococcygeal body
Description	irregular fibromuscular mass	complex musculotendinous structure
Location	in the subcutaneous tissue , posterior to vaginal vestibule and anterior to the anal canal & anus (midpoint of the line between the ischial tuberosities and blends interiorly with the perineal membrane) Forms the central point of the perineum	between the anterior aspect of the coccyx and the posterior wall of the anorectal canal
Function	<ul style="list-style-type: none"> ✓ Gives attachment to perineal muscles. ✓ Plays an important role in visceral support especially in female. 	<ul style="list-style-type: none"> ✓ Receives insertion of fibers of levator ani muscle.





bony boundaries

Anterior: Symphysis pubis.
Posterior: Coccyx.
Lateral: Ischiopubic rami, ischial tuberosities & sacrotuberous ligaments.

Division

By an imaginary line passing through two **ischial tuberosities**, it is divided into:

Urogenital triangle anteriorly

Anal triangle posteriorly



Urogenital Triangle

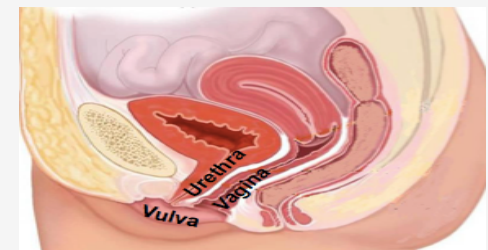
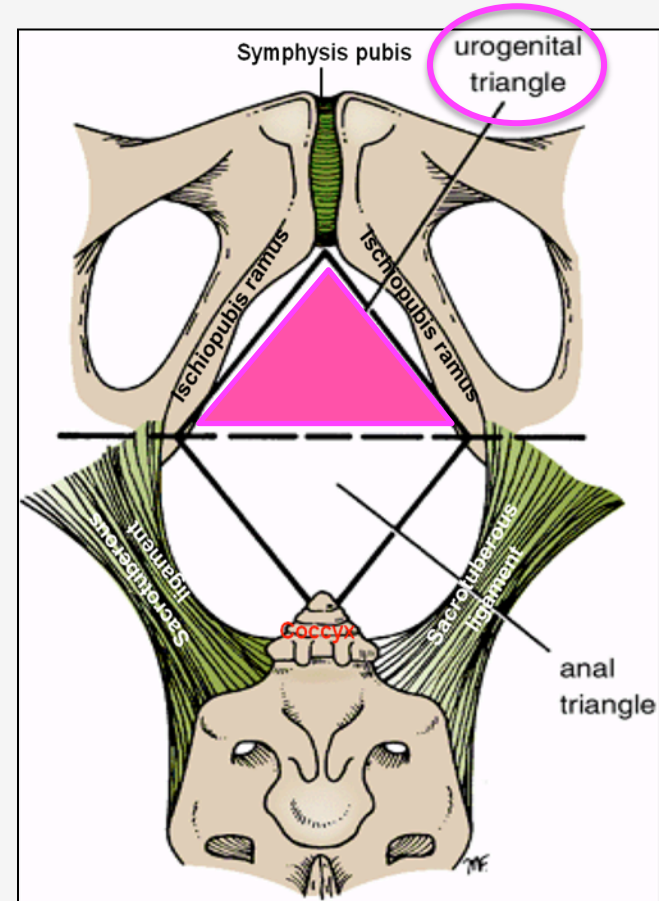
Urogenital Triangle

Boundaries

Anteriorly : Symphysis pubis
Posteriorly : Transverse line passing through the 2 ischial tuberosities.
Laterally : Ischiopubic rami & ischial tuberosities.

Contents

Lower part of **urethra & vagina**.
External genitalia (**vulva**).



Urogenital Diaphragm



Urogenital Diaphragm

Description

A triangular **musculofascial diaphragm**

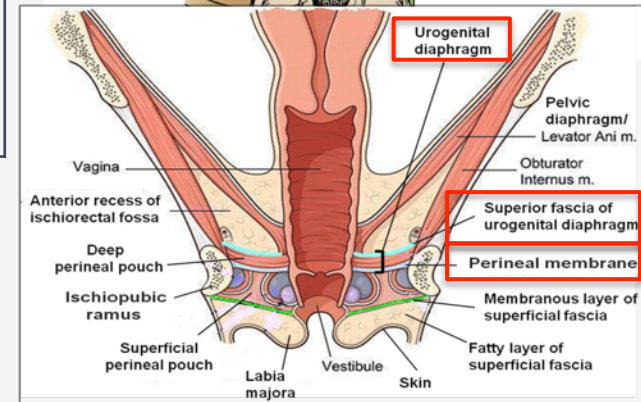
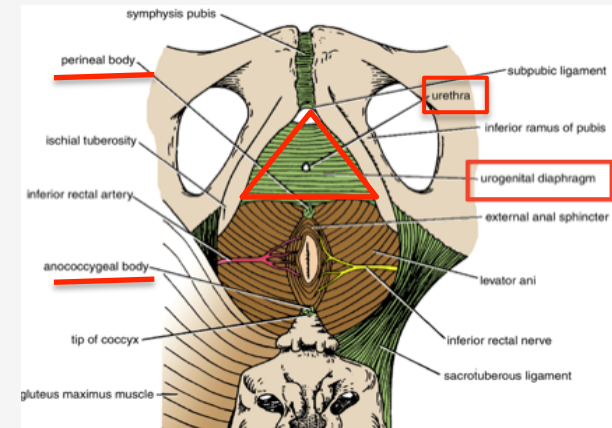
Location

- In the **anterior part** of the perineum
- Fills in the gap **between the pubic arch**.

Compositions

- **Sphincter urethrae.**
 - **deep transverse perineal muscles:** enclosed within the **superior** and **inferior** layers of **fascia of the urogenital diaphragm**
- The **inferior layer** of the fascia is formed by the **perineal membrane**

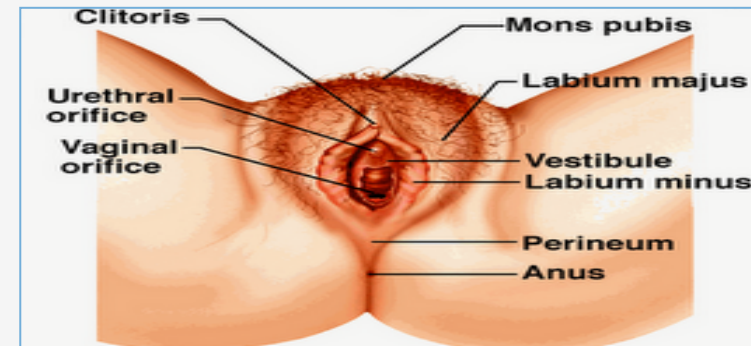
*Pelvic diaphragm: levator ani ms. +coccygus ms.



Female External Genitalia (Vulva)

- **Mons pubis** : a collection of fat overlying the pubes.
- **Labia majora.**
- **Labia minora.**
- **Clitoris.**
- **Vestibule of vagina:** The interval between the two **labia minora**.

Vagina & urethra **open into the vestibule** through **urethral orifice** anteriorly and **vaginal orifice** posteriorly





Fascia of Urogenital Triangle (Perineal Fascia)

The **perineal fascia** is continuous **anteriorly** with the fascia of abdomen and consists of **superficial** and **deep** layers.

Superficial perineal fascia

Superficial fatty layer (Camper's fascia)

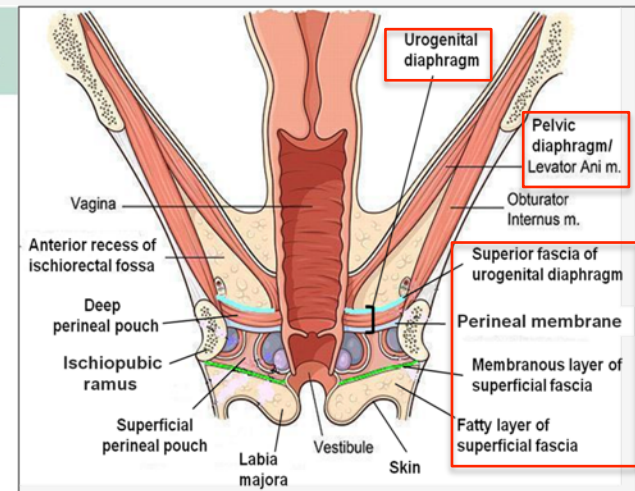
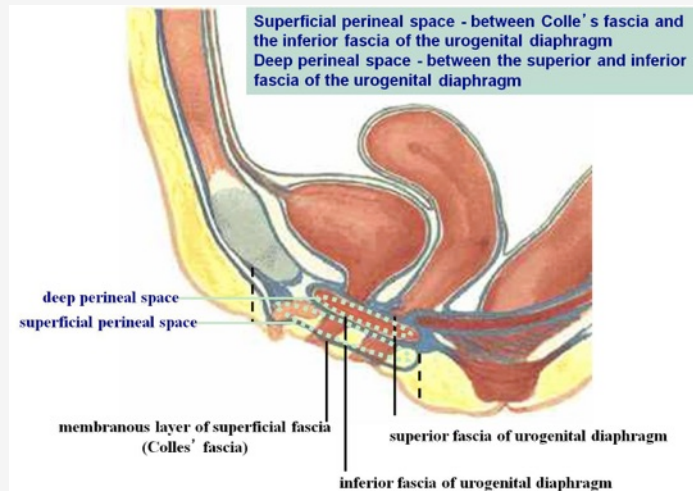
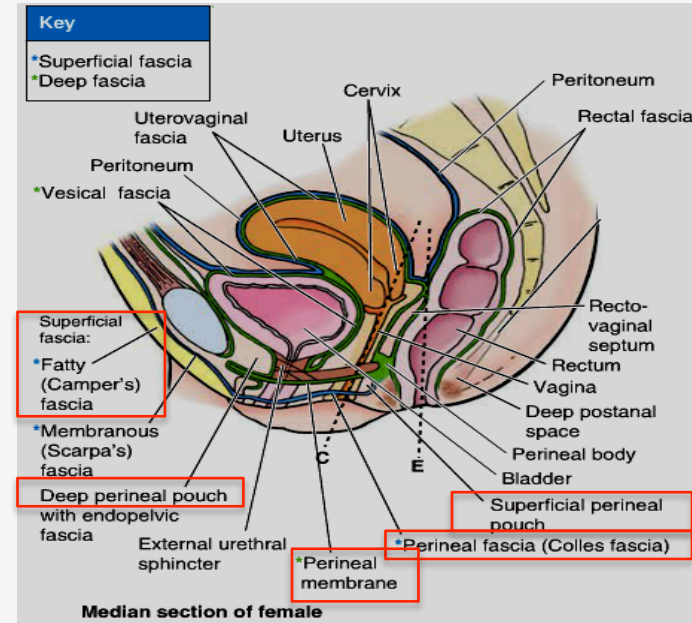
makes up the substance of **mons pubis & labia majora** and **extends into the anal region**

Deep membranous layer (Colle's fascia)

Does not extend to **anal region**. Becomes **fused** with the posterior margin of the **perineal membrane**

Deep perineal fascia

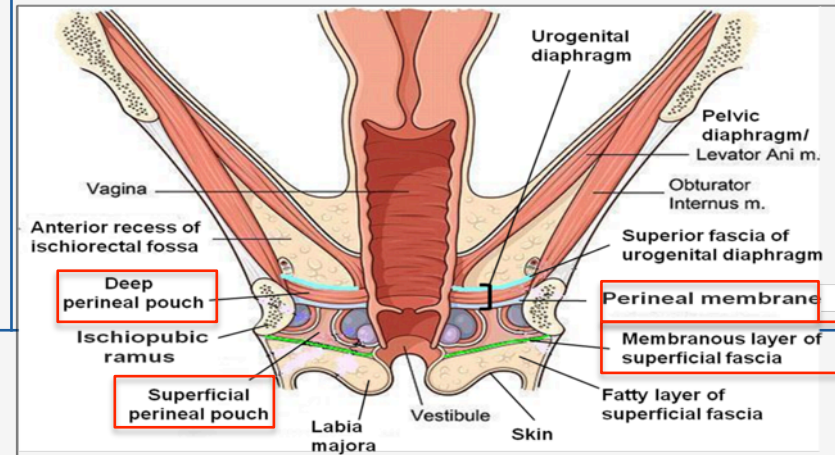
invests the muscles in the superficial perineal pouch



Structurally, the urogenital triangle is complex, with a number of fascial layers and pouches. Unlike the anal triangle, the urogenital triangle has an additional layer of strong deep fascia, known as the **perineal membrane**. This membrane has **pouches** on its superior and inferior surfaces.



	Superficial perineal pouch	Deep perineal pouch
Description	space between the deep membranous layer of superficial fascia and the perineal membrane .	It is a completely closed space deep to the perineal membrane
Boundaries	<ul style="list-style-type: none"> Inferiorly: membranous layer of superficial fascia. Superiorly: perineal membrane. Laterally: ischiopubic rami 	<ul style="list-style-type: none"> Inferiorly: Inferior fascia of the urogenital diaphragm (Perineal membrane) Superiorly: Superior fascia of the urogenital diaphragm Laterally: Inferior portion of obturator internus fascia.
Contents	<ul style="list-style-type: none"> Bulbs of vestibule: on each side of vaginal orifice. Crura of clitoris. Superficial perineal muscles: Bulbospongiosus muscle, surrounds orifice of vagina and covers vestibular bulb. Ischiocavernosus muscle, covers crus of clitoris on each side. Superficial transverse perineal muscles. Greater vestibular glands: on each side of vaginal orifice. Perineal branch of pudendal nerve supplying muscles & skin. 	<ul style="list-style-type: none"> Part of urethra Part of vagina Sphincter urethrae muscle, which is pierced by urethra & vagina. Deep transverse perineal muscles Internal pudendal vessels Dosal nerve of clitoris

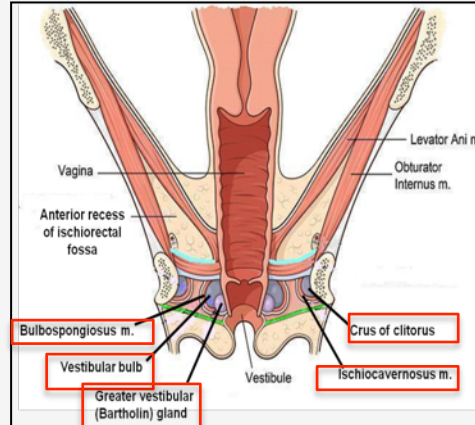
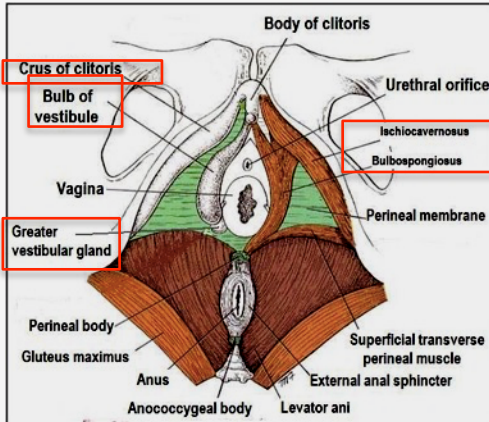


Skin → Superficial fatty layer → deep membranous fascial layer → Perineal membrane (inferior layer of urogenital fascia) → Urogenital diaphragm (Muscle) → superior layer of urogenital fascia.

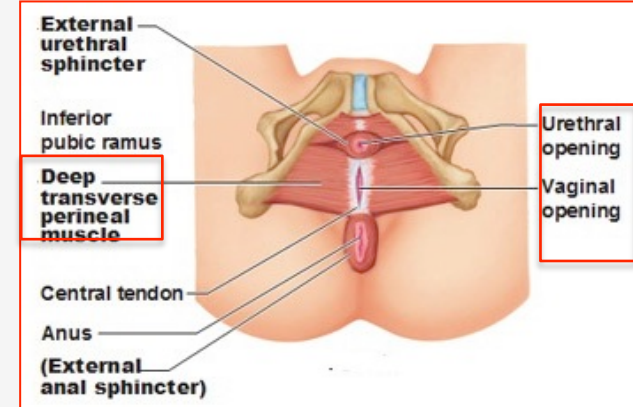
Vagina



Superficial perineal pouch



Deep perineal pouch



vagina

The vagina is a muscular canal that leads from the uterus to the external orifice of the genital canal

It measures about 3 in. (8 cm) long.

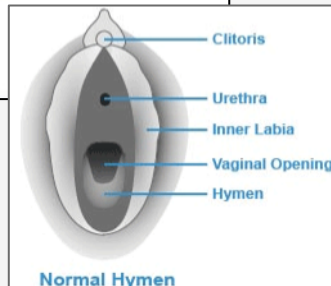
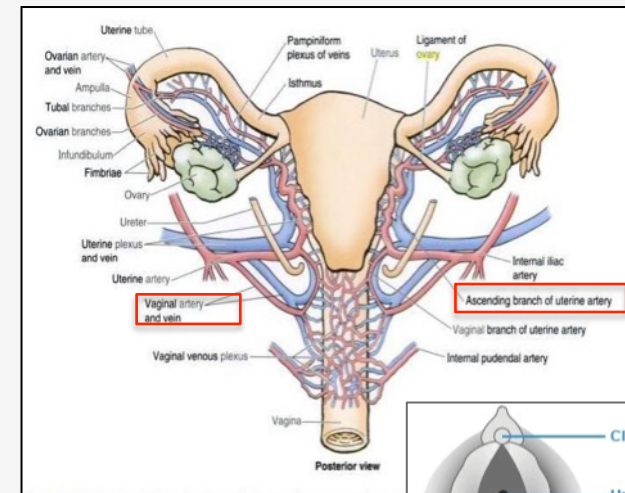
It serves as the **excretory duct** for the **menstrual flow** & forms part of the **birth canal**.

The vaginal orifice in a **virgin*** possesses a **thin mucosal fold**, called the **hymen**, which is perforated at its center.

Arteries:

- **Vaginal artery**, a branch of the **internal iliac artery**
- **Vaginal branch** of the **uterine artery**

Veins: drain into the **internal iliac veins**.

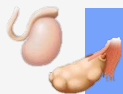
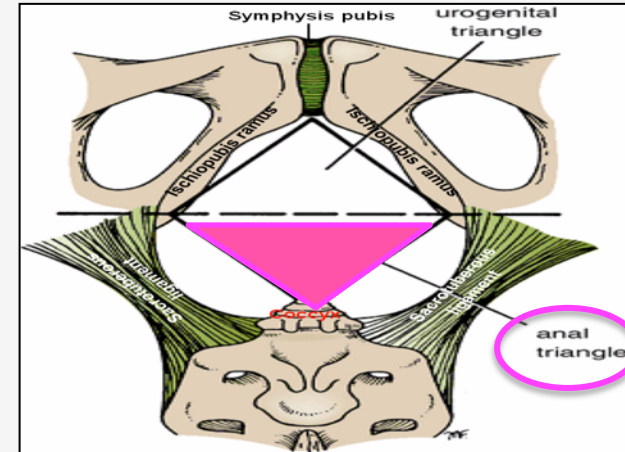


*a person who has never had sexual intercourse.

Anal Triangle



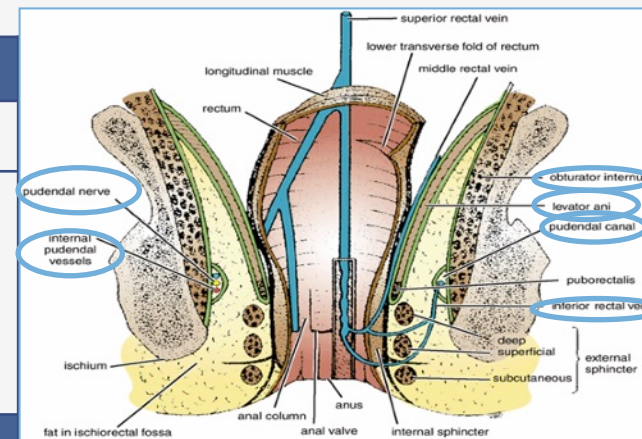
Boundaries	Contents
<ul style="list-style-type: none"> Anteriorly: Transverse line passing through the 2 ischial tuberosities. Posteriorly : coccyx. Laterally : ischial tuberosity & sacrotuberous lig. 	<ul style="list-style-type: none"> Lower part of Anal canal. Ano-coccygeal body. Ischiorectal fossa on each side.



Ischioanal Fossa

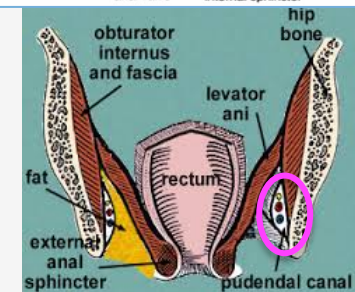
A fascial lined wedge-shaped space on each side of the anal canal.

Boundaries	Contents
<ul style="list-style-type: none"> Base: Skin of the perineum. Medial wall: Levator ani & anal canal. Lateral wall: Obturator internus, covered with fascia. 	<ul style="list-style-type: none"> Dense fat. Pudendal nerve & internal pudendal vessels within the pudendal canal Inferior rectal nerve & vessels crossing the fossa to reach anal canal.



Pudendal Canal:

Definition	Contents
<p>A fascial canal formed by obturator fascia, located on the lateral wall of the ischioanal fossa</p>	<p>Pudendal nerve. Internal pudendal vessels.</p>

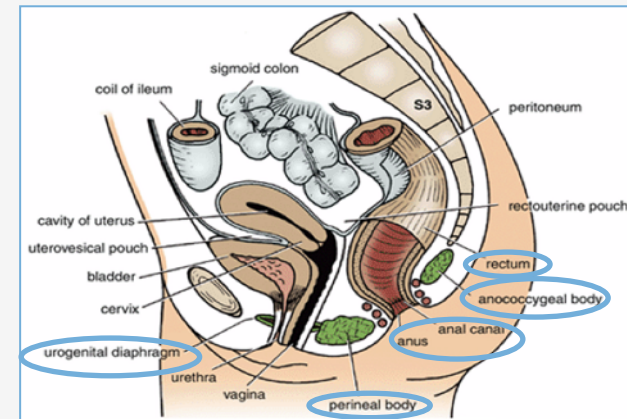


Anal Canal



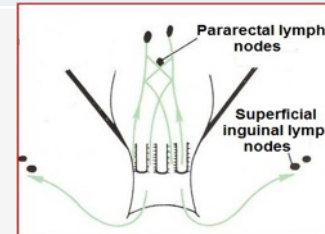
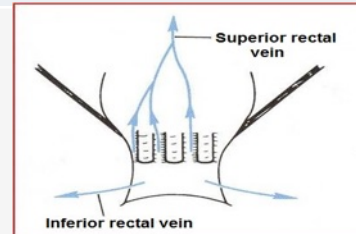
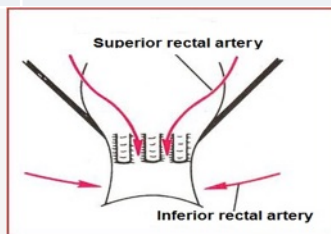
It is about 1.5 in. long, descending from the **rectal ampulla** to the **anus**.

Division		Relations
Upper half	Lower half	Anteriorly: Perineal body, urogenital diaphragm, and lower part of vagina Posteriorly: Anococcygeal body. Laterally: Ischiorectal fossae.
derived from hindgut (endoderm)	derived from the proctodeum (ectoderm)	



The two parts have different **blood supply**, **nerve supply** and **lymphatic drainage**.

Anal canal	Arterial supply	Venous drainage	Lymphatic drainage	Nerves
Upper half	Superior rectal artery (continuation of the inferior mesenteric artery)	Superior rectal vein drained into the inferior mesenteric vein (portal circulation)	Para-rectal nodes drained into inferior mesenteric lymph nodes	Visceral motor (sympathetic & parasympathetic) & sensory nerves
Lower half	Inferior rectal a. (branch of internal pudendal artery)	Inferior rectal vein drained into the internal pudendal vein (Systemic circulation) (site of portal-systemic anastomosis)	Superficial inguinal lymph nodes	Somatic motor & sensory nerves -(Inferior rectal N. branch of pudendal N.) supplies external sphincter muscle of the anus and that supply the skin of the anal region.



Pudendal Nerve Block



Pudendal nerve block is used in **providing analgesia** for the **second stage of labour** and to **provide anesthesia of the perineum** in order to create or repair an **episiotomy**. Can be done by **transvaginally** or through **perineal approach**.

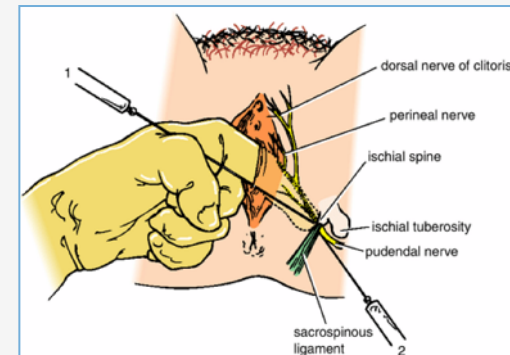
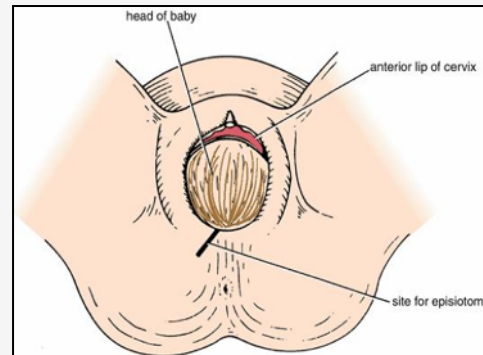
Transvaginal method:

The needle is passed **through** the **vaginal mucous membrane** **toward the ischial spine**. After the needle is passed through the **sacrospinous ligament**, the **anesthetic solution** is **injected around the pudendal nerve**

Perineal method:

The **ischial tuberosity** is **palpated subcutaneously** through the buttock. The needle is inserted on the **medial side of the ischial tuberosity** to a depth of about 1 in. (2.5 cm) from the free surface of the tuberosity. **The anesthetic is injected around the pudendal nerve.**

An episiotomy is a surgically planned incision on the perineum and the posterior vaginal wall **during second stage of labor** to **prevent perineal tear**.



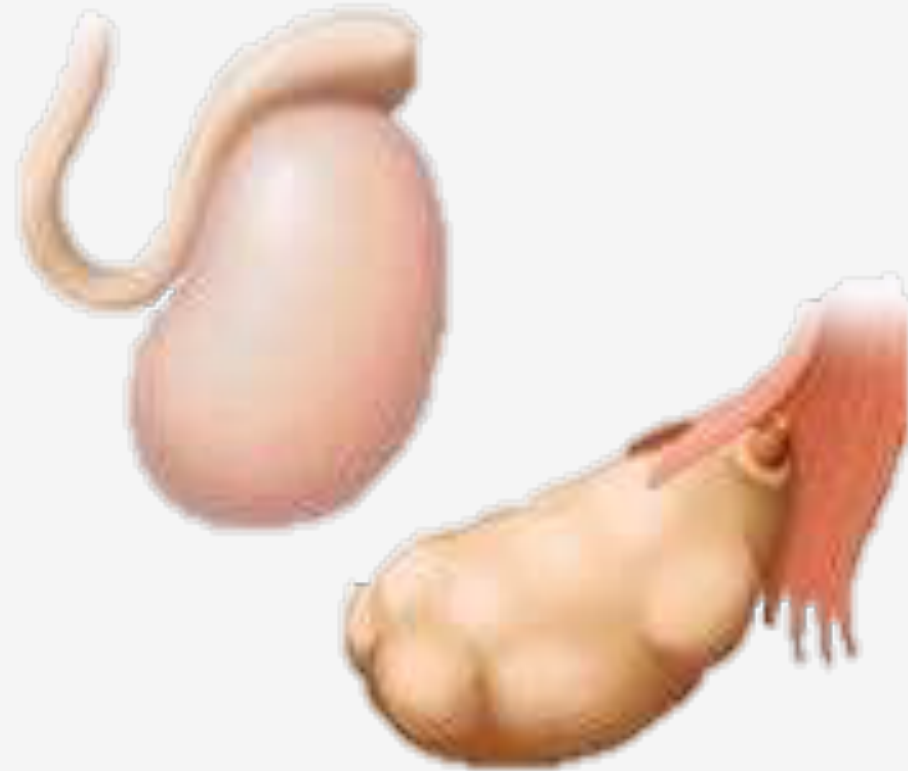
GOOD LUCK

Done by:

Anjod AlMuhareb

Revised by:

Rahma AlShehri



anatomy433@gmail.com



[@anatomy433](https://twitter.com/anatomy433)