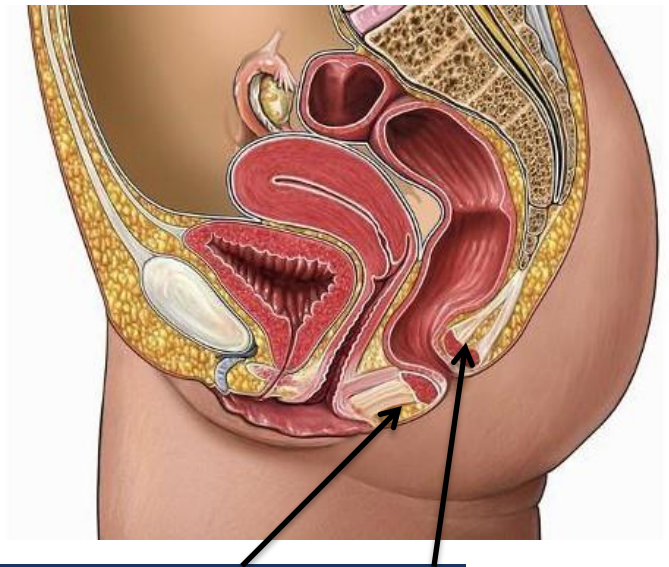
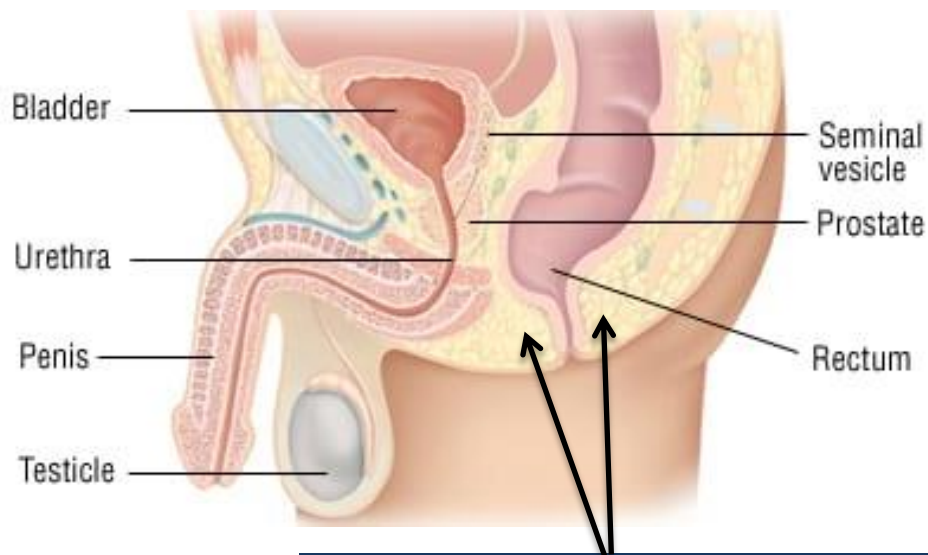
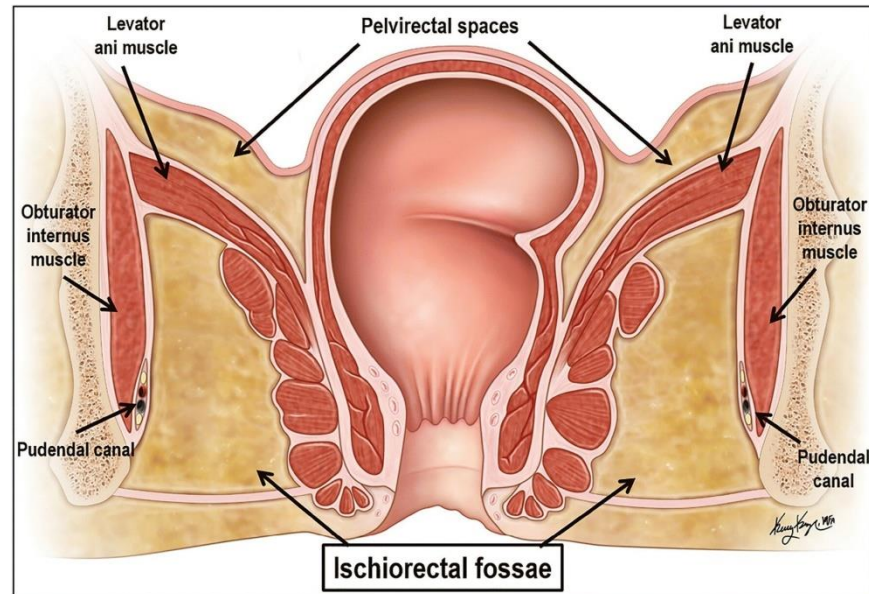




Ischiorectal Fossa / Ischioanal Fossa



Dr. Shantanu Mallick MD

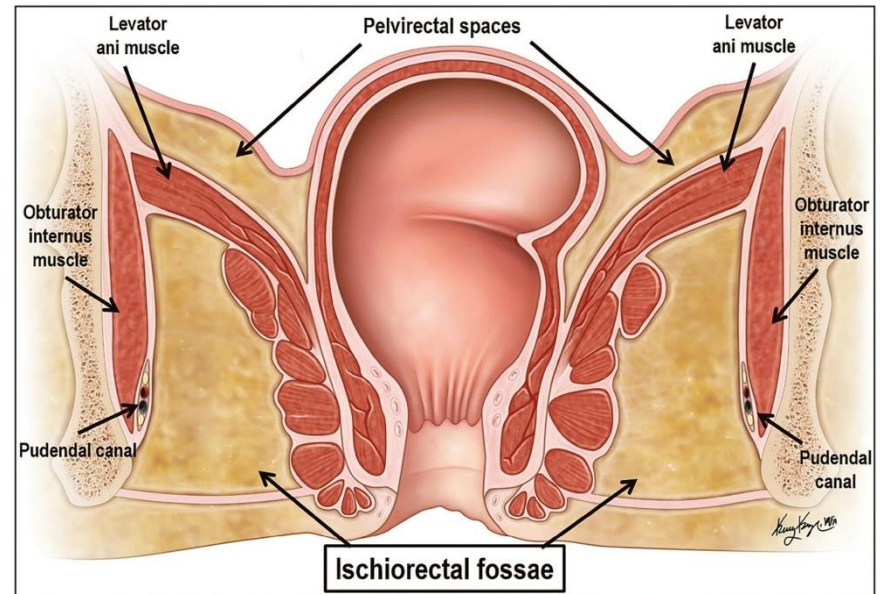
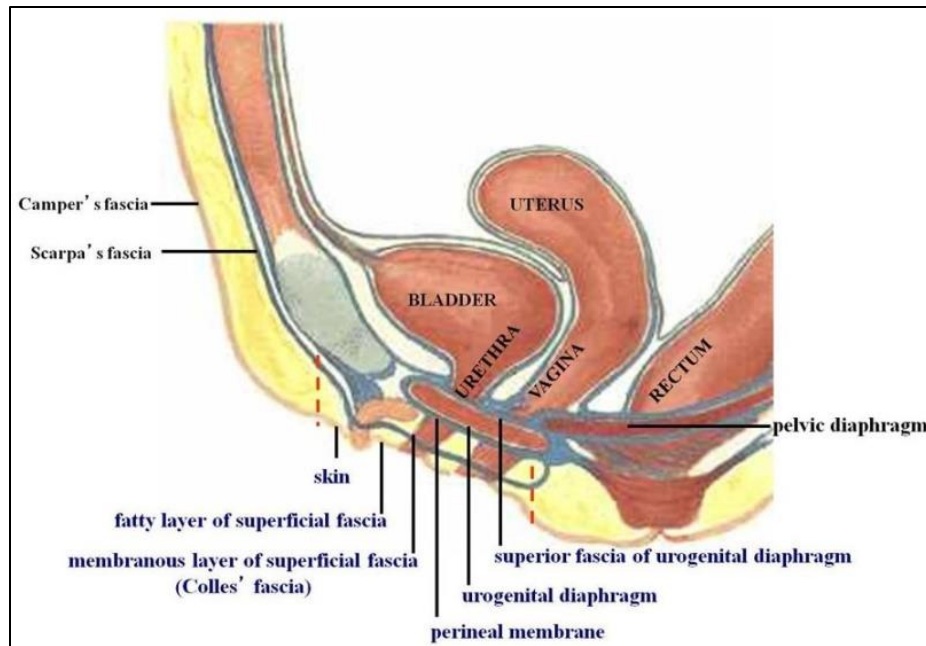


Introduction

It's a wedge-shaped fat-filled space situated below the pelvic diaphragm on each side of the anal canal.

Two fossa on each side communicate each other behind the anal canal.

It helps in dilatation of the anal canal during defecation.



Boundaries

Lateral: Fascia covering the Obturator internus muscles and ischial tuberosity

Medial: fascia covering the Levator ani muscle and external anal sphincter

Posterior: Sacrotuberous ligament, on which Gluteus maximus resides

Roof: Meeting point of fascia of lateral wall and inferior fascia of pelvic diaphragm

Floor: Perineal skin with perineal space

Anterior: Posterior border of Perineal membrane

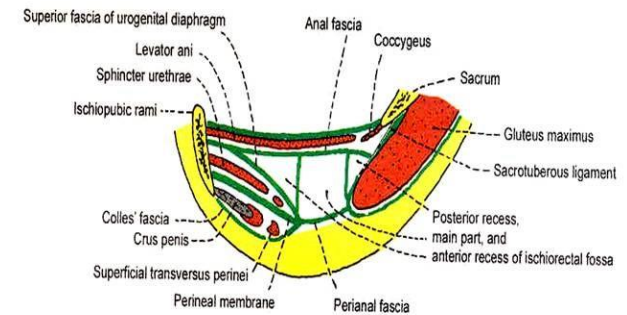
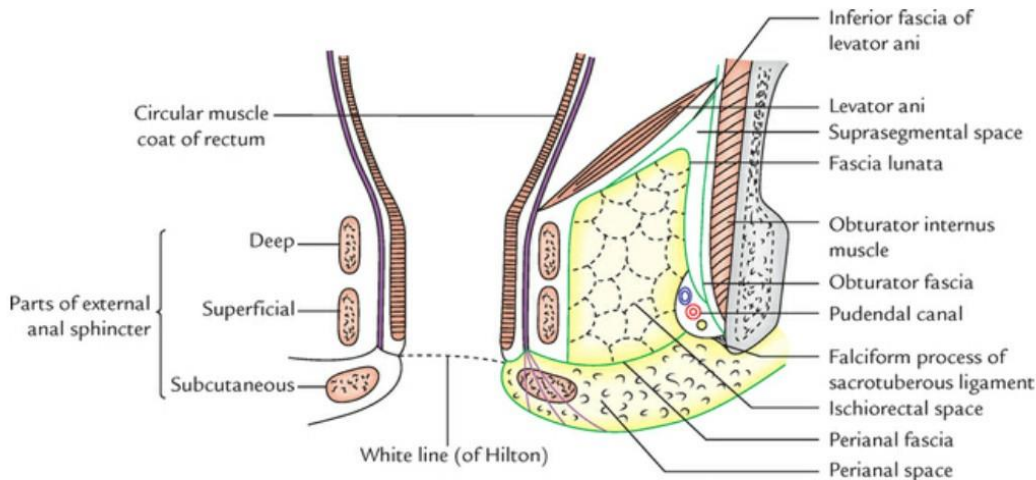
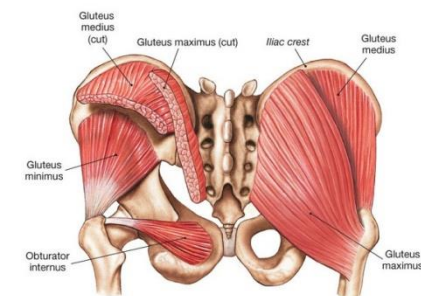
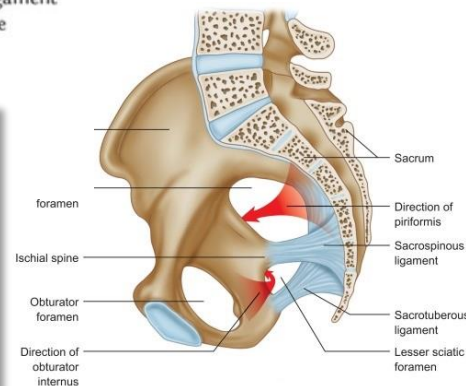
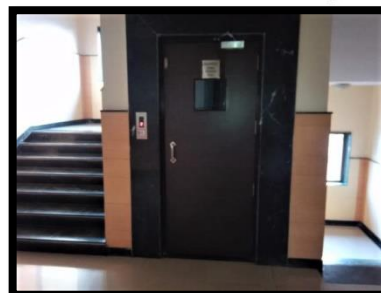
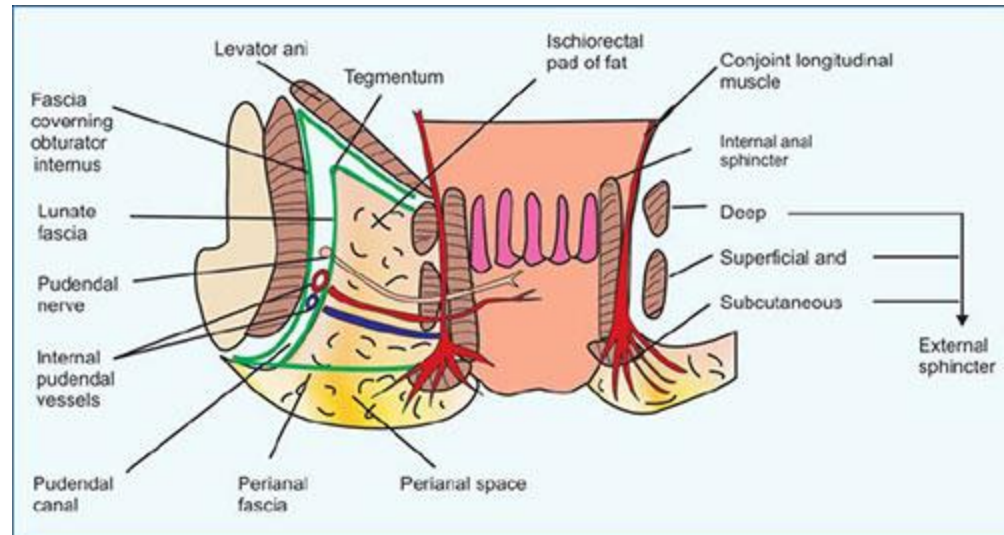
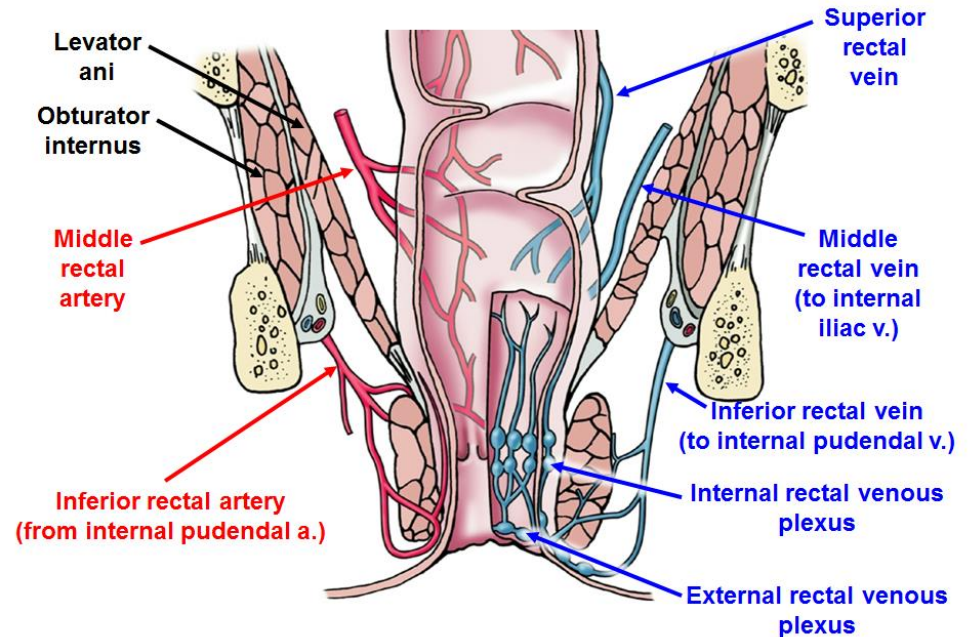


Fig. 28.8: Parasagittal section through the ischiorectal fossa, showing its recesses.



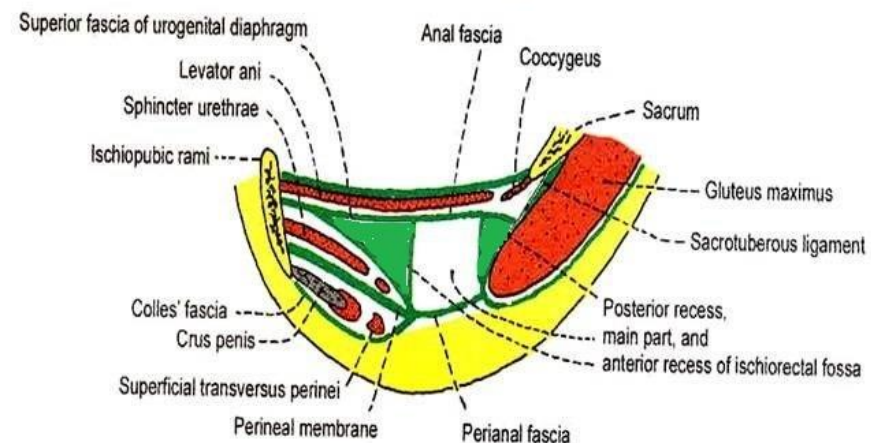
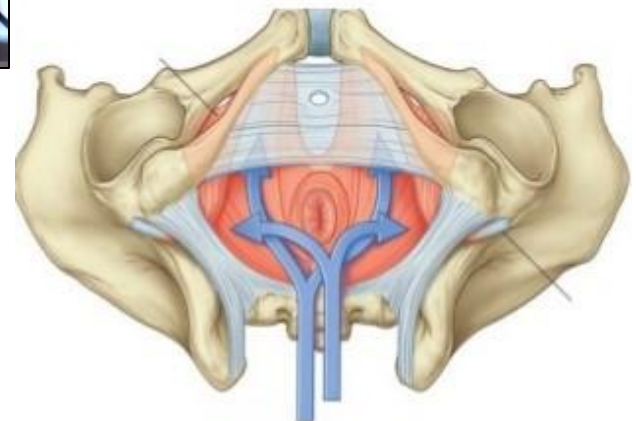
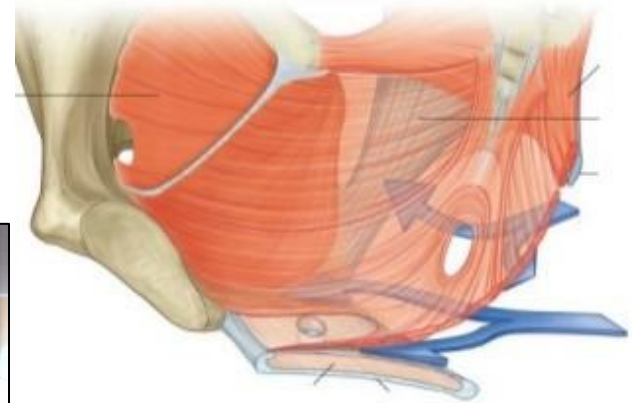
Content

- Ischiorectal pad of fat
- Inferior rectal nerves and vessels (running from lateral to medial side)
- Perineal branch of 4th sacral nerve (enters the posterior angle of the fossa running over Levator ani to reach the Sphincter ani externus which is innervates)
- Posterior scrotal (labial) nerves and vessels (cross the anterolateral part of the fossa to enter the urogenital triangle)



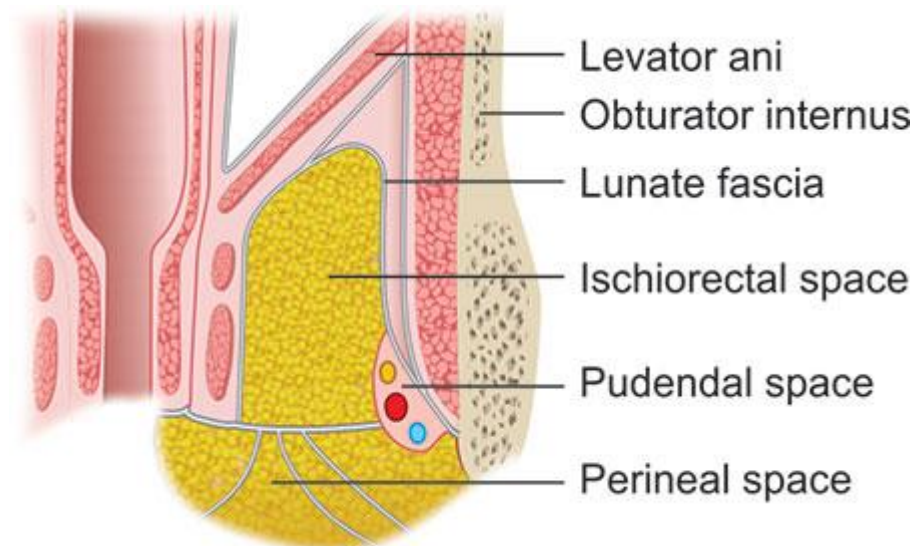
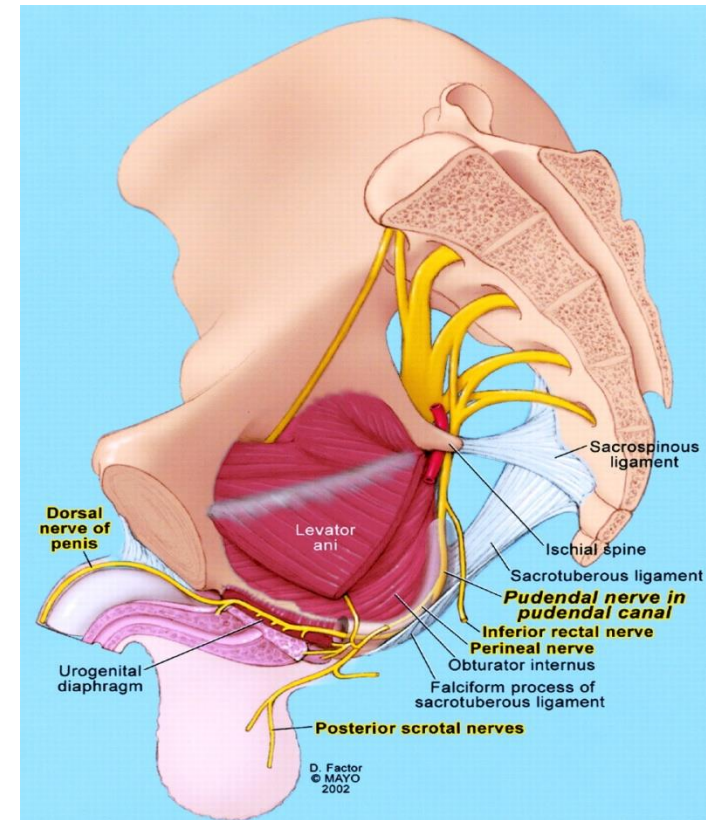
Recesses of Ischiorectal fossa

- Ischiorectal fossa extends anteriorly above the urogenital diaphragm forming the **anterior recess**.
- Ischiorectal fossa extends posteriorly deep to the Sacrotuberous ligaments and forms posterior recess. Behind the anal canal this is continuous with the opposite fossa and forms the **“horseshoe-shaped” posterior recess**.



Pudendal canal (Alcock's canal)

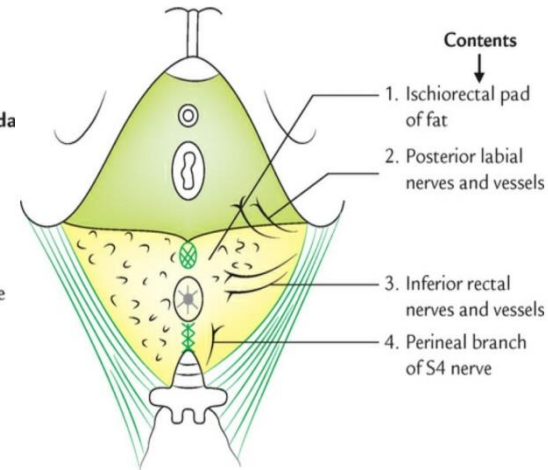
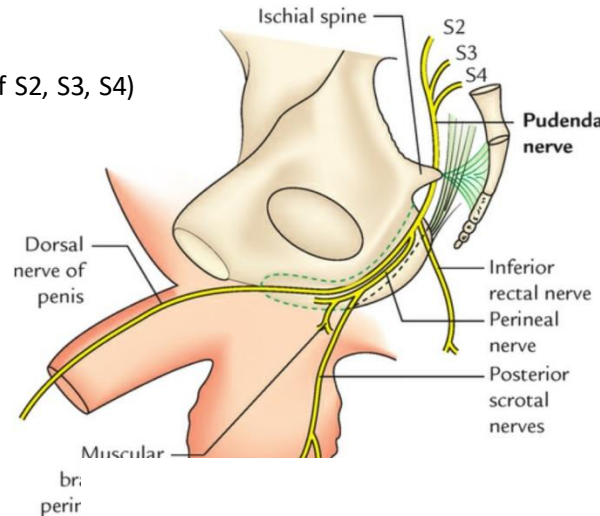
- It is a fascial canal present on the lateral wall of the Ischiorectal fossa.
- It extends from lesser sciatic foramen to the posterior limit of deep perineal pouch.
- Pudendal canal is formed by the splitting of Obturator fascia (or by separation between the fascia Lunata and Obturator fascia)
- Content: Pudendal nerve (Ventral rami of S2, S3, S4 and internal pudendal vessels)



Pudendal nerve & Internal pudendal vessels

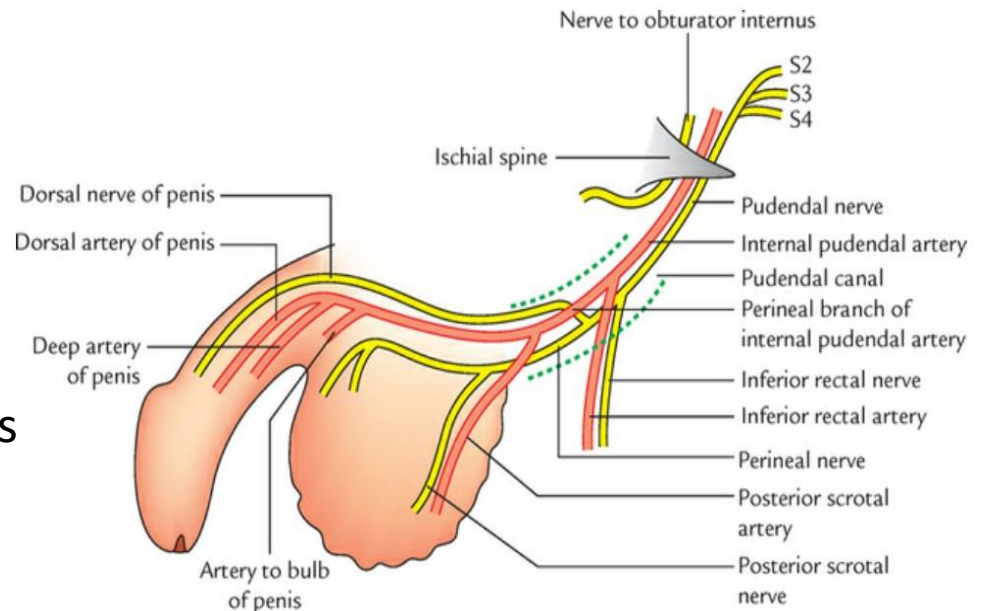
- **Pudendal nerve:** (Ventral Rami of S2, S3, S4)

- Inferior rectal nerve
- Perineal nerve
- Posterior scrotal nerve
- Dorsal nerve of penis (or clitoris)



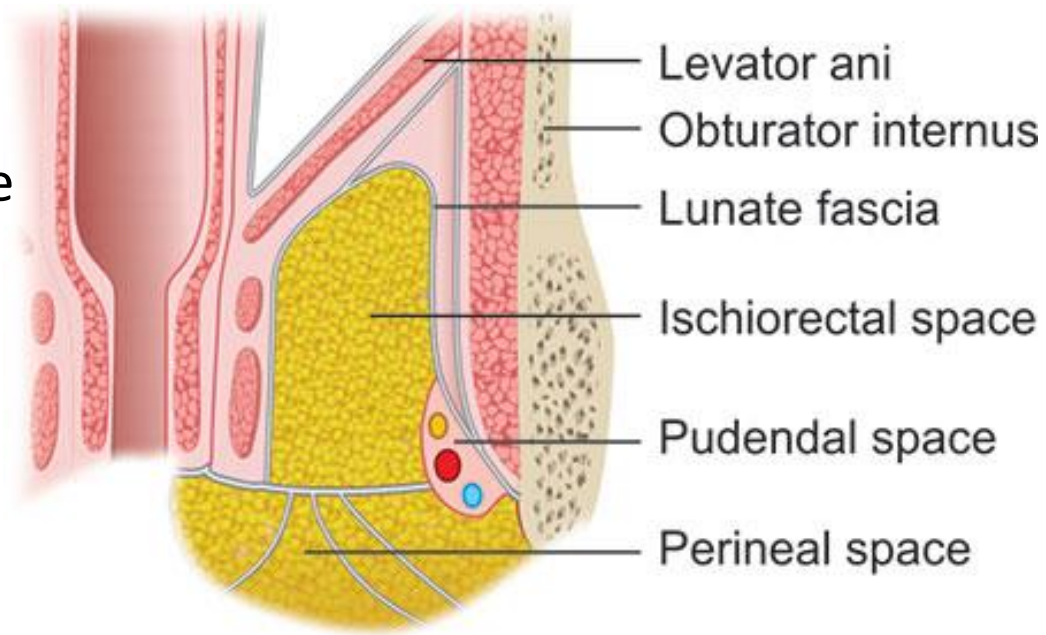
- **Internal pudendal artery:**

- Inferior rectal artery
- Perineal branches
- Artery to the bulb and urethra
- Deep artery of penis or clitoris
- Dorsal artery of penis or clitoris



Perianal space

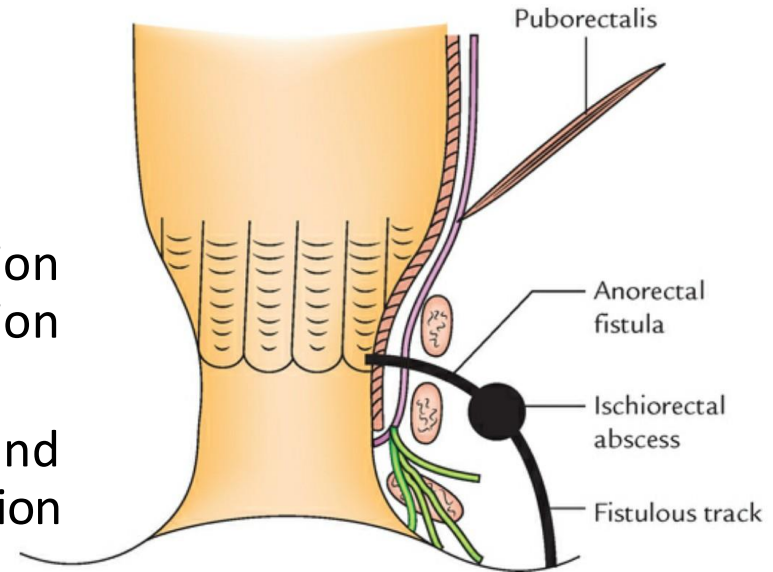
- It is a subcutaneous space on each side of the anal orifice.
- It's bounded above by the Perineal fascia (a fibrous septum extends from the white line of Hilton medially to Pudendal canal laterally) and below by perianal skin.
- Perianal space is subdivided into numerous compartments by fibroelastic septa.
- The fat in the perianal space is tightly arranged in small loculi.
- The infection in this space causing “perianal abscess”.



Applied anatomy

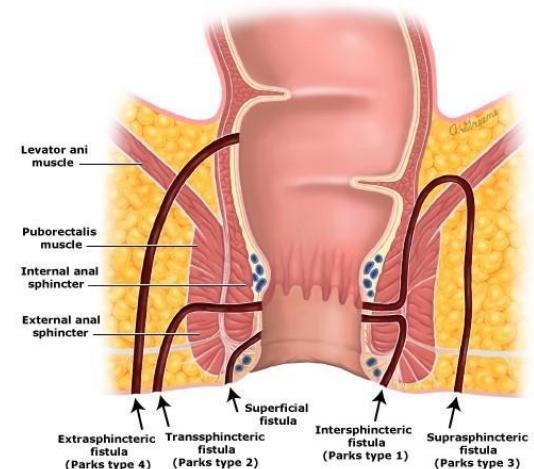
- **Ischiorectal abscess**

- Infection may occur from boils and abrasion of the perineal skin, pelvic infection or lesion in the anal canal.
- The fat in the fossa is loosely arranged and therefore swelling increases without tension with little pain
- Infection may pass to the other side and form horseshoe-shaped abscess.
- In neglected cases abscess may burst into anal canal or on the surface of the perineum to form anorectal fistula or fistula in ano.



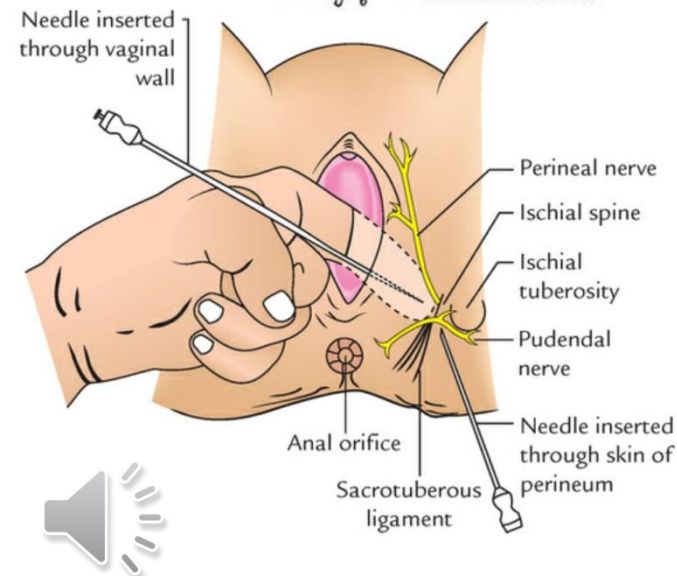
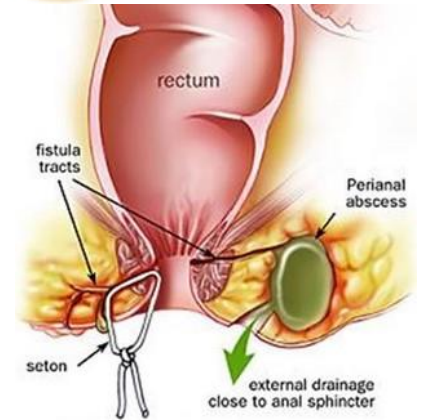
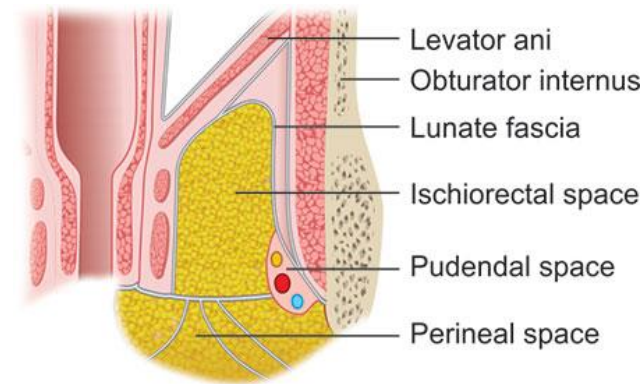
- **Rectal prolapse:**

- fat in Ischiorectal fossae provides cushion-like support to rectum and anal canal. The loss of fat in debilitating disease in children can cause rectal prolapse.



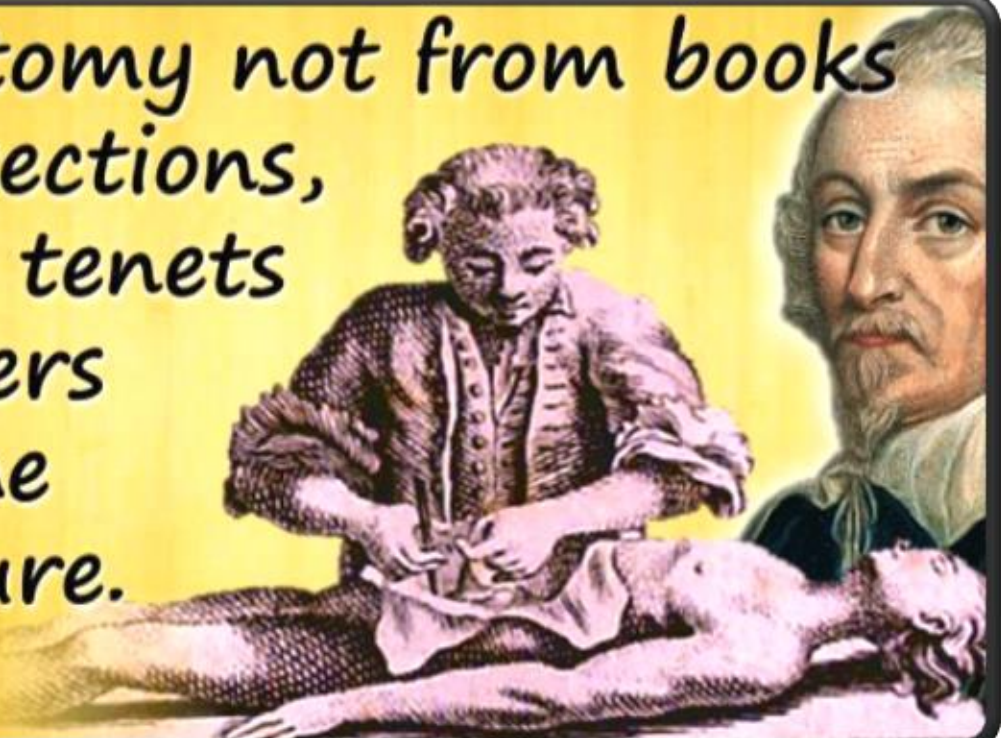
Applied anatomy

- Perianal abscess
 - The fat in perianal space is tightly arranged in small loculi. The infection or abscess don't get much space to increase and that's why perianal abscess is very painful.
- Pudendal nerve block
 - Pudendal nerve block is used for pain as well as burning sensation and hyperalgesia in the external genital and perineal region.
 - Local anesthesia is infiltrated where the nerve is crossed the ischial spine. Ischial spine is palpated through vaginal wall and needle is inserted under the guard of the finger to the ischial spine.
 - The needle can also be inserted through the perineal skin



I...learn...anatomy not from books
but from dissections,
not from the tenets
of Philosophers
but from the
fabric of nature.

—William Harvey



Thank you