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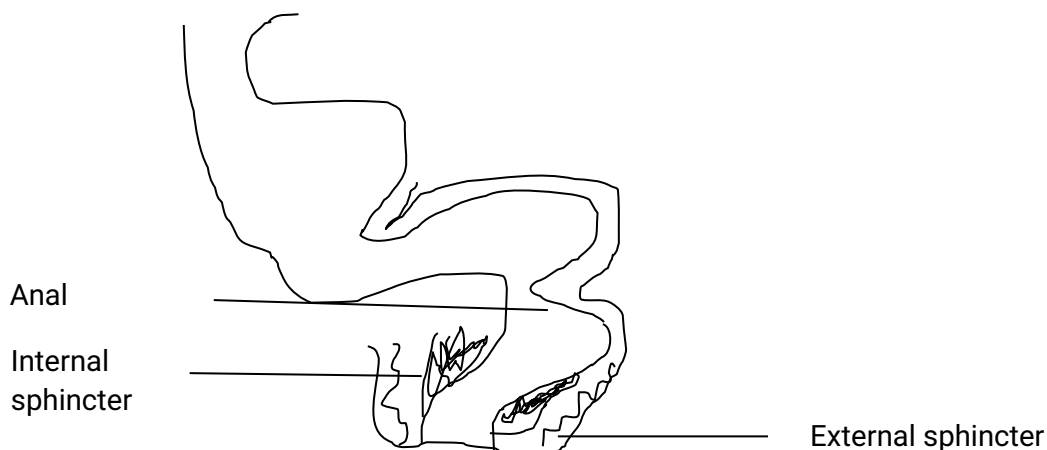
PHYSIOLOGY

GROSS ANATOMY OF PELVIS AND PERINEUM

ANA 212

THE ANAL CANAL

Anal canal, anal canal, is the terminal segment of the large intestine, the final segment of the gastrointestinal tract, between the rectum and anus, located below the level of the pelvic diaphragm. It is located within the anal triangle of the perineum, between the right and left ischioanal fossa. It has an important role in defecation and maintaining faecal continence. The canal is 4cm long. Except during defecation, the anal canal is collapsed by the internal and external anal sphincter to prevent the passage of faecal material.



INTERNAL SPHINCTER	EXTERNAL SPHINCTER
Surround the upper 2/3 of the anal canal	Surround the lower 2/3 of the anal canal
Formed by thickening of the involuntary circular smooth muscle in the bowel wall.	Voluntary muscle that overlaps with the internal sphincter, blending superiorly with the puborectalis muscle of the pelvic floor.

At the junction of the rectum and the anal canal, there is a muscular ring known as the anorectal ring. It is formed by the fusion of the internal anal sphincter, external anal sphincter and puborectalis muscle, and is palpable on digital rectal

examination.

Anatomical relations

Anteriorly		Posteriorly	laterally
male	female	Anococcygeal ligament	Ischioanal fossae
Perineal body	Perineal body	Coccyx	
Urogenital diaphragm	Urogenital diaphragm	sacrum	
Urethra, bulb of the penis	vagina		

Precursor –hindgut, proctodeum

Artery –superior rectal artery (above pectinate line) and inferior rectal artery (below line)

Vein –superior rectal vein (above pectinate line) and inferior rectal vein (below pectinate line)

Nerve –autonomic inferior hypogastric plexus (above pectinate line) and somatic inferior rectal nerves (below line)

Lymph –superficial inguinal lymph node (below pectinate line) and internal lymph node (above line)