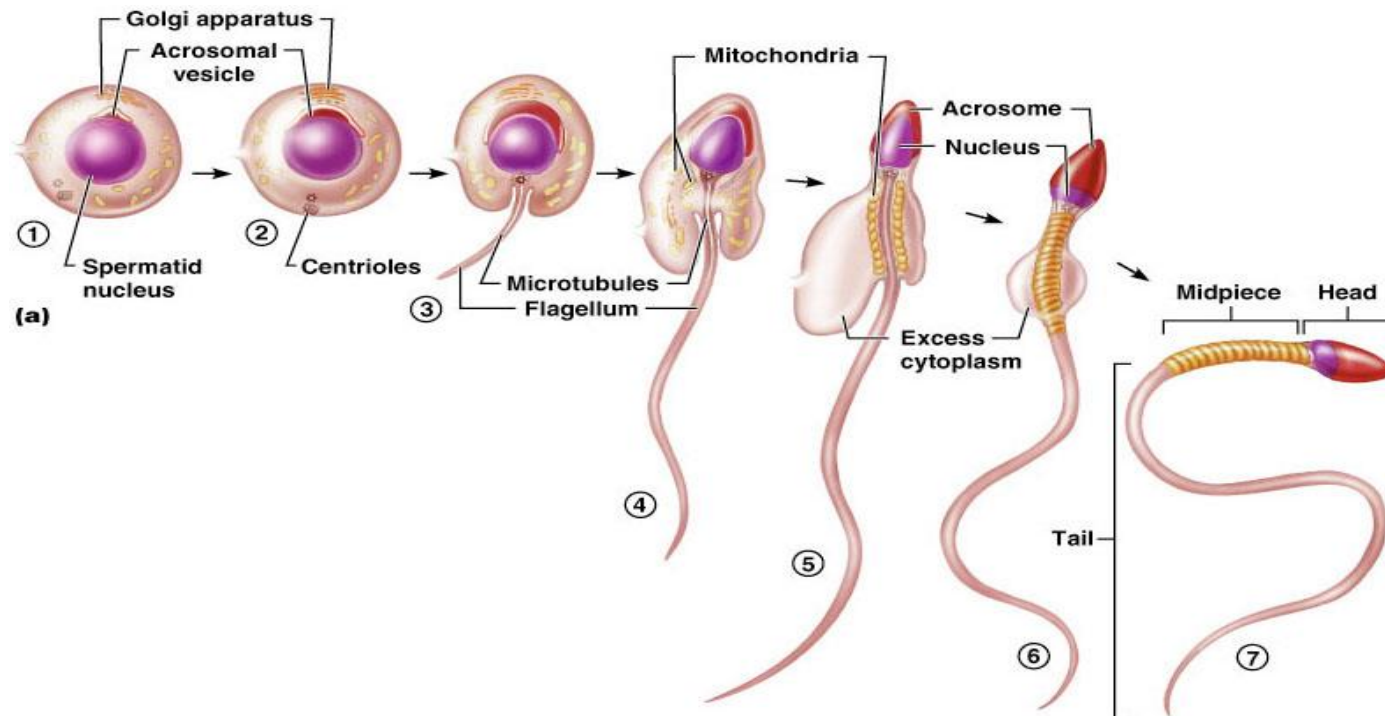


Spermatids to Sperm

- Sperm have three major regions
 - Head – contains DNA and has a helmet like acrosome containing hydrolytic enzymes that allow the sperm to penetrate and enter the egg
 - Midpiece – contains mitochondria spiraled around the tail filaments
 - Tail – a typical flagellum produced by a centriole

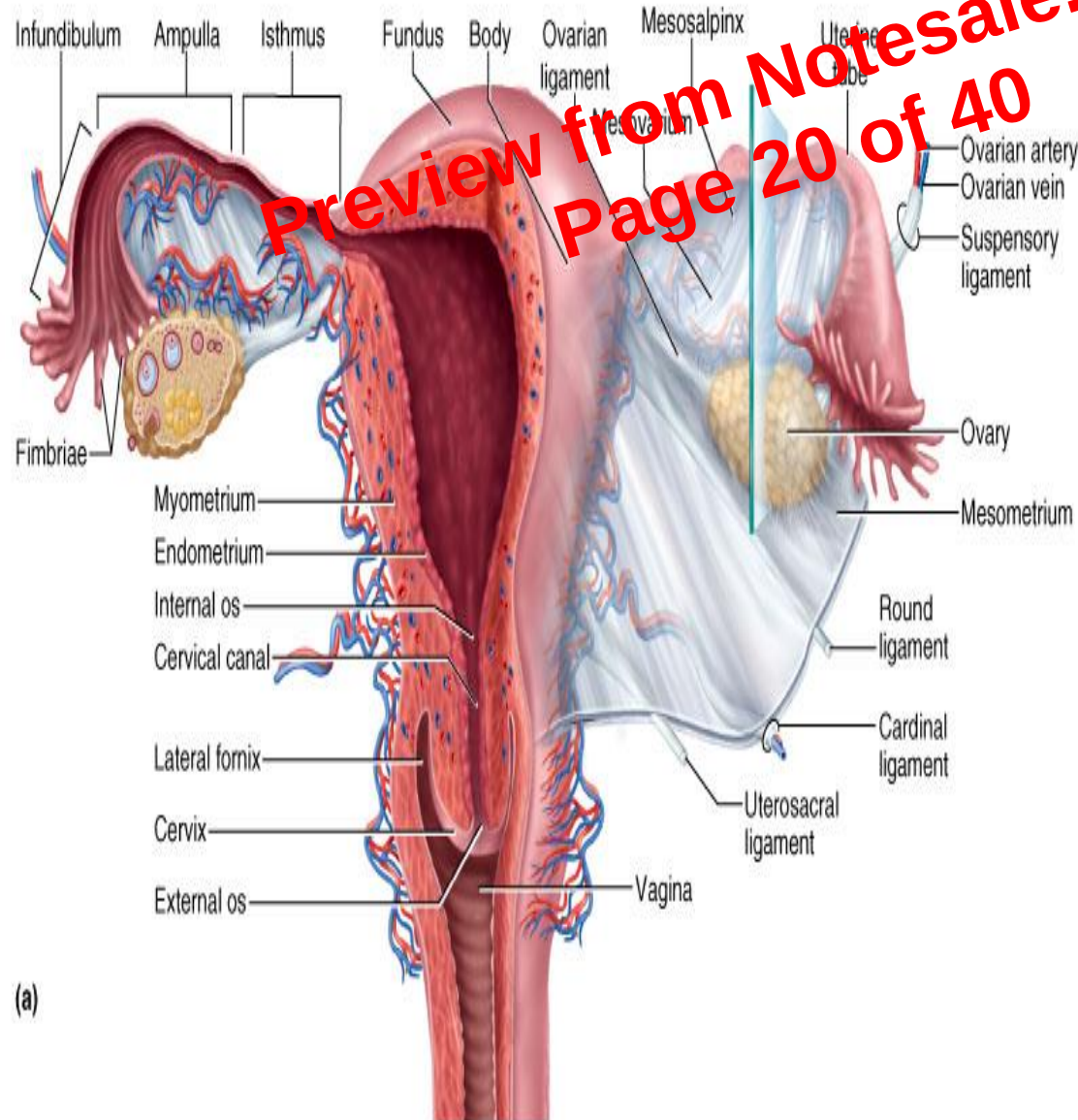


Ductus Deferens and Seminal Vesicles

- Ductus Deferens : runs from the epididymis to its an enlarged section (ampulla) where it merges with the seminal vesicle
- Sperm and seminal fluid mix in the ejaculatory duct and enter the prostatic urethra during ejaculation
- Vasectomy – cutting and ligating the ductus deferens, which is a nearly 100% effective form of birth control
- Seminal vesicle lies on the posterior wall of the bladder. They functions to:
 - and secrete 60% of the volume of semen
 - Semen – viscous alkaline fluid containing:
 - fructose: fuel for the road trip
 - prostaglandins which stimulate reverse peristalsis in the uterus
 - ascorbic acid

Vagina

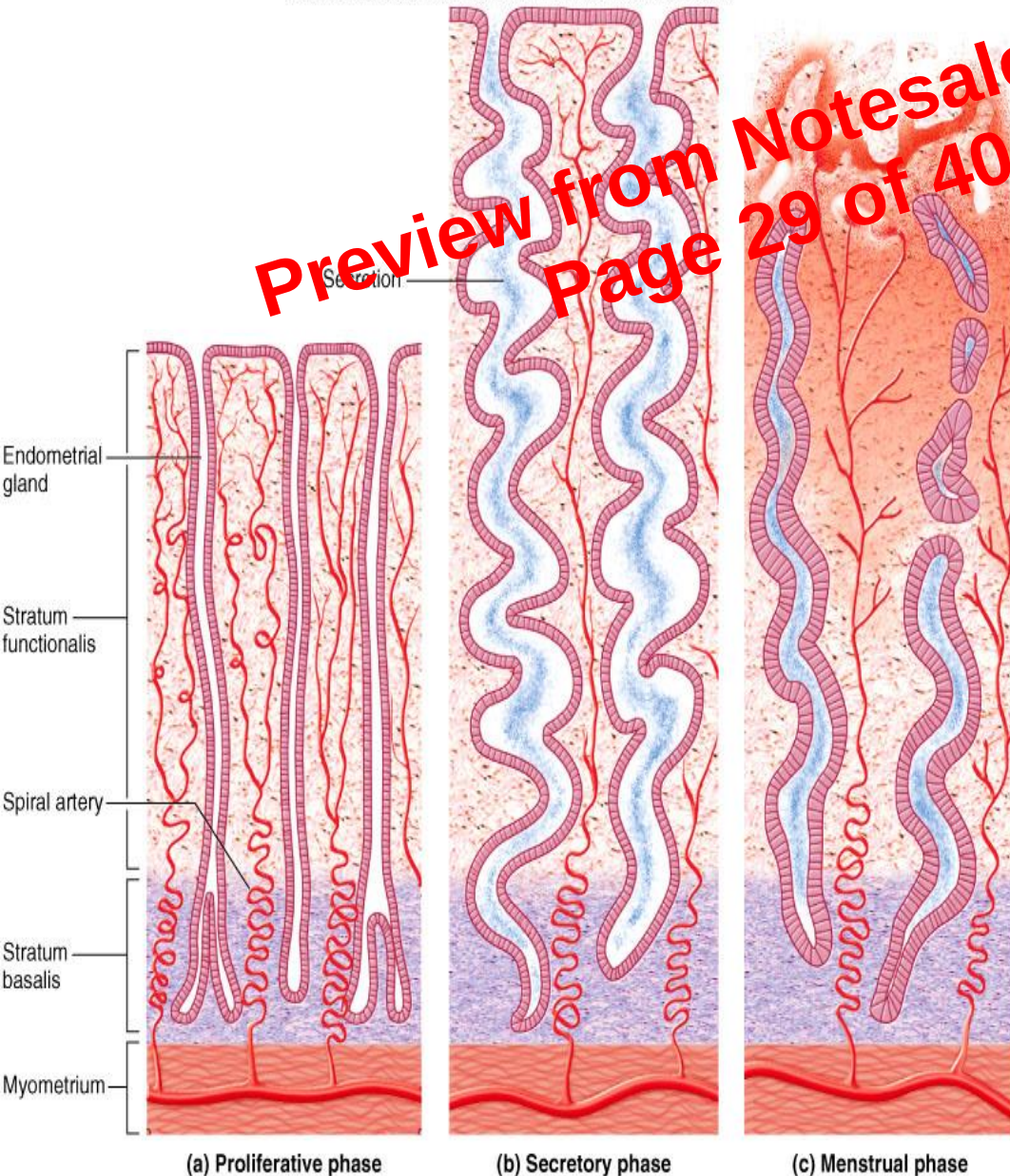
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- Thin-walled tube lying between the bladder and the rectum.
- Extending from the cervix to the exterior of the body.
- Provides a passageway for birth, menstrual flow, and is the organ for sexual intercourse.

Endometrium

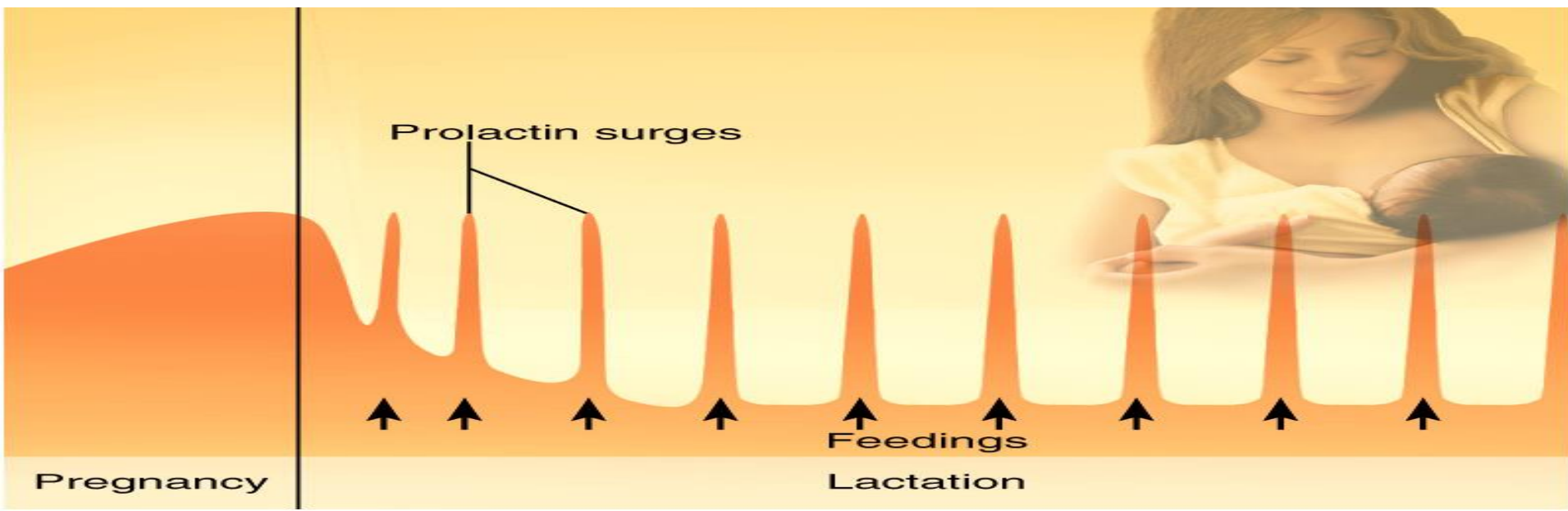
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- Has numerous uterine glands that change in length as the endometrial thickness changes
- Uterine glands supply fertilized egg with nourishment
 - glycogen-rich uterine fluid.
- Will increase in size during the first half of the menstrual cycle.
- Reduction in estrogen levels cause the endometrium to shed

Lactation

- During pregnancy estrogen and progesterone high levels stimulate the hypothalamus to secrete prolactin-releasing hormone (PRH) which targets the anterior pituitary. This results in the secretion of prolactin
 - Prolactin stimulates the production of milk in the breasts



Chromosomes and Heredity

- Heredity = transmission of genetic characteristics from parent to offspring
 - karyotype = chart of chromosomes at metaphase
- The body cells have 23 pairs homologous for a total of 46 chromosomes $2n$ (diploid number of chromosomes) 22 of the 23 pairs guide genetic expression of most other traits. (autosomes)
- Sex cells (gametes) from the ova and the sperm each has 1 chromosome that determine the sex
- Sperm and egg contain only 23 chromosomes n (haploid)
 - fertilized egg has diploid number of chromosomes