

PHS 212 ASSIGNMENT

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18/MTHSO/272

BIDMEDICAL ENGINEERING

Discuss the factors facilitating the movement of sperm in the female reproductive tract

The Cervix

Several important functions have been attributed to the cervix and these include

- i Providing a receptive environment for sperm entry near the time of ovulation.
- ii Preventing access of sperm, microorganisms, and particulate matter to the upper reproductive tract and thus, the Peritoneal cavity
- iii Filtering spermatozoa and removal of seminal plasma
- iv Preventing sperm phagocytosis by white blood cells within the female reproductive tract

Cervical Mucus

Cervical mucus is continuously secreted through exocytosis by the nonciliated epithelial cells that line the cervical canal. This biomaterial serves many important functions, including exclusion of seminal plasma, exclusion of morphologically abnormal sperm, and support of viable sperm for subsequent migration to the uterus and oviduct.

Sperm transport through the uterus

Little is known about sperm transport within the endometrial cavity. Sperm motility does not appear to be the only force ~~directing~~ directing the sperm toward the oviducts, because inert particles deposited within the uterus are transported to the fallopian tubes. Uterine muscular contractions likely play a role in this

Process.

Fallopian Tube

Sperm movement through the fallopian tube relies on a combination of forces: intrinsic sperm motility, tubular muscular contraction, and fluid flow. Tubal fluid production is maximal at the time of ovulation, and this fluid sustains the sperm before fertilization. Tubal fluid may also facilitate both sperm capacitation and acrosomal reaction.