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**FACTORS FACILITATING THE MOVEMENT OF SPERM IN THE FEMALE REPRODUCTIVE TRACT**

**Semen**

* Alkaline secretion from prostate gland into semen,on ejaculation the spermatozoa rapidly pass through the ductus deferens and become mixed with fluid secretion from the seminal vesicles and prostate gland. The 2-6ml of ejaculate typically consists of 40-50 million spermatozoa mixed with alkaline fluid from the seminal vesicles (60% of the total) and acid secretion (pH 6.5) from the prostate (30% of the total). The pH of normal semen ranges from 7. 2 to 7.8. The alkaline nature act as buffers.
* Prostaglandins cause myometrial contractions, the physiologic role of the prostaglandin in seminal fluid is to facilitate the migration of spermatozoa from the vagina into the uterine cavity.

**Female reproductive tract**

* Oestogen and oxytocin cause myotmetrial contractions, anteriorly directed myometrial contractions occ ur s near the time of ovulation, facilitates the transport of sperm through the female reproductive tract.
* Oestrogen facilitate the production of watery mucus in the cervix, at ovulation, estogens increase hydration of the mucus which results in watery secretion with low viscoelasticity allowing sperm cells to penetrate.

**Capacitation (priming) of sperm**

Sperm must undergo capacitation in the female reproductive tract prior to fertilizing the egg.

* Occurs after the sperm membrane becomes more fluid via the removal of cholesterol and the removal of proteins and carbohydrates from the membrane that may otherwise block sites that bind to zona pellucida.
* A change in membrane potential that permits Ca2+ to enter the sperm via voltage gated mechanism to facilitate vesicle release for the acrosome reaction
* Phosphorylation of numerous proteins needed in fertilization.

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