NAME: EBRIMSON GLORY CHINWENDU

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At coitus, human sperm are deposited into the vagina, where, to avoid vaginal acid and immune responses, they quickly contact cervical mucus and enter the cervix. Cervical mucus filters out sperm with poor morphology and motility and as such only a minority of ejaculated sperm actually enter the cervix. In the uterus, muscular contractions may enhance passage of sperm through the uterine cavity. A few thousands of sperm swim through the uterus junctions to reach the fallopian tube ( uterine tubes, oviducts) where sperm are stored in a reservoir or at least maintained in a fertile state, by interacting with the oviductal epithelium. As the time of ovulation approaches, sperm becomes capacitated and hyperactivated, which enables them to proceed towards the tubal ampulla. Sperm may be guided to the oocyte by a combination pf chemotaxis. Motility hyperactivation assists sperm in penetrating mucus in tubes and the zona pellucida of the oocyte, so that they may finally fuse with the oocyte plasma membrane. Passage of sperm through the female reproductive tract is regulated to maximize the chance of fertilization and ensure that sperm with normal morphology and vigorous motility will be the ones to succed. Oocytes are usually fertilized within hours of ovulation. On the other hand, sperm may be inseminated days or even months before the arrival of the oocyte. In humans, there is evidence that fertilization occurs when intercourse takes place up to five days before ovulation. Because sperm are terminally differentiated cells, deprived of an active transcription and translation apparatus, they must survive in the female without benefit of reparative mechanisms available to many other cells. Sperm are subjected to physical stresses during ejaculation and contractions of the female tract, and may sustain oxidative damage. Furthermore, because sperm are allogenic to the female, they may encounter the defences of the female immune system meant for infectious organisms. Thus, sperm must somehow use their limited resources to maintain their fertility in the face of the numerous impediments. AS it is, of the millions of sperm inseminated at coitus in humans, only a few thousand reach the fallopian tubes and ordinarily, only a single sperm fertilizes an oocyte.

Human semen coagulates, but it forms a loose gel rather than the compact fibrous plug. The coagulate forms within about a minute of coitus. The fate of spermatozoa that are ejaculated or inseminated into the vagina, but that do not enter the cervix. The vagina is open to the exterior and thus to infection, especially at the time of coitus, therefore, it is well equipped with antimicrobial defences. These defences include pH and immunological response and can damage sperm as well as infectious organisms. To enable fertilization to take place, both the female and the male have adopted mechanisms for protecting sperm. In humans, semen is deposited at the exterior of the cervix so that sperm can quickly move out of the vagina. However, human sperm must contend with the acidic pH of vaginal fluid. The vaginal pH of women is normally five or lower, which is microbial for many sexually transmitted disease pathogens. Evidence indicates that the acidity is maintained through lactic acid production that feed on glycogen present in shed vaginal epithelial cells. The pH of the seminal plasma ranges from 6.7 to 7.4 and has the potential to neutralize vaginal acid. The cervical canal widens under the influence of estrogen.