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PHS 212 - Physiology.

Write short notes on the following:

1. Spermatogenesis

Spermatogenesis is the process by which haploid spermatozoa develop from germ cells in the seminiferous tubules of the testis. The spermatids are transformed into spermatozoa (Sperm) by the process of Spermiogenesis. These develop into mature spermatozoa, also known as Sperm Cells. Spermatogenesis takes place within several structures of the male reproductive system. The initial stages occur within the testes and progress to the epididymis where the developing gametes mature and are stored till ejaculation.

## 2. Testosterone.

Testosterone is the primary male sex hormone and anabolic steroid. In male humans, testosterone plays a key role in the development of male reproductive tissues such as testes and prostate, as well as promoting secondary sexual characteristics such as increased muscle and bone mass, and the growth of body hair. Testosterone is produced by the gonads (by the Leydig cells in testes in men and by the ovaries in women) although small quantities are also produced by the adrenal glands in both sexes. It is an androgen, meaning that it stimulates the development of male characteristics.

Testosterone plays a role in certain behaviours, including aggression and dominance. It also helps to spark competitiveness and boost self-esteem.

### 3. Semen.

Semen is also called Seminal fluid, fluid that is emitted from the male reproductive tract and that contains sperm cells, which are capable of fertilizing the female eggs. Semen also contains other liquids, known as seminal plasma, which help to keep the sperm cells viable. Most of the fluids in semen is made up of secretions from male reproductive organs. Semen contains citric acid, free amino acids, fructose, enzymes, phosphorylcholine, prostaglandin, potassium and zinc.

#### 4. Male Orgasm.

This is a feeling of intense pleasure, relaxation and connection that is associated with sexual climax. In most men, orgasm and ejaculation happen simultaneously but they are in fact different physiological events that can occur independently of one another.

#### 5. Male Infertility.

This refers to a male's inability to cause pregnancy in a fertile female. In humans it accounts for 40-50% of infertility. It affects approximately 7% of all men. Male infertility is commonly due to deficiencies in the semen, and semen quality is used as a surrogate measure of male fecundity. Some causes of male infertility are abnormal sperm production due to, descended testicles, genetic defects, health problems such as Diabetes, Gonorrhoea, HIV etc.