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DEPARTMENT: NURSING SCIENCE

COURSE: PHYSIOLOGY

1. **TESTOSTERONE**:

Testosterone is the primary male sex hormone and anabolic steroid, mainly produced in men by the testicles but could also be produced in females. It is an androgen therefore, it plays a key role in the development of male reproductive tissues such as prostrate and testes as well as promotes secondary sexual characteristics such as increased muscle and bone mass and body hair growth. Testosterone is also involved in an individual’s health and wellbeing. it prevents osteoporosis. In men, when testosterone levels are insufficient, it may lead to abnormalities such as frailty and bone loss, erectile dysfunction. It also stimulates the production of luteinizing hormone in females.

1. **SEMEN:**

Semen, also known as seminal fluid, is an organic fluid that contains spermatozoa. It is secreted by the gonad and other sexual organs of male or hermaphroditic animals and can fertilize the female ovum. Sperm cells constitute only about 2-5% of total semen volume. As sperm cells travel through the respiratory tract, they’re bathed in fluids produced and secreted by various tubules and glands of the reproductive system. From the testes, sperm are stored in the epididymis where potassium, sodium and glycerylphosphorylcholine are contributed to sperm cells. After sperm mature in the epididymis, it passes through a duct called the vas deferens to the ampulla which secretes ergothioneine, a substance that removes oxygen from chemical compounds as well as fructose which nourishes the sperm. During ejaculation, fluids are released from the prostate gland and seminal vesicles are added into the sperm to dilute the concentration of sperm and provide a suitable environment for the sperm. These fluids constitute 60% of the semen volume. They contain fructose, citric acid, acid phosphate, potassium, phosphorus and prostaglandins. A small amount of fluids constituted by the bulbourethral and urethral glands, a thick clear fluid known as mucous. The total volume of semen for each ejaculation of a human male averages between 2 and 5ml each. Each ejaculation contains about 200-300 million sperms. Semen frequently contains degenerated cells clogged off from the network of tubules and ducts through which the tubules have passed.