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Gr-A – Lecture No - 28

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Biochemistry of Semen

Introduction :-

Semen also known as seminal fluid is an organic fluid that contains spermatozoa. It is secreted by gonads (sexual glands) and other sexual organs of male or hermaphroditic animals and can fertilize the female ovum. The seminal plasma alongwith the sperm constitute semen.

Biochemistry :- In humans, seminal fluid contains several components besides spermatozoa. There are proteolytic and other enzymes as well as fructose elements of seminal fluid which promote the survival of spermatozoa, and provide a medium through which they can move or swim. Semen is produced and originates from seminal vesicle which is located in the Pelvis. The process that results in the discharge of semen is called ejaculation Semen is also a form of genetic material.

Semen contains citric acid, free amino acids, fructose, enzyme, Phosphorylcholine, Prostaglandin, Potassium and zinc.

Semen is a mixture of fluids that contain Sperms but the majority of semen is composed of over 200 Seperate proteins as well as vitamines and minerals including vitamin C, Calcium, chlorine, citric acid, fructose, lactic acid, magnesium, nitrogen, phosphorus, Potassium, Sodium, vitamin B12 and zinc.

Semen contains so many chemical compounds is mainly to assist the sperm. The proteins, minerals, fatty acids and other compounds in the semen primarily help the sperm to provide energy which is needed to move & enter an egg.

Another element of semen liked called Prostaglandins, help the sperm evade detection by the other body.

Ascorbic acid (vit. C), amino acids, Phosphorus, Potassium help to keep the sperm healthy.

Most of the seminal fluid (Semen) is made up of fructose a form of sugar and its purpose in semen is to provide sperm with the fuel they need to travel through the body.

Zinc is the most abundant mineral in semen and it is responsible for stabilizing the sperm's DNA. Zinc is also responsible for semen colour and taste.

The Prostrate gland also contribute a protein in semen known as PSA. This protein is responsible for breaking semen down into a thinner liquid after ejaculation.

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