Vidya Bhawan Balika Vidyapeeth Lakhisarai

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1. **Spermatogonia** are the immature male germ cells that undergo meiotic divisions to form sperms. Each spermatogonium is diploid and contains 46 chromosomes .
2.
3. **Primary spermatocytes** are spermatogonia that undergo periodic meiosis to form two equal haploid cells called as the secondary spermatocytes.

4. The primary spermatocytes contain 46 chromosomes .

5. **Secondary spermatocytes** are haploid cells arising from the primary spermatocytes as a result of meiosis I. They contain 23 chromosomes.
6.
7. **Spermatids** are the haploid cells that arise from the secondary spermatocytes as a result of meiosis II. They contain 23 chromosomes .
8.
9. **Spermiogenesis** is the process by which spermatids mature to form spermatozoa.
10.
11. **Spermiation** is the process by which mature spermatozoa are released from the seminiferous tubules.

<u>Hormones affecting spermatogenesis</u>:

Gonadotropin releasing hormone (GnRH): It is a hormone secreted by the hypothalamus.

Its levels increase significantly at puberty.

The increased levels of GnRH stimulates the release of two gonadotropins – Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH), from the anterior pituitary.

Follicle Stimulating Hormone (FSH): FSH acts on the Sertoli cells and stimulates the release of some factors that help in the process of spermatogenesis.

Luteinizing Hormone (LH): LH acts on the Leydig cells and stimulates the synthesis and secretion of androgens which in turn stimulate the process of spermatogenesis.