# The Reproductive System
## Fill-In Notes

**Purpose of life:**

- _____
- _____ to ensure the _____ _____.

**Stages of Human Development**

- Sexual reproduction requires the _____ _____ (from the mother) by a _____ (from the father).
- Fertilization is the fusion of _____ _____.
- Genetic material becomes _____ and produces a cell made of _____ of chromosomes for a total of 46 (half from mom and half from dad).
- This cell is called a _____

**Life Stages:**

| | Stage | Approximate Age |
|---|---|---|
| Stages during Pregnancy | ■ Zygote | ■ |
| | ■ | ■ 2 to 9 weeks |
| | ■ Fetus | ■ |
| Stages after birth | ■ | ■ Birth to 2 years |
| | ■ Early Childhood | ■ |
| | ■ | ■ 6 to 10 years |
| | ■ Adolescence | ■ |
| | ■ | ■ 18-70 years |
| | ■ Old Age | ■ |

**Puberty**

- The _____ system becomes functional during adolescence.
- Puberty is when the body undergoes _____ _____ changes to prepare for the ability to _____,
- Generally between the ages of _____ years old
- The beginning of puberty is marked by an _____ _____.
- _____ production begins at the onset of puberty.
- Hormones are _____, transported by the _____ and control the activity of _____ _____.
- They are _____ (made) by _____, released into the bloodstream and stimulate activity in an organ or tissue _____
- Hormones and the glands that make them are part of the _____
- The endocrine system regulates the _____ growth, _____, reproduction and regulation of _____.
- Puberty is triggered by two hormones secreted by the _____
- The pituitary gland is the size of a grape and found at _____
- The two hormones produced are: _____ and _____

- These stimulate the maturation of the _____ or the production of _____

- In women: FSH and LH also stimulate the _____ to produce the female sex hormones: _____ and _____.

- In men: FSH and LH stimulate the _____ to produce the male sex hormone, _____.

- This causes several physical and psychological changes: the _____ and _____ sexual characteristics

**Sexual Characteristics: (txbk p. 142, fig. 5.22)**

**Female (txbk p. 142, fig. 5.23)**

- Physiological (Primary)
  - _____
  - Genital organs mature
- Anatomical (Secondary)
  - Silhouette changes (fatty tissue accumulates on breasts and hips)
  - _____
  - Underarm and pubic and Pubic Hair appears
- Psychological (Secondary)
  - _____
  - Libido
  - _____
  - Sense of responsibility to reproduce

**Male (txbk p. 143, fig. 5.24)**

- Physiological (Primary)
  - _____
- Anatomical (Secondary)
  - Skeletal and Muscle growth
  - _____
  - _____
  - Facial, Underarm and Pubic hair appears. General hairiness increases

- Psychological (Secondary)
  - _____
  - _____
  - Need for autonomy

**Male Hormones**

- In puberty, the release of FSH stimulates _____ (the production of sperm).

- The cells that line the _____ undergo meiosis to produce spermatozoa (_____)

- Since these cells are under constant renewal, the testicles can produce roughly _____ sperm per_____

**The travel of Sperm:**

Seminiferous Tubules–Epididymis -Vas deferens- Ejaculatory duct -Urethra

**Erection and Ejaculation**

- Once formed the sperm enter the _____ for collection until they are expelled through the _____

- The penis contains _____ that fills with blood during _____. This causes _____ and causes and erection.

- With stimulation the sperm is pushed down towards the urethra, mixes with the _____ to create _____ until the resulting pressure causes _____ (the expulsion of semen by the penis)

- The acid in urine _____, so it is important that the two do not mix

- During an erection two _____ contract, making it impossible to _____

**Hormones and the Female Body**

- Estrogen
  - Involved in the _____ (the changing of the endometrium)
  - Affects body shape and growth
    - _____
- Progesterone
  - Prepares the uterus for _____
  - Causes the _____ (produce milk) to develop in pregnant women

**Oogenesis: p.144**

- Between _____ months of fetal life, cells near surface of _____ undergo _____
- They enter _____, but stop halfway through (meiosis I)
- They are called _____ and are enveloped in _____ called _____.
- Starting at puberty, one_____ per menstrual cycle can reach _____ and develop into an _____.

- This process is called _____ (the production of ovum through meiosis)

- At puberty: _____ capable of becoming ova called <u>oocytes</u>

- About _____ of these oocytes will become ova throughout a female's lifetime

- To be considered fertile, a woman must be able to _____ _____

**Ovarian Cycle: p. 145**

- Series of _____ that ovarian follicles undergo every_____.
- _____ by which a single _____ in order to release an _____ and changes into a _____ to encourage the implantation of the ovum in the _____.

**Ovarian Folicle (Days 1-13)**

- _____ stimulates maturation of ovarian follicle containing _____.
- Follicle _____ more _____, which stimulates release of more _____
- Estrogen thickens the _____

**Ovulation (14th day)**

- Increase in _____ causes the ovarian follicle to _____ and _____ the oocyte into _____.

**Corpus Luteum (days 15-28)**

- LH promotes the _____ of the ovarian follicle and _____ the follicle into the _____.
- The _____ produces _____ to prepare the body to receive a fertilized ovum and _____
- _____ of FSH and LH so more ova won't mature and be released.
- _____ the _____ (endometrium).

- **If ovum is _____**, it will then _____ in the uterus (The woman becomes pregnant).
- **If ovum is _____, _____** starts. _____ and _____ ovum are expelled, and _____ disintegrates, causing progesterone production to decrease. (day 1-5 of menstrual cycle)

**The Menstrual Cycle (p.147)**

- represents all the periodic changes that take place in the _____.

_____ Phase: (days 1-5) _____ occurs, expulsion of uterine lining and ovum. Progesterone decreases.
_____ Phase: (days 6-14) Lining of uterus starts to thicken. _____ increases.
_____ Phase: (days 15 to 28) Lining of uterus continues to thicken. _____increases.