The Female Reproductive System Glossary of Terms

The female reproductive system is designed to carry out several functions. It produces the ova (female egg cells) necessary for reproduction. The system is designed to transport the ova to the site of fertilization. Conception, the fertilization of an egg by a sperm, normally occurs in the fallopian tubes. The next step for the fertilized egg is to implant into the walls of the uterus, beginning the initial stages of pregnancy. If fertilization and/or implantation does not take place, the system is designed to menstruate (the monthly shedding of the uterine lining). In addition, the female reproductive system produces female sex hormones that maintain the reproductive cycle.

Female Anatomy
The female reproductive anatomy includes internal and external structures. The function of the external female reproductive structures (the genital) is to enable sperm to enter the body and to protect the internal genital organs from infectious organisms.

The main external structures of the female reproductive system include:
- **Labia majora**: The labia majora enclose and protect the other external reproductive organs. The labia majora contain sweat and oil-secreting glands. After puberty, the labia majora are covered with hair.
- **Labia minora**: They lie just inside the labia majora, and surround the openings to the vagina and urethra.
- **Bartholin's glands**: These glands are located next to the vaginal opening and produce a fluid (mucus) secretion.
- **Clitoris**: The two labia minora meet at the clitoris, a small, sensitive protrusion that is comparable to the penis in males. The clitoris is covered by a fold of skin, called the prepuce, which is similar to the foreskin at the end of the penis. Like the penis, the clitoris is very sensitive to stimulation and can become erect.

The internal reproductive organs include:
- **Vagina**: The vagina is a canal that joins the cervix (the lower part of uterus) to the outside of the body. It also is known as the birth canal.
- **Uterus (womb)**: The uterus is a hollow, pear-shaped organ that is the home to a developing fetus. The uterus is divided into two parts: the cervix, which is the lower part that opens into the vagina, and the main body of the uterus, called the corpus. The corpus can easily expand to hold a developing baby. A channel through the cervix allows sperm to enter and menstrual blood to exit.
- **Ovaries**: The ovaries are small, oval-shaped glands that are located on either side of the uterus. The ovaries produce ova and hormones.
- **Fallopian tubes**: These are narrow tubes that are attached to the upper part of the uterus and serve as tunnels for the ova (egg cells) to travel from the ovaries to the uterus.
- **Cervix**: The cervix is the lower end of the uterus. It is located at the top of the vagina and is about one inch long. The cervical canal passes through the cervix, allowing blood from a menstrual period and a baby (fetus) to pass from the womb (uterus) into the vagina. The cervical canal also allows sperm to pass from the vagina into the uterus.

Menstrual Cycle
Females of reproductive age experience cycles of hormonal activity that repeat at about one-month intervals. With every cycle, a woman's body prepares for a potential pregnancy, whether or not that is the woman's intention. The term menstruation refers to the periodic shedding of the uterine lining.

The average menstrual cycle takes about 28 days and occurs in phases: the follicular phase, the ovulatory phase (ovulation), and the luteal phase.

There are four major hormones involved in the menstrual cycle: follicle-stimulating hormone, luteinizing hormone, estrogen, and progesterone.

Follicular Phase
This phase starts on the first day of your period. During the follicular phase of the menstrual cycle, the following events occur:
Two hormones, follicle stimulating hormone (FSH) and luteinizing hormone (LH) are released from the brain and travel in the blood to the ovaries.

The hormones stimulate the growth of about 15-20 eggs in the ovaries each in its own "shell," called a follicle.

These hormones (FSH and LH) also trigger an increase in the production of the female hormone estrogen. As estrogen levels rise, like a switch, it turns off the production of follicle-stimulating hormone. This careful balance of hormones allows the body to limit the number of follicles that complete maturation, or growth. As the follicular phase progresses, one follicle in one ovary becomes dominant and continues to mature. This dominant follicle suppresses all of the other follicles in the group. As a result, they stop growing and die. The dominant follicle continues to produce estrogen.

**Ovulatory Phase**
The ovulatory phase, or ovulation, starts about 14 days after the follicular phase started. The ovulatory phase is the midpoint of the menstrual cycle, with the next menstrual period starting about 2 weeks later. During this phase, the following events occur:

- The rise in estrogen from the dominant follicle triggers a surge in the amount of luteinizing hormone that is produced by the brain.
- This causes the dominant follicle to release its egg from the ovary.
- As the egg is released (a process called ovulation) it is captured by finger-like projections on the end of the fallopian tubes (fimbriae). The fimbriae sweep the egg into the tube.
- Also during this phase, there is an increase in the amount and a change in the consistency of mucus produced by the cervix (lower part of the uterus.) If a woman were to have intercourse during this time, this receptive mucus captures the man's sperm, nourishes it, and helps it to move towards the egg for fertilization.

**Luteal Phase**
The luteal phase begins right after ovulation and involves the following processes:

- Once it releases its egg, the empty follicle develops into a new structure called the corpus luteum.
- The corpus luteum secretes the hormone progesterone. Progesterone prepares the uterus for a fertilized egg to implant.
- If intercourse has taken place and a man's sperm has fertilized the egg (a process called conception), the fertilized egg (embryo) will travel through the fallopian tube to implant in the uterus. The woman is now considered pregnant.
- If the egg is not fertilized, it passes through the uterus. Not needed to support a pregnancy, the lining of the uterus breaks down and sheds, and the next menstrual period begins.

**How many ova (eggs) does a woman have?**
The vast majority of the eggs within the ovaries steadily die, until they are depleted at menopause. At birth, there are approximately 1 million eggs; and by the time of puberty, only about 300,000 remain. Of these, 300 to 400 will be ovulated during a woman's reproductive lifetime. The eggs continue to degenerate during pregnancy, with the use of birth control pills, and in the presence or absence of regular menstrual cycles.