Definition: **Reproductive System** from *Black's Medical Dictionary, 43rd Edition*

A collective term for all the organs involved in sexual reproduction. In the female these are the **OVARIES**, **FALLOPIAN TUBES**, **UTERUS**, **VAGINA** and **VULVA**. In the male these are the testes (see **TESTICLE**), **VAS DEFERENS**, **SEMINAL VESICLES**, **URETHRA** and **PENIS**.

Summary Article: **reproductive system**

From *The Columbia Encyclopedia*

in animals, the anatomical organs concerned with production of offspring. In humans and other mammals the female reproductive system produces the female reproductive cells (the eggs, or ova) and contains an organ in which development of the fetus takes place; the male reproductive system produces the male reproductive cells, the sperm, and contains an organ that deposits the sperm within the female.

**In the Human Female**

In the human female reproductive system, ova are produced in the ovaries, two small organs set in the pelvic cavity below and to either side of the navel. The ovaries also secrete, in cyclic fashion, the hormones estrogen and progesterone (see menstruation). After an ovum matures, it passes into the uterine tube, or fallopian tube. If sperm are present as a result of sexual intercourse or artificial insemination, fertilization occurs within the tube. The ovum, either fertilized or unfertilized, then passes down the fallopian tube, aided by cilia in the tube, and into the womb, or uterus, a pear-shaped organ specialized for development of a fertilized egg.

An inner uterine layer of tissue, the endometrium, undergoes cyclic changes as a result of the changing levels of the hormones secreted by the ovaries. The endometrium is thickest during the part of the menstrual cycle in which a fertilized ovum would be expected to enter the uterus and is thinnest just after menstruation. If no fertilized egg is present toward the end of the cycle, the thickened endometrium degenerates and sloughs off and menstruation occurs; if a fertilized egg is present it becomes embedded in the endometrium about a week after fertilization. The developing embryo produces trophoblastic cells and these, along with cells from the endometrium, form the placenta, the organ in which gas, food, and waste exchange between mother and embryo takes place. The embryo also forms the amniotic sac within which it develops.

The lower end of the uterus is called the cervix. The vagina, a passage connecting the uterus with the external genitals, receives the penis and the sperm ejaculated from it during sexual intercourse. It also serves as an exit passageway for menstrual blood and for the baby during birth. The external genitals, or vulva, include the clitoris, erectile tissue that responds to sexual stimulation, and the labia, which are composed of elongated folds of skin. After birth the infant is fed with milk from the breasts, or mammary glands, which are also sometimes considered part of the reproductive system.

**In the Human Male**

In the male reproductive system sperm are produced in the seminiferous tubules of the testes, two organs contained in the scrotum, an external sac in the groin. The testes also produce the male
hormone testosterone and a portion of the seminal fluid, the liquid in which sperm are carried. The external location of the scrotum ensures the relatively low temperature that is necessary for the normal development of sperm. After formation, the sperm pass from the testes into the tubular epididymis, and from there into another passage, the vas deferens. The seminal vesicle, which produces nutrient seminal fluid, and the prostate gland, which produces alkaline prostatic fluid, are both connected to the ejaculatory duct leading into the urethra.

The first stage of the male sexual act, erection, results from nerve impulses from the autonomic nervous system that dilate the arteries of the penis, thus allowing arterial blood to flow into erectile tissues of the organ. During intercourse, contractions in the ducts of the testes, epididymis, and ductus deferens cause expulsion of sperm into the urethra and their mixture with the seminal and prostatic fluids. These substances, together with mucus secreted by accessory glands known as Cowper's glands, form the semen, which is discharged from the penile urethra during ejaculation.

**Human Reproductive Disorders**

Disorders that may affect the proper functioning of the reproductive system include abnormal hormone secretion, sexually transmitted diseases, and the presence of cancerous tissue in the region. Such problems frequently affect fertility and may complicate pregnancy.

See infertility. See also fertility drug; in vitro fertilization.

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