

CHAPTER 14

The Reproductive System

LEARNING OBJECTIVES

Upon completion of this chapter, you should be able to:

- List the major organs of the male and female reproductive systems and describe their functions.
- Identify and use the word elements of the male and female reproductive systems.
- Briefly describe symptoms and treatments in response to disorders of the reproductive system.
- Describe the major drug classifications used to treat reproductive system disorders.
- Identify and interpret selected abbreviations relating to the reproductive system.
- Label diagrams of the male and female reproductive systems.
- Analyze and define the new terms introduced in this chapter.



Word Elements • The Reproductive System

ROOT	MEANING
amni/o	amnion; innermost of the extraembryonic membranes enveloping the embryo in utero and containing the amniotic fluid
balan/o	glans penis
cervic/o	cervix
circum/o	around
colp/o; vagin/o	vagina
gonad/o	gonads; sex glands
gynec/o	woman; female
lact/o	milk
mast/o; mamm/o	breast
men/o	menses; menstruation
nat/o	birth
oophor/o; oo	ovary; egg
orch/o; orchi/o; orchid/o; test/o	testes
ovari/o	ovary
prostat/o	prostate gland
salping/o	tube; fallopian tube
spermat/o; sperm/o	sperm
uter/o; hyster/o; metr/o	uterus
vas/o	vessel; vas deferens
vulv/o	vulva

An Overview of the Reproductive System

The primary function of the reproductive system is to perpetuate life. The reproductive process begins with **fertilization**, which occurs when a male **gamete** (also called a **sperm** or **spermatozoon**; plural: **spermatozoa**) fertilizes a female gamete (also called an **ovum**; plural: **ova**). The collective name for any female or male organ that produces a gamete is **gonad**.

The single cell formed at fertilization is called a **zygote**, which contains more than a trillion molecules, despite its diameter measuring only 0.1 mm. These trillions of molecules all communicate and work together in the **gestation** process. The period of gestation is the time lapse between the formation of the zygote and birth.

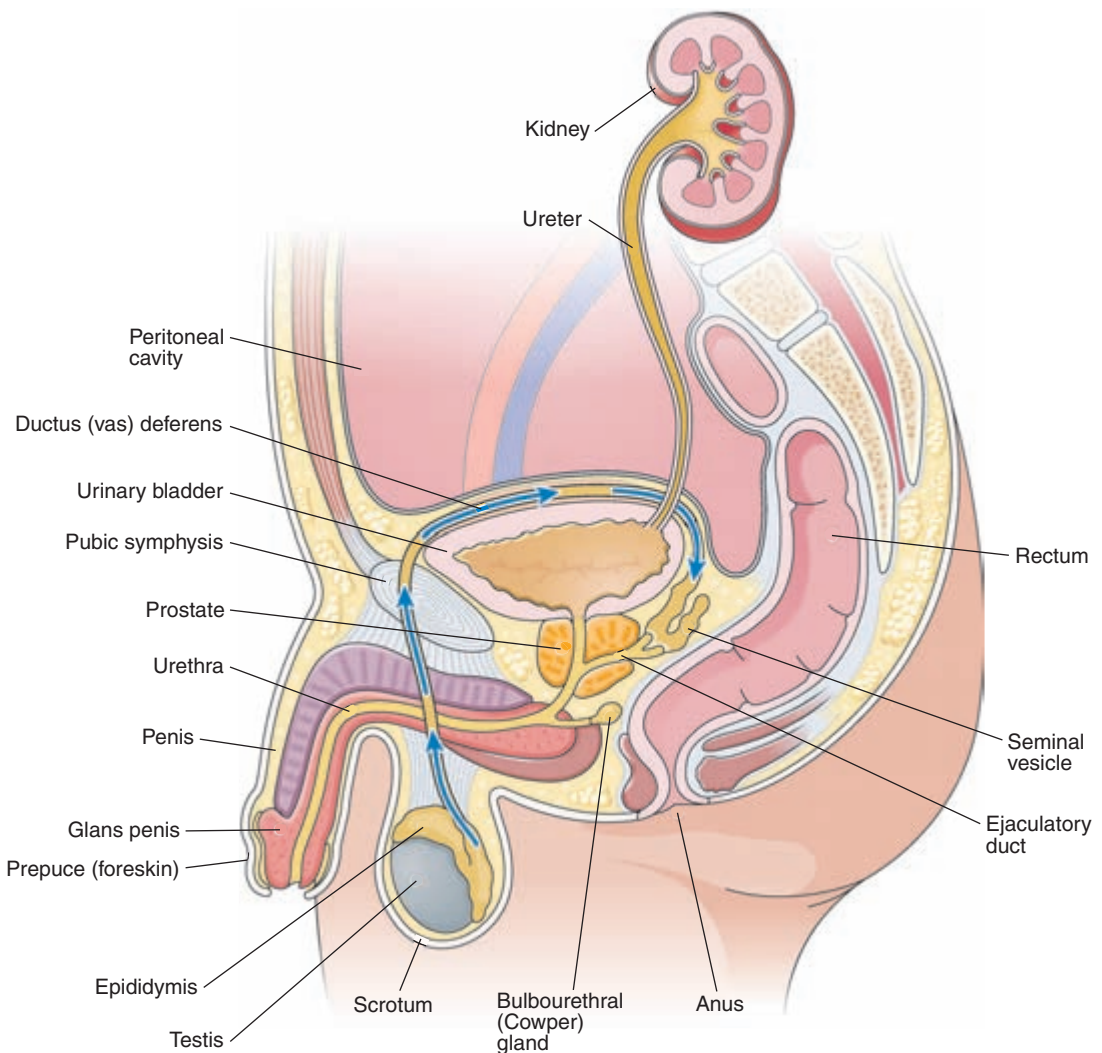
Obstetricians (from *obstetrix*, the Latin word for midwife) are the specialists who provide medical care to pregnant women and deliver babies. **Gynecologists** (gyn/o, gynec/o means “woman”) diagnose and treat disorders of the female reproductive system, and **urologists** diagnose and treat disorders of the urinary and male reproductive systems. Two additional specialists are the **neonatologist**, who specializes in newborns (neo- means “new”; nat/o means “born”), and the **pediatrician**, who specializes in children (ped/o means “child”).

Structure and Function

The reproductive systems in both the male and female may be divided into two groups: the organs of reproduction and the external genitalia. Both reproductive systems have similarities in that they produce special cells to replicate the species, yet they differ in their physical structure and function.

THE MALE REPRODUCTIVE SYSTEM

The male reproductive system is a combination of reproduction and urinary systems. It consists of the **testes** (singular: **testis**), various ducts, the urethra, and the following accessory glands: **seminal vesicles**, **prostate**, and the **bulbourethral** (bulb/o means “bulb-like”; urethr/o means “urethra”; -al is an adjective form) **glands**. The supporting structure and accessory organs are the **scrotum** and **penis**, which are considered the external organs of reproduction (Fig. 14-1).



→ Path of spermatozoa

FIGURE 14-1 Male reproductive system. A sagittal view of the male reproductive system. The blue arrows illustrate the pathway of sperm. Parts of the urinary and digestive systems are also shown. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

The primary function of the male reproductive system is to produce sperm. The process, called **spermatogenesis** (spermat/o means “sperm”; genesis means “origin” or “beginning process”), involves cell division known as **meiosis**. Meiosis is a process that halves the number of chromosomes in a cell from 46 to 23.

Organs of Reproduction

As indicated earlier, the organs of reproduction in the male reproductive system include the testes, various ducts, and the urethra, along with their supporting structures. Spermatogenesis begins in the **testes** and is initiated by the secretion of **androgens** (andr/o means “masculine”; androgen means “male hormone”). The most significant of these hormones is **testosterone**. After spermatogenesis is complete, the **spermatozoa** (singular: **spermatozoon**) travel to the **epididymis** (epi- means “upon”; *didymis* is Greek meaning “twin” and “testes”), a coil-shaped tube at the upper part of the testicle that runs down the side and turns upward into the body where the sperm are stored to mature. Once the sperm mature, they leave the epididymis and enter the **ductus deferens**, also called the **vas deferens** (vas means “vessel”; deferen means “to carry away”), which leads to the ejaculatory duct in the prostate. From here, the sperm travel through the seminal vesicles, which are glands located at the base of the urinary bladder that join the vas deferens. The seminal vesicle produces a fluid that nourishes the sperm and forms much of the volume of the semen; the prostate gland located just below the urinary bladder secretes a thick alkaline fluid that assists sperm motility.

The Cowper’s or bulbourethral glands are small pea-sized glands located on either side of the urethra. They produce a mucus-type secretion that joins the semen to become part of the ejaculated fluid during sexual intercourse. See the pathway of sperm from spermatogenesis to **ejaculation** in Figure 14-2.

External Genitalia

The external genitalia include the penis and the scrotum. Once the sperm is propelled through the reproductive ducts, it enters the urethra, which extends from the urinary bladder to the external opening on the end of the penis, and is ejaculated. The role of the scrotum is to house and protect the testes. The testes require a lower body temperature in order to produce sperm and are located outside of the body, suspended in the scrotal sac.

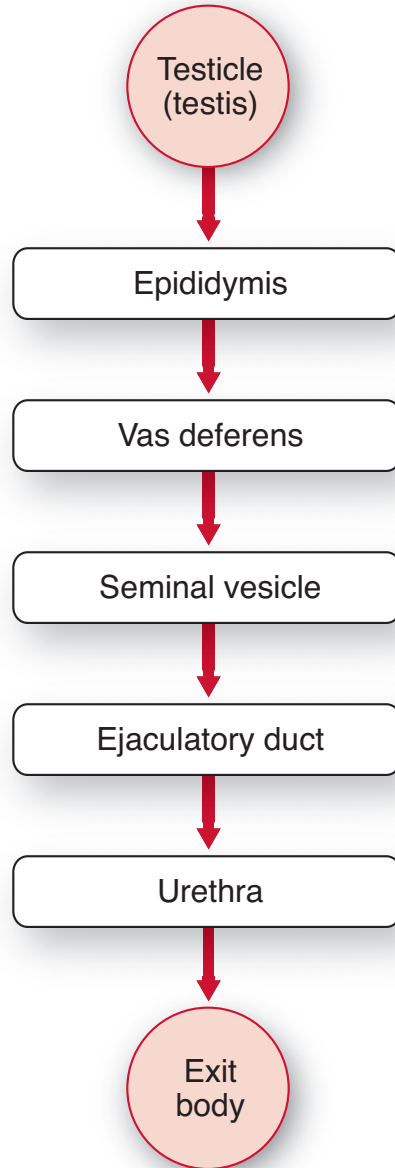


FIGURE 14-2 Pathway of sperm.

THE FEMALE REPRODUCTIVE SYSTEM

Similar to the male reproductive system, the female reproductive system has both internal and external organs. The internal organs of reproduction are the **uterus**, two **ovaries**, two **fallopian tubes**, **vagina**, and the **hymen** (Fig. 14-3). The external genitalia are collectively called the **vulva** and consist of the **labia majora**, **labia minora**, **clitoris**, **vaginal opening**, and **urinary meatus**. (Fig. 14-4). The **Bartholin's glands**, two small organs located on either side of the vagina, open into the area between the labia minora.

Organs of Reproduction

The **uterus** is a pear-shaped organ that has an upper rounded portion called the **fundus** and a lower narrow portion referred to as the **cervix**, which extends into the vagina. The uterus is composed of three layers of tissues: the **perimetrium** (peri- means “surrounding”; metr/o means “uterus”; -um is a singular noun ending), which is the outer surrounding layer; **myometrium** (my/o means “muscle”; metr/o means “uterus”; -um is a singular noun ending), which is the middle muscular layer; and the **endometrium** (endo- means within; metr/o means “uterus”; -um is a singular noun ending), which is the inner layer that has a rich blood supply. The endometrium reacts to hormonal changes every month that result in **menstruation** (*mensis* is Latin for “month”), a shedding of the endometrial lining.

Two **ovaries** (singular: **ovary**) lie on either side of the uterus in the pelvic cavity. At birth, the ovaries of the female contain the immature **ova** (ova is plural for **ovum**, or egg). The maturation of the ova takes place in these almond-shaped organs, along with the production of hormones.

The **fallopian tubes**, or uterine tubes, extend out from the upper portion of the uterus. They end with finger-like projections, fimbriae (fimbria is singular), near the ovaries, and their primary

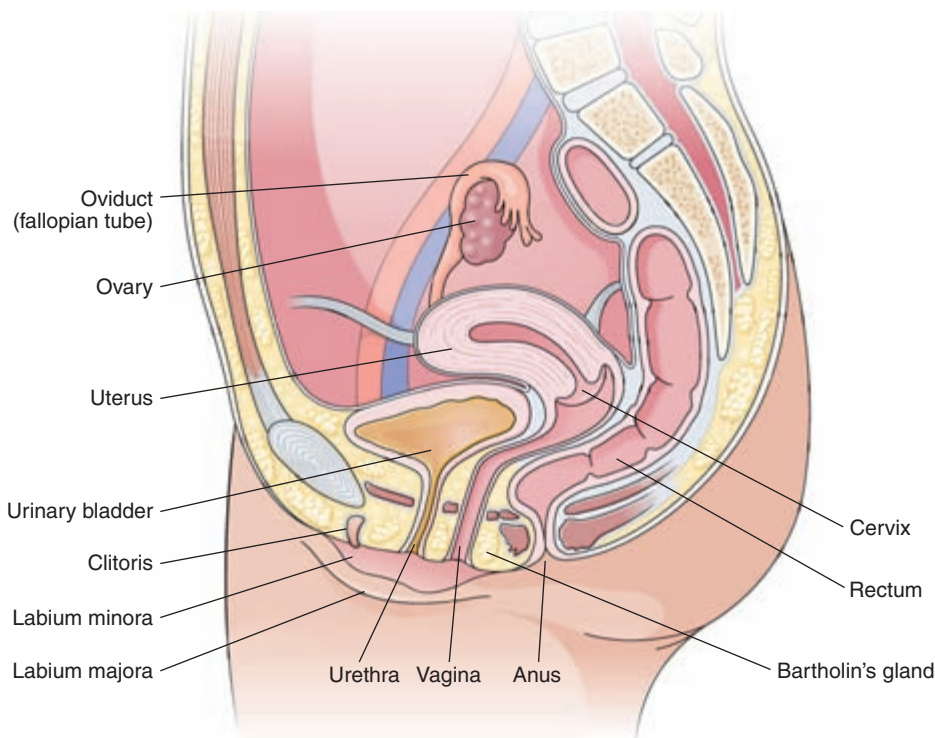


FIGURE 14-3 The female reproductive system and adjacent structures, sagittal view. The internal organs of reproduction are the uterus, two ovaries, two fallopian tubes, vagina, and hymen. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

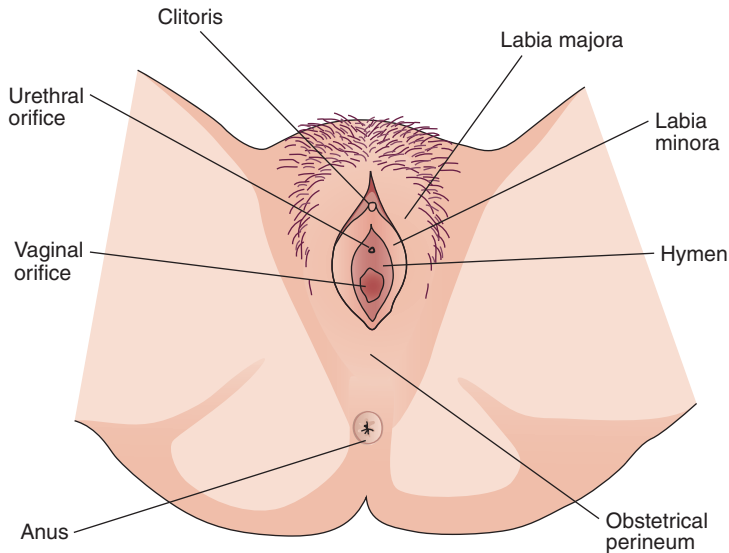


FIGURE 14-4 The external genitalia of the female reproductive system. Collectively, the parts of the female external genitalia are termed the “vulva” and consist of the labia majora, labia minora, clitoris, vaginal opening, urinary meatus, and Bartholin’s glands. Modified from Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

function is to catch the ovum as it leaves the ovary and propel it toward the uterus for implantation. Fertilization occurs in the fallopian tube.

External Genitalia

As mentioned earlier, the external genitalia are collectively called the **vulva** (Fig. 14-4). The **labia majora** and **labia minora** are the vaginal lips that protect the vaginal opening and the urinary meatus (*labi/o* and *cheil/o* mean “lips”). The **clitoris** is an organ of sensitive, erectile tissue located in front of the vaginal opening. The **Bartholin’s glands** are two small rounded glands on either side of the vaginal opening. They produce a mucus secretion to lubricate the vagina.

The **vagina** is a muscular tube that extends from the **cervix** to the outside of the body. The vagina has the following functions:

- Allows for the passage of the monthly **menstrual** flow of blood and tissue.
- Receptacle for semen during sexual intercourse.
- Serves as the birth canal during a normal vaginal birth.

The **hymen** is a membranous fold of tissue that partially or completely covers the vaginal opening.

The **mammary** (*mamm/o* means “breast”) **glands**, or breasts, are an important part of the female reproductive system since they nourish the newborn. These are milk-producing glands that develop during puberty. **Lactation** (*lact/o* means “milk”), the production of milk, causes the breasts to become enlarged and is relieved by a nursing infant. The **areola** is the dark-pigmented area that surrounds the nipple.

Menstrual Cycle and Fertilization

Similar to the male reproductive system, the female reproductive system also provides gametes for fertilization but goes a step further in that it also provides a nourishing environment suitable for a fertilized egg and the development of the zygote. This process of preparation is the **menstrual cycle**, a recurrent periodic change in the ovaries and uterus that occurs

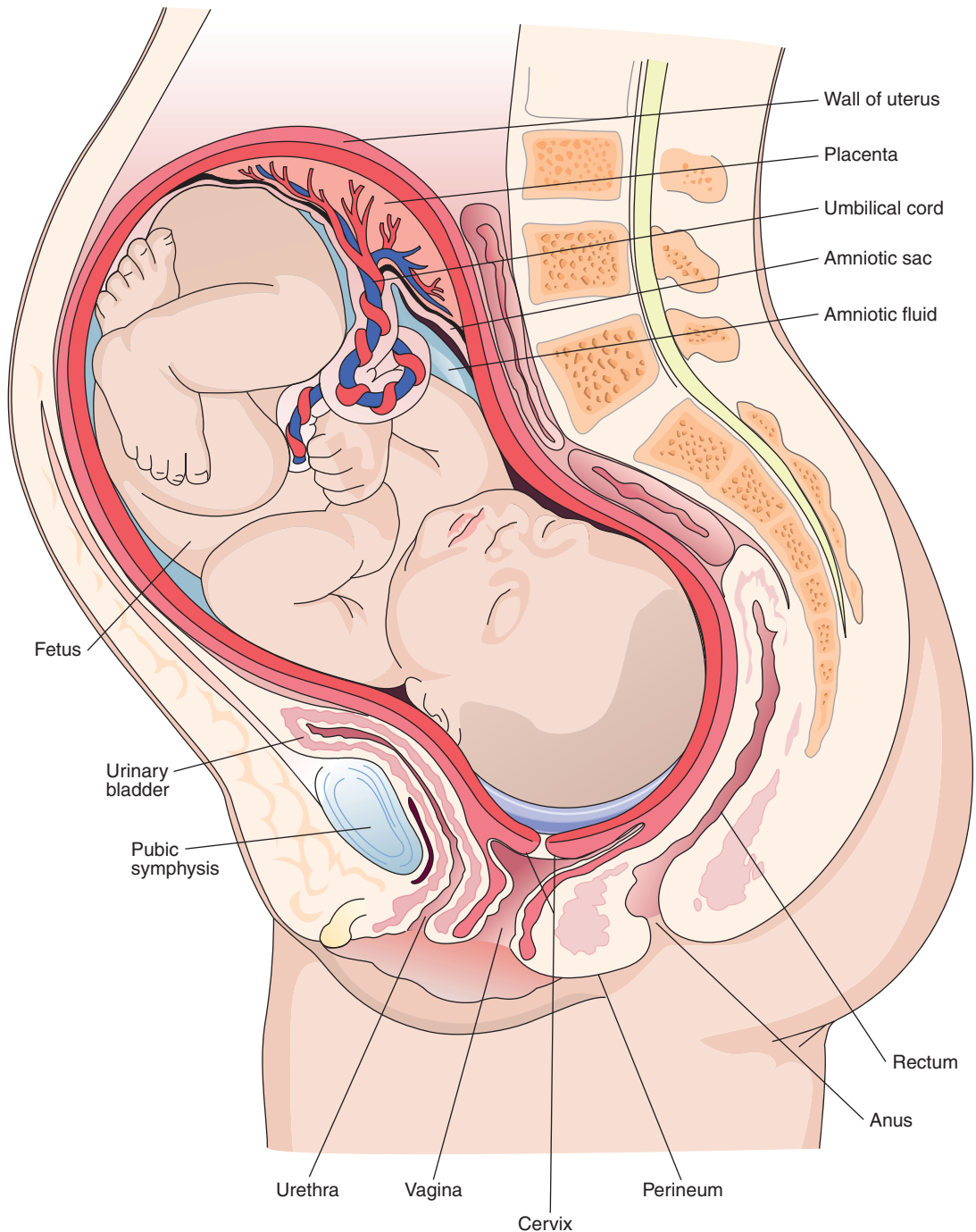


FIGURE 14-5 A pregnant uterus with intact fetus. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

approximately every 28 days. Hormonal activity controls the menstrual cycle, which has three phases: **secretory** (secretion of hormones), **proliferative** (preparation of the endometrial lining for implantation if fertilization occurs), and **menses** (the end of one cycle and the beginning of another). If male spermatozoa are present during **ovulation**, the possibility of fertilization exists.

Pregnancy

Gestation, a synonym for pregnancy, comes from the Latin verb *gesto*, meaning “to bear.” When the egg is penetrated by the male spermatozoon, it travels through the oviduct or fallopian tube and implants into the uterus; it is called an **embryo** during the first 8 weeks of gestation. Between the eighth week and birth, which under normal circumstances occurs between weeks 38 to 40, the term **fetus** is used. The fetus receives nourishment from the **placenta**, a spongy organ that attaches to the fetus by the umbilical cord. The **amniotic sac** surrounds the fetus and contains **amniotic fluid**, in which the fetus floats until it is ready to be born (Fig. 14-5).

Diagnostic tests and procedures associated with pregnancy include **amniocentesis** (Fig. 14-6), which involves the extraction of amniotic fluid from the **amniotic sac**. Amniocentesis is most commonly used to discover or rule out the presence of a genetic disorder, but it can also help in determining fetal lung maturity, which bears on the safety of an early delivery, indicates whether the mother’s immune system is having an adverse effect, and reveals the age and sex of the fetus.

The medical term used in reference to a woman pregnant for the first time is **primigravida**. The term **gravida** is used in discussing a woman pregnant for the second and subsequent times, and gravida is followed by a number (most often a Roman numeral, e.g., I, II, etc.) that indicates the number of times the woman has been pregnant. Another way of designating the number of the pregnancy is by using Latin prefixes: **primigravida**, **secundigravida**, and so on. The medical term for a woman who has delivered a baby is **para**, followed by a number. Thus, a woman who has given birth to her first child would be called a gravida I, para I. A woman whose first pregnancy has concluded in a multiple birth, for example twins, would be gravida I, para II. A woman who has carried and delivered a second child would be known as a gravida II, para II. Another example is a woman who has had three pregnancies with only one carried to viability; this woman would be gravida III, para I.



Gravida comes from the Latin adjective gravis, which medical dictionaries list as meaning “heavy.” However, other meanings of gravis include “profound” and “important.” Para comes from the Latin verb pario, which means “to bring forth, produce, or create.”

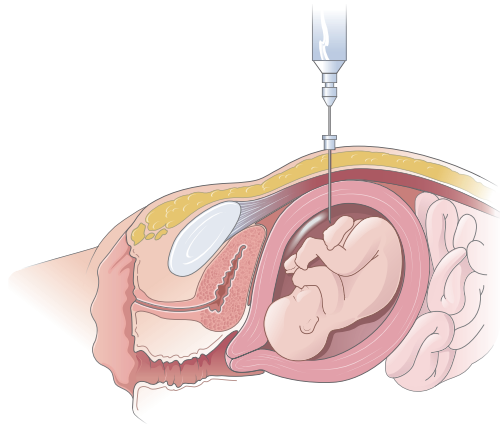


FIGURE 14-6 Amniocentesis. A needle is inserted through the abdominal wall, into the uterus, and a sample of amniotic fluid is removed from the amniotic sac. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

Disorders and Treatments

Disorders of the male and female reproductive systems sometimes vary. Disorders common to both the male and female reproductive systems are briefly described under the following headings: sexually transmitted diseases, other infections, structural abnormalities, and tumors. Additional conditions are included at the end of this section.

SEXUALLY TRANSMITTED DISEASES

Sexually transmitted diseases (STDs) occur through sexual intercourse or sexual contact. They include the following. **Human immunodeficiency virus (HIV)** attacks the immune system. It is transmitted through blood and infected body fluids during sexual intercourse

with an infected partner. **Gonorrhea**, caused by bacteria, is highly contagious and is also transmitted through sexual contact. Signs and symptoms include painful urination and an abnormal discharge. This disease may also be transmitted to a child during birth. Silver nitrate eye drops or erythromycin ointment is given to all newborns immediately after birth to prevent gonorrhea as a preventive measure. **Chlamydia** is also an infection that is spread through sexual contact. Frequently, there are no noticeable symptoms at the onset, and if left untreated, the infection may spread to the reproductive organs in women. Antibiotics for the infected partner(s) are usually the recommended treatment. Repeated infections or spread of the infection in women can cause **pelvic inflammatory disease (PID)**. This is an infection of the uterus, ovaries, and fallopian tubes. The long-term effects of PID can cause scarring of the fallopian tubes (oviducts), which can block the tubes and prevent fertilization or pregnancy. If a woman has PID and an egg becomes fertilized, the egg may implant outside the uterus, which is known as an **ectopic pregnancy** (*ektapos* is Greek for “out of place”). An ectopic pregnancy can be life-threatening. **Syphilis** is another highly contagious disease and is also caused by bacteria. It is spread by sexual contact. Treatment consists of a course of antibiotics for the infected partners.

Lastly, infections are seen with the human papillomavirus (papilla is a small nipple-like process; -oma means “tumor”), also known as **HPV**. This is a contagious sexually transmitted virus that is spread through contact with infected genital skin, body fluids, and oral sex. There are many types of HPV. The virus may clear up on its own, but if it persists, it can lead to cervical cancer and genital warts. A vaccine is available that offers protection to a few of the types of HPV and may prevent cancers of the vagina and vulva.

OTHER INFECTIONS

Infections of the female reproductive system may result from exposure to bacteria, fungi, or viruses. Many of the conditions are marked by inflammation, the terms for which are indicated by the suffix -itis, which you learned in early chapters. They include the following: **mastitis** (mast/o means “breast”), **oophoritis** (oophor/o means “ovary”) and **salpingitis** (salping/o means “fallopian tube”). Salpingitis is a condition that can lead to a closing off of the fallopian tubes and can result in infertility.

Male reproductive system infections include **epididymitis** (epi- means “upon”; *didymos* comes from Greek meaning “twin”), inflammation of the epididymis; and **prostatitis** (prostat/o means “prostate”; -itis means “inflammation”), inflammation of the prostate. **Balanitis** (balan/o means “glans penis”) is inflammation of the head of the penis and usually occurs in uncircumcised male infants. Symptoms include redness and swelling and a foul-smelling discharge. Treatment usually consists of antibiotic therapy.

STRUCTURAL ABNORMALITIES

Structural abnormalities are found in both the male and female reproductive system. The differences will be presented first with the male reproductive system and then the female reproductive system.

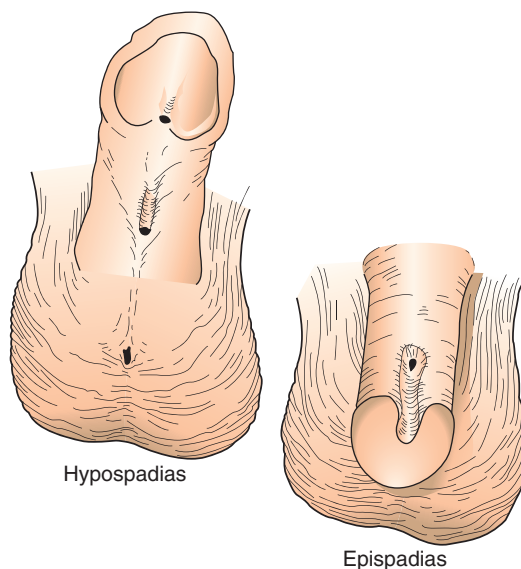


FIGURE 14-7 Abnormal penile openings. Hypospadias is the term used when the urethral opening is located on the underside of the penis. Epispadias is the term for when the urethral opening is located on the topside of the penis. From Porth CM. *Pathophysiology Concepts of Altered Health States*, 7th Ed. Philadelphia: Lippincott Williams & Wilkins, 2005.

A birth defect in males where the urethral opening develops abnormally on the underside of the penis is called **hypospadias** (hypo- means “below” or “under”; spao is Greek for “tear”); when the opening develops abnormally on the topside of the penis, it is called **epispadias** (epi- means “on top” or “over”) (Fig. 14-7). Surgical repair is usually performed in the first year of life to correct the placement of the abnormal opening.

One other structural condition of the male reproductive system involves the testes or male gonads. The testes develop in the abdominal cavity, and shortly before birth, they normally descend through a canal into the scrotum. When they do not descend or they remain “hidden” in the abdominal cavity, it is called **cryptorchidism** (crypt- means “hidden”; orchidism means “a condition of the testes”).

In the female, the uterus may be out of position or actually may have a bend in the body of the organ. The following terms describe the variant conditions: **anteversion** (Fig. 14-8A) is an abnormal tipping forward of the entire uterus (ante- means “forward”; -version means “to turn”); **anteflexion** (Fig. 14-8B) is an exaggerated forward bend of the uterus; **retroversion** (Fig. 14-8C) is an abnormal tipping of the entire uterus backward (retro- means “backward”); and **retroflexion** (Fig. 14-8D) is an abnormal tipping with the body of the uterus bent back on itself. A **prolapsed uterus** involves the descent of the uterus or cervix into the vagina canal. Two other conditions involving structural abnormalities of the female reproductive system are a **cystocele** (cyst/o means “bladder”; -cele is a herniation or protrusion), which is a protrusion of the bladder into the anterior wall of the vagina (Fig. 14-9A), and a **rectocele**

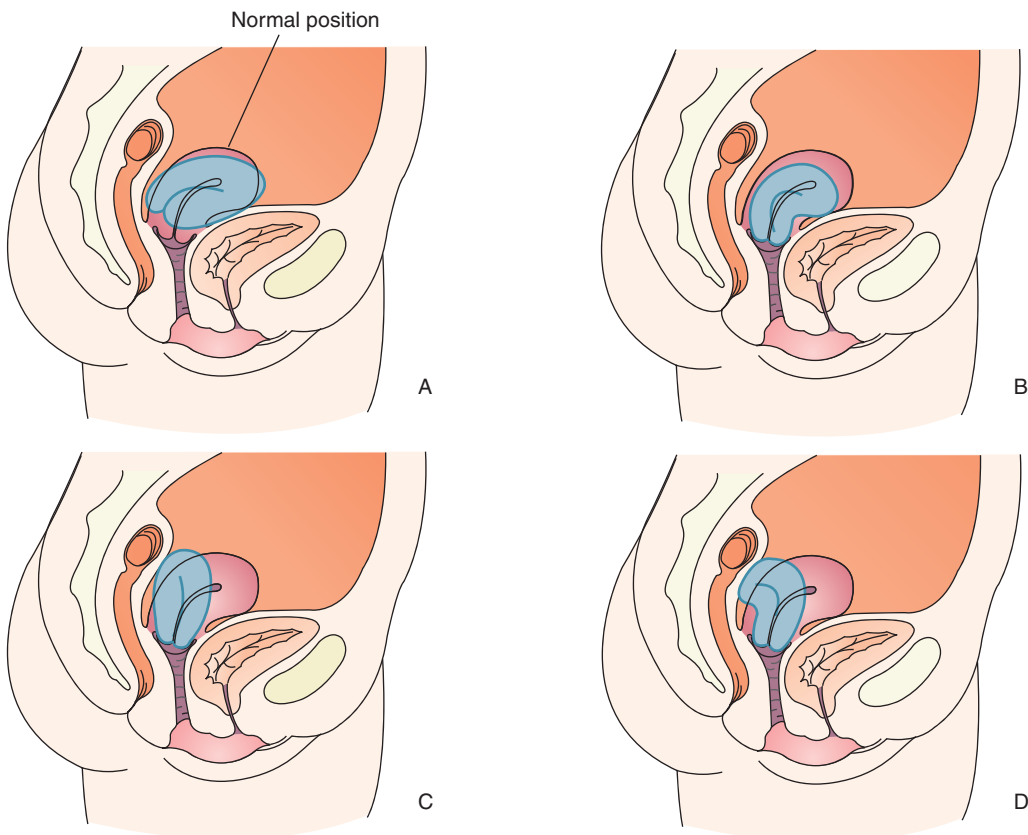


FIGURE 14-8 Uterine flexion and version. The blue-shaded figure represents the abnormal positioning of the uterus. **A.** Anteversion. **B.** Anteflexion. **C.** Retroversion. **D.** Retroflexion. From Pillitteri A. *Maternal and Child Nursing*, 4th Ed. Philadelphia: Lippincott Williams & Wilkins, 2003.

(rect/o means “rectum”), which is a protrusion of the rectum into the posterior wall of the vagina (Fig. 14-9B).

TUMORS

Tumors can affect any part of the male or female reproductive systems. Prostate cancer is one of the most common cancers in men. Genetics and age may play a role in its development. Another less common type of cancer in males is testicular (testicul means “testicle” or “testis”) cancer. Although not nearly as common as prostate cancer, among males in the age group of 20 to 34 years, it is one of the most common types of male cancer.

Benign tumors in the female reproductive system are sometimes called **fibroids**. Cysts, which may also be considered a benign tumor, are usually caused by hormonal disturbances. They frequently occur in the ovaries and are characterized by enlarged ovaries. Infertility and menstrual abnormalities may be a result of polycystic ovary disease.

Cancer of the endometrium is the most common type of cancer in the female reproductive system. A biopsy may be used to detect the cancer, and a **hysterectomy** (hyster/o means “uterus”; -ectomy means “removal of”) is a common type of treatment in which the uterus is removed.

Endometriosis (endo- means “within”; metr/o means “uterus”; -osis is an adjective suffix) is a condition many women have during their child-bearing years when estrogen levels are high. It occurs when the endometrial tissue that lines the uterus happens to grow outside the uterus. The tissue may grow on the intestines, on the outside of the uterus or ovaries, or on other organs in the abdomen (Fig. 14-10). This tissue becomes irritated during the menstrual cycle and may result in fluid-filled cysts that can be painful and result in scar tissue. Imaging tests such as computed tomography (CT) scans, magnetic resonance imaging (MRI), or ultrasounds are done to diagnose cysts or tissue growth outside of the uterus. A laparoscopy (lapar/o means “abdomen”; -scopy means “visualization with an instrument”) is a surgical procedure where a viewing scope is introduced through the abdominal wall and allows visual inspection inside the abdominal cavity.

DIAGNOSTIC AND SURGICAL PROCEDURES

A variety of diagnostic tests and surgical procedures are performed on both men and women to detect and treat disorders of the reproductive system. Tests and procedures for the male will be discussed first, followed by those pertaining to the female.

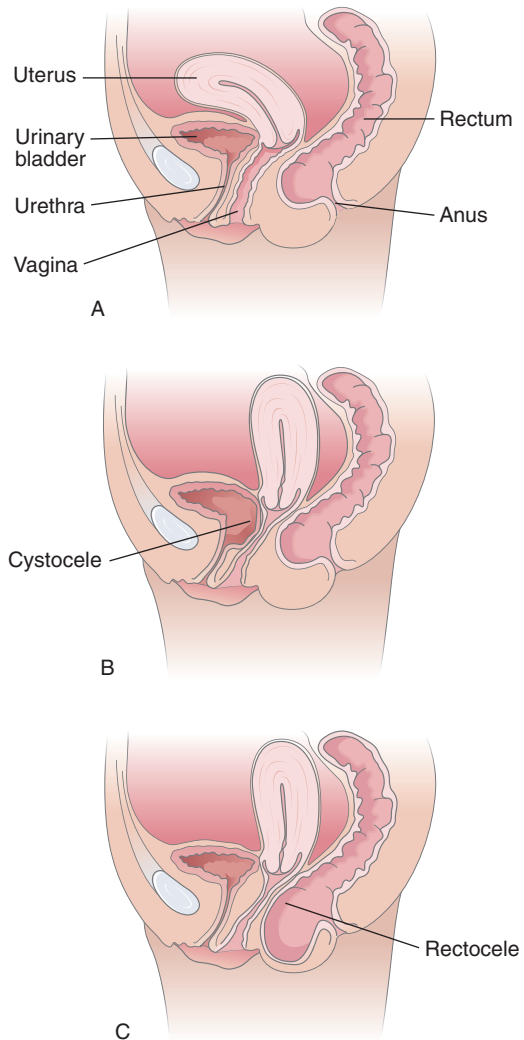


FIGURE 14-9 Herniation into the vagina. **A.** Normal positioning of the uterus. **B.** Cystocele: The bladder protrudes into the anterior wall of the vagina. **C.** Rectocele: The rectum protrudes into the posterior wall of the vagina. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

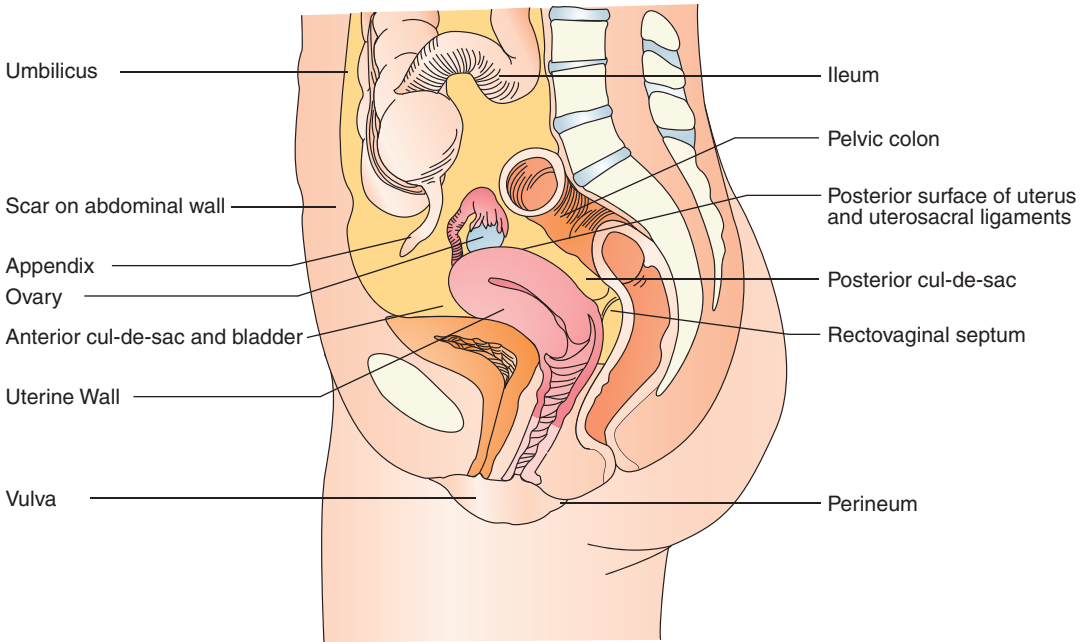


FIGURE 14-10 Endometriosis. The endometrial tissue that lines the uterus grows outside the uterus. The tissue may grow on the intestines, ovaries, or other organs in the abdomen. From LifeART Nursing 1, CD-ROM. Baltimore: Lippincott Williams & Wilkins.

An enlarged prostate gland or cancerous gland may sometimes be detected by a digital (digit means “finger”) exam, where the examiner palpates the prostate gland. Ultrasounds, CT scans, and MRIs are also performed on the prostate to detect abnormalities or cancer.

One surgical procedure that is performed for treatment of an enlarged prostate is called a transurethral resection of the prostate (TURP). Figures 14-11A and 14-11B illustrate the introduction of a cystoscope (cyst/o means “bladder”; -scope means “instrument for viewing”) into the urethra and the resection of the enlarged prostate. In some cases, removal of the entire prostate

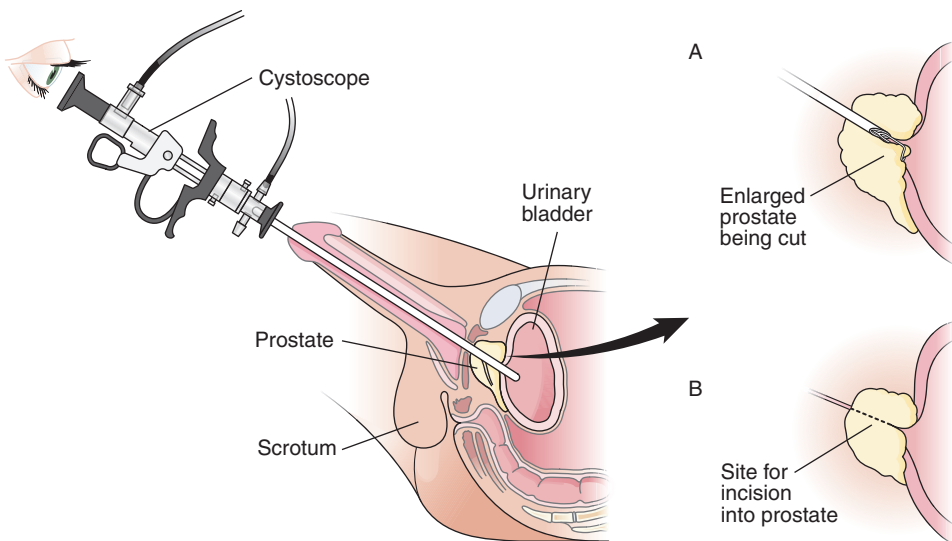


FIGURE 14-11 Prostate surgery procedure using a cystoscope. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

gland may be necessary. The medical term for this procedure is **prostatectomy** (prostat/o means “prostate”; -ectomy means “removal of”).

Another common surgical procedure, a **vasectomy** (vas/o means “vessel” or “vas deferens” in this case; -ectomy “means removal of”), may be done on the male reproductive system for contraceptive (to prevent pregnancy) measures. A portion of the vas deferens, bilaterally, is removed to produce sterility (Fig. 14-12).

Some of the more common diagnostic and surgical treatments/procedures of the female reproductive system include the following:

- **Amniocentesis** (amni/o means “amnion”; -centesis means “surgical puncture”): As mentioned earlier, this is a procedure in which a sample of amniotic fluid is tested for fetal abnormalities (see Fig. 14-6).
- **Colposcopy** (colp/o means “vagina”; -scopy means “a visual examination with an instrument”): Visual examination of the tissues of the cervix and vagina using a **colposcope**.
- **Papanicolaou test, or Pap Smear** (named after Dr. Papanicolaou): Exfoliative biopsy or a scraping of the cervical tissues to diagnose cervical cancer and other conditions of the cervix and surrounding tissues.
- **Dilation and curettage (D&C)**: Dilation of the cervix and curettage (removal) or scraping of the lining of the uterus.
- **Cone biopsy**: Surgical removal of a cone-shaped section of the cervix (Fig. 14-13).
- **Laparoscopy** (lapar/o means “abdomen”; -scopy means “a visual examination with an instrument”): Visual examination of the interior of the abdomen by means of a laparoscope.
- **Oophorectomy** (oophor/o means “ovary”): Removal of one ovary; **bilateral oophorectomy**: removal of both ovaries.

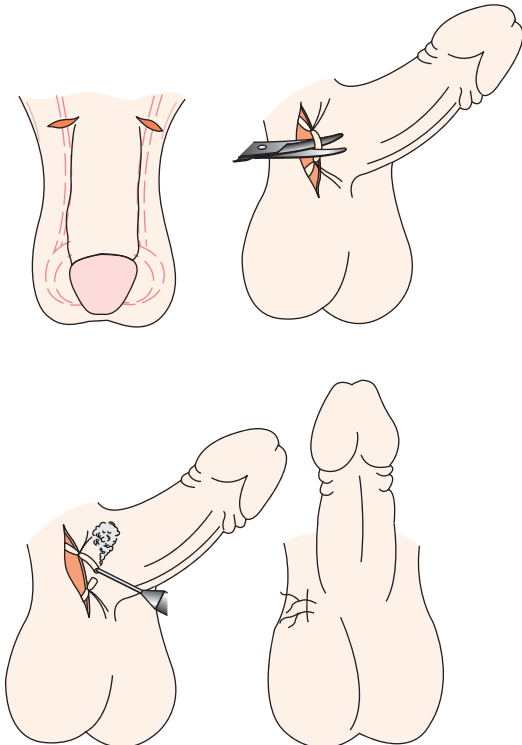


FIGURE 14-12 Vasectomy. External view of male genitalia showing vasectomy. A portion of the vas deferens, bilaterally, is removed to produce sterility. LifeART image copyright 2009. Lippincott Williams & Wilkins. All rights reserved.

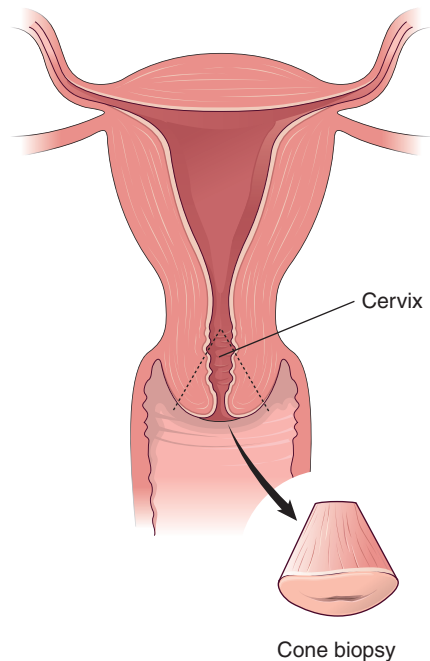


FIGURE 14-13 Cone biopsy. The surgical removal of a cone-shaped section of the cervix. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

- **Bilateral salpingo-oophorectomy** (salping/o means “fallopian tube” or “oviduct”; oophor/o means “ovary”): Removal of both ovaries and fallopian tubes.
- **Hysterosalpingograph (HSG)** (hyster/o means “uterus”; salping/o means “fallopian tube” or “oviduct”; -graph means “a recording”): A radiographic examination of the uterus and fallopian tubes after an injection of radiopaque material.
- **Hysterectomy** (hyster/o means “uterus”; -ectomy means “removal of”): The surgical removal of the uterus.
- **Mammography** (mamm/o means “breast”; -graphy means “process of recording”): A radiographic examination of the breast.
- **Mastectomy** (mast/o means “breast”; -ectomy means “to remove”): Removal of a breast.
- **Tubal ligation** (tubal is an adjective form of tube meaning a fallopian tube; ligation is to tie off or bind; ligo is Latin meaning “to bind”): A procedure that interrupts the continuity of the uterine or fallopian tubes by cutting the tubes to sterilize a female (Fig. 14-14).

Pharmacology

Pharmacologic treatment varies for the many conditions and disorders that affect the male and female reproductive systems. These may include antibiotics used in the infectious processes of the reproductive system; vaccines for certain sexually transmitted viruses; hormone therapy for conditions such as endometriosis, hormone-deficient conditions, and gender-specific cancers to name a few; nonsteroidal anti-inflammatory drugs (NSAIDs) for inflammatory conditions; and certain muscle relaxants and hormone inhibitors for treatment of benign prostatic hypertrophy (BPH) or an enlarged prostate.

As mentioned earlier, there are numerous drug classifications used for the reproductive system. To discuss the many individual drug names is larger than the scope of this text. For specific drug therapy nomenclature, we recommend referencing a pharmacology textbook or internet website specific to the reproductive condition.

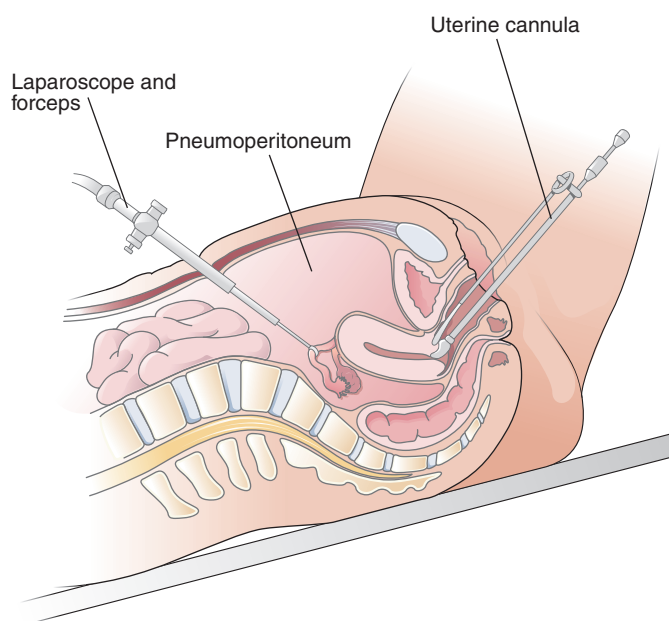


FIGURE 14-14 Laparoscopic tubal ligation. The peritoneal cavity is inflated with a gas, and the oviducts are cut laparoscopically through a small incision in the abdomen. From Cohen BJ. *Medical Terminology: An Illustrated Guide*, 5th Ed. Philadelphia: Lippincott Williams & Wilkins, 2007.

Abbreviation Table • The Reproductive System



ABBREVIATION	MEANING
BPH	benign prostatic hypertrophy
CS	cesarean section
D&C	dilation and curettage
DUB	dysfunctional uterine bleeding
EDC	estimated date of confinement (due date)
GC	gonorrhea
GYN	gynecology
HRT	hormone replacement therapy
HSG	hysterosalpingogram
HSV	herpes simplex virus
IUD	intrauterine device
IVF	in vitro fertilization
LMP	last menstrual period
OB	obstetrics
PID	pelvic inflammatory disease
PMS	premenstrual syndrome
STD	sexually transmitted disease
TAH	total abdominal hysterectomy
TURP	transurethral resection of the prostate
VD	venereal disease

Study Table • The Reproductive System



TERM AND PRONUNCIATION	ANALYSIS	MEANING
Structure and Function		
androgens (AN-droh-jehns)	from the Greek words <i>andros</i> (man) and <i>gainein</i> (to produce)	hormones that promote the production of male gametes
cervix (SURV-ihks)	a Latin word meaning neck (as in the neck of the uterus)	common term for the uterine cervix
chromosome (KROM-oh-som)	from the Greek word <i>khroma</i> (color) and <i>soma</i> (body), so called because the structures contain a substance that stains readily with basic dyes	a gene-bearing bundle of DNA found in the nucleus of all cells

TERM AND PRONUNCIATION	ANALYSIS	MEANING
embryo (EHM-bree-oh)	from the Greek word <i>embryon</i> (young animal, literally, “that which grows”)	name change from <i>zygote</i> after the first cell division until the eighth week of pregnancy
epididymis (ehp-ih-DIHD-ih-muhs)	from the Greek words <i>epi</i> (on) + <i>didymos</i> (testicle)	organ in which the male sperm become functional
fallopian (fah-LOH-pee-ahn) tubes; also called uterine (YU-teh-rihn) tubes	named after Gabriello Fallopio (1523–1562), an Italian anatomist who first described them	tubes between the ovaries and the uterus
fertilization (FUR-tih-ly-ZAY-shun)	from the Latin word <i>fertilis</i> (fruitful)	the joining of the male and female gametes (in the context of the human reproductive system)
fetus (FEE-tuhs)	a Latin word meaning the bearing, bringing forth, or hatching of young	name change from <i>embryo</i> after the eighth week of pregnancy to birth
gamete (GAH-meet)	a Greek word meaning a wife; also <i>gametes</i> (a husband), from <i>gamein</i> (to take a wife, to marry)	term given to both the female ovum and the male spermatozoon
gestation (jehs-TAY-shun)	from the Latin word <i>gestare</i> (to bear, carry, gestate)	development that occurs between the formation of the zygote and birth of the child
gonad (GOH-nad)	from the Greek word <i>gone</i> (seed, act of generation, race, family)	gamete-generating organ (ovary or testis)
gravid (GRA-vee-dah)	from the Latin word <i>gravis</i> (heavy, profound, important)	a pregnant woman
lactation (lack-TAH-shun)	from the Latin word <i>lactare</i> (to suckle, entice, lead on, induce); derived from the Latin word <i>lac</i> (milk)	milk production
mammary gland (MAM-mar-ry)	from the Latin word <i>mamma</i> (breast) + gland	breasts
menarche (meh-NAR-kee)	from the Greek words <i>men</i> (month) and <i>arkhe</i> (beginning)	beginning of menses
menopause (MEN-oh-pawz)	from the Latin words <i>men</i> (month) and <i>pausis</i> (a cessation, a pause)	normal stopping of the monthly period or menses
menses (MEN-seez)	plural form of the Latin word <i>mensis</i> (month)	end of one uterine cycle and the beginning of another

TERM AND PRONUNCIATION	ANALYSIS	MEANING
menstrual cycle (MEN-strew-ahl SY-kl); also called the uterine cycle (YU-tehr-in SY-kl)	from the Latin word <i>mensis</i> (month) + cycle	part of the reproductive system process in women, comprising three phases: secretory, proliferative, and menses
mitosis (my-TOH-sihs)	from the Greek word <i>mitos</i> (wrap, thread) + <i>-osis</i> (process)	process of cell division by which one cell becomes two, both of which contain the maternal and paternal chromosomes
ovary (OH-vah-ree)	from the Latin word <i>ovum</i> (egg)	small almond-shaped organ located on either side of the uterus
ovulation (OH-vyu-LAY-shun)	from the Latin word <i>ovum</i> (egg) + <i>atio</i> (process)	release of a mature ovum from the ovary
ovum (OH-vuhm); ova (OH-vah)	a Latin word meaning egg	the female gamete; ovum is singular; ova is plural
para (PAR-ah)	from the Latin verb <i>pario</i> (to bring forth, produce, create)	a woman who has given birth to a viable fetus
penis (PEE-nihs)	from the Latin <i>penis</i> (tail)	male sex organ that transports the male sperm into the female vagina
placenta (pla-SEN-tah)	a Latin word meaning cake	a spongy organ that is attached to the fetus by the umbilical cord and that provides nourishment to the fetus
pregnancy (PREG-nan-see)	from the prefix <i>pre-</i> (before) and the Latin word <i>gnascor</i> (to be born)	period of time when the fetus grows inside of the uterus
progestins (pro-JESS-tihns)	from <i>pro-</i> (before) and the Latin word <i>gestare</i> (to carry); + <i>-in</i> (suffix denoting chemical)	female hormones generated in the ovaries
prostate gland (PRAH-stayt)	from the Greek word <i>prostates</i> (one standing in front)	male gland that produces and stores prostatic fluid, a fluid medium that is part of semen
reproductive tract	from the Latin prefix <i>re-</i> (again) and the Latin word <i>producere</i> (to produce) + tract, common English word	in the male reproductive system, the ductwork leading from the epididymis to the outside of the body
scrotum (SKROH-tum)	Latin <i>scrotum</i> cognate with Old English <i>scrud</i> (garment, source of shroud)	the sac that encloses and protects the testicles

TERM AND PRONUNCIATION	ANALYSIS	MEANING
semen (SEE-mehn)	a Latin word meaning seed	combination of male gametes, their associated glandular secretions, and prostatic fluid
seminal vesicle (SEH-min-ahl)	from the Latin <i>semen</i> (seed) + vesicle from the Latin word <i>vesica</i> (bladder, balloon)	glands at the base of the urinary bladder that secrete a thick substance that nourishes sperm
sperm (spurm); spermatozoon (SPUR-mah-tah-ZOH-on); spermatozoa (SPUR-mah-tah-ZOH-ah)	from the Greek word <i>sperma</i> (seed) and <i>zoion</i> (animal)	the male gamete; sperm is singular or plural; spermatozoon is singular; spermatozoa is plural
spermatogenesis (SPUR-mah-toh-JEHN-ih-sihs)	<i>spermat/o</i> (sperm); <i>-genesis</i> (production)	production of sperm
testes (TEHS-teez); singular: testis (TEHS-tihs)	from the Latin word <i>testiculus</i> dim. of <i>testis</i> (witness) (the organ being evidence of virility)	the organs that produce and store the male gametes
testosterone (tehs-TOSS-teh-rohn)	from the Latin word <i>testis</i> (witness); <i>-sterone</i> (steroid hormone)	the male reproductive hormone (androgen) prominent in male gamete production
urethra (yu-REETH-rah)	from the Greek word <i>ourethra</i> (passage for urine)	male ductwork that acts as a part of both the male urinary and male reproductive systems
uterine cervix (YU-teh-rihn)	<i>uter/o</i> (uterus); <i>-ine</i> (adjective suffix) + cervix, Latin word for neck	the “neck” located at the lower end of the uterus
uterine cycle; also called the menstrual cycle	<i>uter/o</i> (uterus); <i>-ine</i> (adjective suffix) + cycle, common English word	part of the reproduction system process in women, comprising three phases: secretory, proliferative, and menses
uterine tubes (YU-teh-rihn); also called fallopian (fah-LOH-pee-ahn) tubes	<i>uter/o</i> (uterus); <i>-ine</i> (adjective suffix) + tubes, common English word	tubes between the ovaries and the uterus
uterus (YU-teh-ruhs)	a Latin word meaning womb, belly	reproductive organ in which the fertilized oocyte is implanted and in which the child develops
vas deferens (vas DEHF-eh rehnz)	from the Latin words <i>vas</i> (vessel) and <i>deferens</i> (carrying down)	duct leading out of the epididymis (also called the <i>ductus deferens</i>)

TERM AND PRONUNCIATION	ANALYSIS	MEANING
zygote (ZY-goht)	from the Greek word <i>zygotes</i> (yoked)	single cell formed at fertilization
Common Disorders		
amenorrhea (ah-MEN-oh-REE-ah)	<i>a-</i> (without); <i>men/o</i> (menses); <i>-rhea</i> (flowing, discharge)	absence of menstruation
anorchism (an-OR-kism)	<i>an-</i> (without); <i>orch/o</i> (testes); <i>-ism</i> (condition)	congenital absence of one or both testes
anteflexion (an-tee-FLEX-shun)	<i>ante-</i> (something positioned in front of); from the Latin word <i>flectere</i> (to bend)	an exaggerated forward bend of the uterus
anteversion (an-tee-VER-shun)	<i>ante-</i> (something positioned in front of); from the Latin word <i>versio</i> (turning)	abnormal tipping forward of the entire uterus
azoospermia (ay-ZOH-oh-SPER-mee-ah)	from the Greek word <i>azoos</i> (lifeless) + <i>sperm/o</i> (sperm)	absence of sperm in the semen
balanitis (bal-ah-NIGH-tis)	<i>balan/o</i> (glans penis); <i>-itis</i> (inflammation)	inflammation of the glans penis
BPH, or benign prostatic hypertrophy	benign (common English word) + <i>prostat/o</i> (prostate) + <i>-ic</i> (adjective suffix); <i>hyper-</i> (above normal); <i>-trophy</i> (nourishment or development)	an enlarged, noncancerous prostate; <i>prostatomegaly</i>
cervicitis (sur-vih-SY-tihz); also trachelitis (trak-ih-LY-tihz)	<i>cervic/o</i> (cervix); <i>-itis</i> (inflammation)	inflammation of the uterine cervix
cryptorchism (kript-OR-kism); also cryptorchidism (kript-OR-kid-izm)	from the Greek word <i>kryptos</i> (hidden); <i>orch/o</i> (testes); <i>-ism</i> (condition)	undescended testicles or when one or both testes fail to descend into the scrotum
cystocele (SIS-toh-seel)	<i>cyst/o</i> (bladder); <i>-cele</i> (hernia)	protrusion of the bladder into the anterior wall of the vagina
dysmenorrhea (dis-MEN-oh-REE-ah)	<i>dys-</i> (bad, difficult); <i>men/o</i> (menses); <i>-rhea</i> (flowing, discharge)	painful menstruation
endometriosis (EN-doh-MEE-tree-OH-sis)	from the Greek words <i>endon</i> (within) and <i>metra</i> (womb) + <i>-osis</i> (condition)	presence of endometrial tissue outside the uterus
epididymitis (ep-ih-did-ih-MY-tis)	from the Greek words <i>epi</i> (on) and <i>didymos</i> (testicle); <i>-itis</i> (inflammation)	inflammation of the epididymis

TERM AND PRONUNCIATION	ANALYSIS	MEANING
epispadias (ep-i-SPAY-dee-as)	from the Greek <i>epi</i> (on) and <i>spas</i> (something torn, rent)	congenital opening of the urethra on the top side of the penis
gonorrhea (gon-oh-REE-ah)	from the Greek <i>gonos</i> (offspring); <i>-rhea</i> (discharge, flowing)	highly contagious sexually transmitted disease caused by bacteria
hydrocele (HIGH-droh-seel)	<i>hydro-</i> (water); <i>-cele</i> (hernia)	hernia filled with fluid in the testes
hypospadias (high-poh-SPAY-dee-as)	<i>hypo-</i> (below normal); from the Greek word <i>spas</i> (something torn, rent)	congenital defect where the opening of the urethra is on the underside of the penis
hysteralgia (HIHS-teh-RAL-jee-ah); also hysterodynia (HIHS-teh-roh-DIHN-ee-ah)	<i>hyster/o</i> (womb, uterus); <i>-algia/-dynia</i> (pain)	pain in the uterus
hysterectomy (HIS-ter-EK-toh-mee)	<i>hyster/o</i> (womb, uterus); <i>-ectomy</i> (excision)	removal of the uterus
hysteropathy (hiss-ter-ROP-ah-thee)	<i>hyster/o</i> (womb, uterus); <i>-pathy</i> (disease)	any disease of the uterus
mastitis (mast-EYE-tis)	<i>mast/o</i> (breast); <i>-itis</i> (inflammation)	inflammation of the breast
menorrhagia (MEN-oh-RAY-jee-ah)	<i>men/o</i> (menses); <i>-rrhagia</i> (rapid flow of blood)	increased amount and duration of flow
oligomenorrhea (oh-LIG-oh-MEN-oh-REE-ah)	<i>olig/o</i> (having little); <i>men/o</i> (menses); <i>-rhea</i> (discharge, flowing)	markedly reduced menstrual flow along with abnormally infrequent menstruation
oligospermia (oh-LIG-oh-SPER-mee-ah)	<i>olig/o</i> (having little); <i>-sperm/o</i> (sperm); <i>-ia</i> (condition)	low sperm count
oophoritis (oo-foh-RY-tihs)	<i>oophor/o</i> (ovary); <i>-itis</i> (inflammation)	inflammation of an ovary
orchialgia (or-kee-AL-jee-ah)	<i>orchi/o</i> (testes); <i>-algia</i> (pain)	pain in the testes
orchioopathy (or-kee-OP-ah-thee)	<i>orchi/o</i> (testes); <i>-pathy</i> (disease)	any disease of the testes
orchitis (or-KY-tihs)	<i>orchi/o</i> (testes); <i>-itis</i> (inflammation)	inflammation of a testis
ovarialgia (oh-vahr-ee-AL-jee-ah)	<i>ovari/o</i> (ovary); <i>-algia</i> (pain)	pain in an ovary
ovaritis (ohv-ah-RY-tihs)	<i>ovari/o</i> (ovary); <i>-itis</i> (inflammation)	inflammation of an ovary (see also <i>oophoritis</i>)

TERM AND PRONUNCIATION	ANALYSIS	MEANING
PID, or pelvic inflammatory disease	common English words	acute or chronic suppurative inflammation of female pelvic structures (endometrium, uterine tubes, pelvic peritoneum) due to infection by <i>Neisseria gonorrhoeae</i> , <i>Chlamydia trachomatis</i> , or other organisms
phimosis (fi-MOH-sis)	from the Greek word <i>phimoo</i> (to muzzle); <i>-osis</i> (condition)	narrowing of the opening of the foreskin so it cannot be retracted or pulled back to expose the glans penis
prolapsed uterus	common English word; uterus is a Latin word meaning womb	descent of the uterus or cervix into the vagina
prostatitis (PROS-tah-TYE-tis)	<i>prostat/o</i> (prostate); <i>-itis</i> (inflammation)	inflammation of the prostate
rectocele (REK-toh-seel)	<i>rect/o</i> (rectum); <i>-cele</i> (hernia)	protrusion of the rectum into the posterior wall of the vagina
retroflexion (re-troh-FLEX-shun)	<i>retro-</i> (backward) + flexion, from the Latin word <i>flectere</i> (to bend)	abnormal tipping with the body of the uterus bent back on itself
retroversion (re-troh-VER-shun)	<i>retro-</i> (backward); from the Latin word <i>versio</i> (to turn)	an abnormal tipping of the entire uterus backward
salpingitis (sal-pin-JY-tiss)	<i>salping/o</i> (tube, fallopian tube); <i>-itis</i> (inflammation)	inflammation of the uterine tube
STD, or sexually transmitted disease	common English words	diseases that are transmitted through sexual intercourse or sexual contact (HIV, GC, syphilis, chlamydia)
syphilis (SIF-ih-lis)	from a poem <i>Syphilis sive Morbus Gallicus</i> , by Fracastorius, <i>Syphilus</i> being a shepherd and principal character	a highly contagious sexually transmitted disease that is caused by a bacterium
vaginitis (VAJ-ih-NIGH-tis)	<i>vagin/o</i> (vagina); <i>-itis</i> (inflammation)	inflammation of the vaginal tissues that may be infectious or due to several other causes
varicocele (VAR-ih-ko-seel)	<i>varic/o</i> (varix, varicose, varicosity); <i>-cele</i> (hernia)	a varicose vein of the testes

TERM AND PRONUNCIATION	ANALYSIS	MEANING
Practice and Practitioners		
gynecologist (guy-neh-KOL-oh-jist)	<i>gynec/o</i> (woman, female); <i>-logist</i> (one who studies a certain field)	a specialist of the female reproductive system
gynecology (guy-neh-KOL-oh-jee)	<i>gynec/o</i> (woman, female); <i>-logy</i> (study of)	the study of the female reproductive system
neonatology (NEE-oh-nay-TOL-oh-jee)	<i>neo-</i> (new); <i>nat/o</i> (birth); <i>-logy</i> (study of)	the medical specialty dealing with newborns
neonatologist (NEE-oh-nay-TOL-oh-jist)	<i>neo-</i> (new); <i>nat/o</i> (birth); <i>-logist</i> (one who studies a certain field)	the medical specialist dealing with newborns
obstetrician (OB-steh-trish-uhn)	from the Latin word <i>obstetricis</i> (midwife), derived from the Latin word <i>obstare</i> (to stand opposite to)	a physician who specializes in the medical care of women during pregnancy and childbirth
obstetrics (ob-STET-rihks)	from the Latin word <i>obstetricis</i> (midwife), derived from the Latin word <i>obstare</i> (to stand opposite to)	medical specialty concerned with the medical care of women during pregnancy and childbirth
pediatrician (pee-dee-a-TRISH-an)	from the Greek <i>paid-</i> , stem of <i>pais</i> (child) + <i>-iatr/o</i> (pertaining to medicine)	medical specialist of children
pediatrics (pee-dee-ATriks)	from the Greek <i>paid-</i> , stem of <i>pais</i> (child) + <i>-iatr/o</i> (pertaining to medicine)	medical specialty dealing with children
Diagnostic and Surgical Procedures		
amniocentesis (am-nee-oh-sen-TEE-sihs)	<i>amni/o</i> (amnion); <i>-centesis</i> (surgical puncture for aspiration)	extraction and diagnostic examination of amniotic fluid from the amniotic sac
cervicectomy (surv-ih-SEK-toh-mee); also, rarely, trachelectomy (trak-eh-LEK-toh-mee)	<i>cervic/o</i> (cervix); <i>-ectomy</i> (excision); from the Greek word <i>trachelos</i> (neck)	excision of the uterine cervix
cervicoplasty (SURV-ih-ko-plass-tee) cervicotomy (surv-ih-KOT-oh-mee); also trachelotomy (trak-eh-LOT-oh-mee)	<i>cervic/o</i> (cervix); <i>-plasty</i> (surgical repair); <i>-tomy</i> (incision into); trachelotomy is from the Greek word <i>trachelos</i> (neck) + <i>-tomy</i> (incision into)	surgical repair of the uterine cervix OR the neck incision of the uterine cervix; <i>tracheotomy</i> is the term used to denote an incision into the neck (trachea); but <i>trachelotomy</i> refers to the uterine cervix and is synonymous with <i>cervicotomy</i>

TERM AND PRONUNCIATION	ANALYSIS	MEANING
cesarean section (c-section) (seh-SAYR-ee-ahn); other spellings are caesarean and caesarian	etymology uncertain	surgical operation through the abdominal wall and uterus for delivery of the baby
circumcision (SER-kum-SI-shun)	<i>circum/o</i> (around); from the Latin word <i>caedo</i> (cut)	a surgical procedure to remove the foreskin of the penis
colposcopy (kole-POSS-koh-pee)	<i>colp/o</i> (vagina); <i>-scopy</i> (use of an instrument for viewing)	using an endoscopic instrument to examine the vagina and cervix
D&C, or dilation and curettage	from the Latin word <i>dilatare</i> (to make wider, enlarge) + from the French word <i>curette</i> (scoop)	dilation of the cervix and curettage, which involves scraping of the lining of the uterus
hysterectomy (hiss-toh-REK-toh-mee)	<i>hyster/o</i> (uterus); <i>-ectomy</i> (excision)	surgical removal of the uterus
hysteropexy (HISS-teh-roh-pek-see)	<i>hyster/o</i> (uterus); <i>-pexy</i> (fixation)	surgical fixation of the uterus
hysteroplasty (HISS-teh-roh-plass-tee)	<i>hyster/o</i> (uterus); <i>-plasty</i> (surgical repair)	surgical repair of the uterus
hysterotomy (hiss-teh-ROT-oh-mee)	<i>hyster/o</i> (uterus); <i>-tomy</i> (incision into)	incision of the uterus
laparoscopy (lap-ah-RAH-sko-pee)	<i>lapar/o</i> (of or pertaining to the abdominal wall, flank); <i>-scopy</i> (use of an instrument for viewing)	direct visualization of the interior of the abdomen with the use of a laparoscope
mammography (mam-OG-rah-fee)	<i>mamm/o</i> (breast); <i>-graphy</i> (process of recording)	examination of the breast by means of an imaging technique, such as radiography
mastectomy (MAS-tek-toh-mee)	<i>mast/o</i> (breast); <i>-ectomy</i> (excision)	removal of a breast
oophorectomy (oo-foh-REK-toh-mee)	<i>oophor/o</i> (ovary); <i>-ectomy</i> (excision)	excision of an ovary; ovariectomy
oophoroplasty (OO-foh-roh-plass-tee)	<i>oophor/o</i> (ovary); <i>-plasty</i> (surgical repair)	surgical repair of an ovary
oophorotomy (oo-foh-ROT-oh-mee)	<i>oophor/o</i> (ovary); <i>-tomy</i> (incision into)	incision into an ovary
orchietomy (or-kee-EK-toh-mee)	<i>orchi/o</i> (testes); <i>-ectomy</i> (excision)	removal of one or both testes (less commonly, <i>orchectomy</i> or <i>orchidectomy</i>)

TERM AND P PRONUNCIATION	ANALYSIS	MEANING
orchio plasty (ORK-ee-oh-plass-tee)	<i>orchi/o</i> (testes); <i>-plasty</i> (surgical repair)	surgical repair of a testis
orchio tomy (or-kee-OT-ah-mee)	<i>orchi/o</i> (testes); <i>-tomy</i> (incision into)	incision into a testis
ovario ectomy (oh-vahr-ee-EK-toh-mee)	<i>ovari/o</i> (ovary); <i>-ectomy</i> (excision)	excision of one or both ovaries
ovario tomy (oh-vahr-ee-OT-oh-mee)	<i>ovari/o</i> (ovary); <i>-tomy</i> (incision into)	incision of an ovary
Pap smear (Papanicolaou)	named after George Papanicolaou, who developed the technique	exfoliative biopsy or a scraping of the cervix to diagnose conditions of the cervix and surrounding tissues
salpingo-oophore ctomy	<i>salping/o</i> (tube, fallopian tube) + <i>oophor/o</i> (ovary); <i>-ectomy</i> (excision)	removal of an ovary and fallopian tube
tubal ligation (TOO-ball lie-GAY-shun)	tube + <i>-al</i> (adjective suffix) + ligation, from the Latin word <i>ligare</i> (to bind)	surgical procedure performed for female sterilization where each fallopian tube is tied off or ‘ligated’ to prevent the ovum from reaching the uterus
TURP, or transurethral resection of the prostate	from the Latin <i>trans</i> (across) + from the Greek word <i>ourethra</i> (urethra); + <i>re-</i> (again) from the Latin <i>secare</i> (to cut)	the removal of part or all of the prostate through the urethra
uterop exy (YU-teh-roh-pek-see)	<i>uter/o</i> (uterus); <i>-pexy</i> (fixation)	surgical fixation of the uterus (see also <i>hysteropexy</i>)
uterop lasy (YU-teh-roh-plass-tee)	<i>uter/o</i> (uterus); <i>-plasy</i> (surgical repair)	surgical repair of the uterus (see also <i>hysteroplasmy</i>)
uterot omy (yu-teh-ROT-oh-mee)	<i>uter/o</i> (uterus); <i>-tomy</i> (incision into)	incision of the uterus (see also <i>hysterotomy</i>)
varico ectomy (VAR-ee-coh-SEEL-ek-toh-mee)	<i>varic/o</i> (varix, varicose, varicosity); <i>-cele</i> (hernia); <i>-ectomy</i> (excision)	the removal of a portion of an enlarged vein to remove a varicocele
vasovasost omy (vay-soh-vay-ZOS-toh-mee)	<i>vas/o</i> (vessel, vas deferens); <i>-stomy</i> (creation of an opening)	procedure to restore fertility to a vasectomized male; reconnect the vas deferens

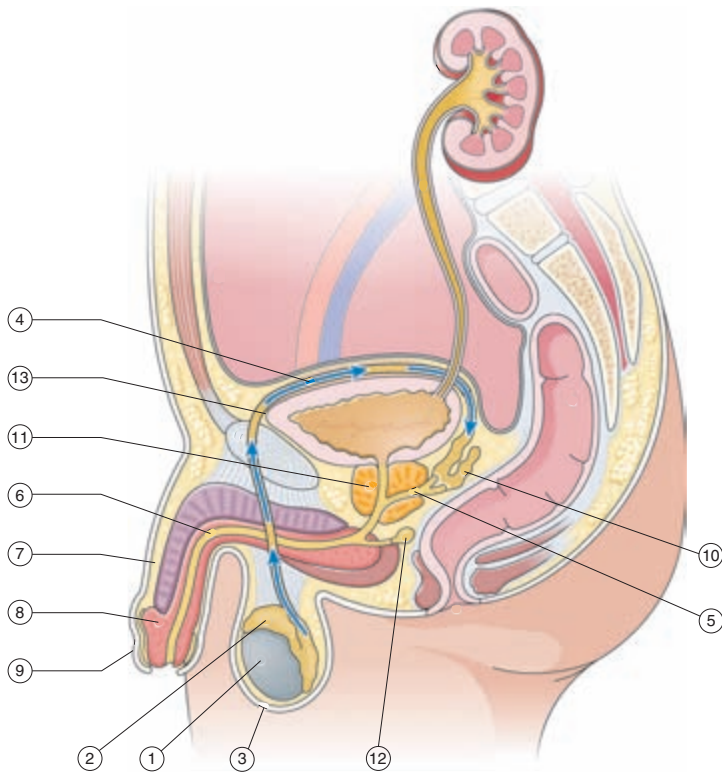
EXERCISES



EXERCISE 14-1 Figure Labeling: The Male Reproductive System

Label the figure of the male reproductive system.

bulbourethral gland	prepuce (foreskin)	urethra
ejaculatory duct	prostate	urinary bladder
epididymis	scrotum	ductus (vas) deferens
glans penis	seminal vesicle	
penis	testis	



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

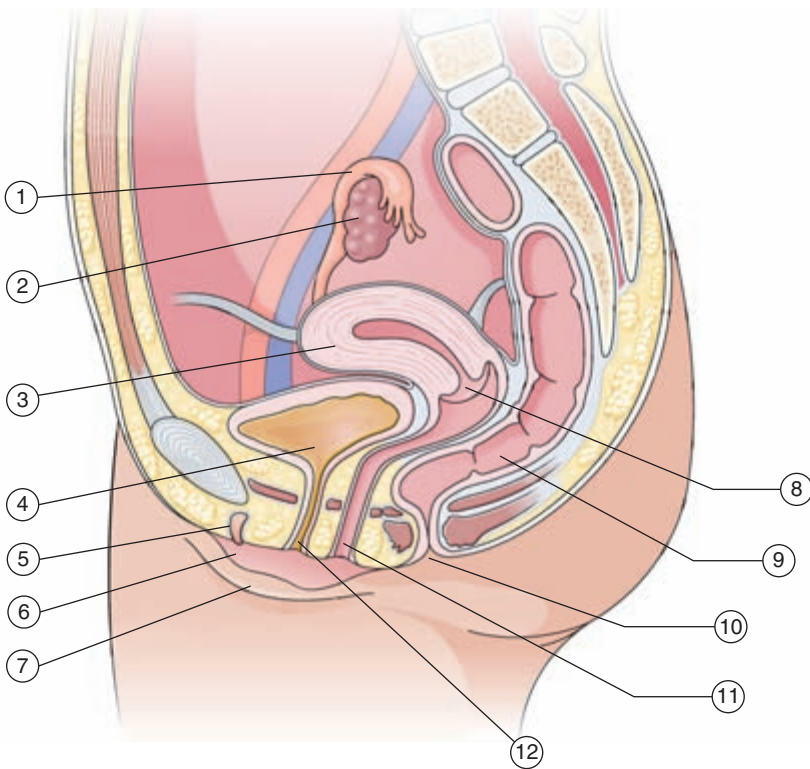
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____



EXERCISE 14-2 Figure Labeling: The Female Reproductive System

Label the figure of the female reproductive system.

anus	labium major	urethra
cervix	labium minor	urinary bladder
clitoris	rectum	uterus
fallopian tube	ovary	vagina



- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____

- 7. _____
- 8. _____
- 9. _____
- 10. _____
- 11. _____
- 12. _____



EXERCISE 14-3 Deciphering Medical Documents

Read the following excerpt from a hospital report, and answer the questions that follow.

A 27-year-old gravida II, para I woman without significant medical history. Blood work was normal before delivery of a stillborn 1-pound, 11-ounce infant during week 21. Although ultrasound studies during week 14 and amniocentesis during week 15 were unremarkable, intrauterine fetal demise had occurred during week 18.

1. What does gravida II, para I signify? _____

2. What is amniocentesis? _____

3. In the final sentence, both “fetal demise” and “stillborn” are self-evident terms. Using your knowledge of word elements, define intrauterine.



EXERCISE 14-4 Building Medical Terms

The combining form *hyster/o* refers to the uterus. Use it to write a term that means:

1. surgical fixation of the uterus _____
2. removal of the uterus _____
3. rupture of the uterus _____
4. suture of the uterus _____

The combining form *metr/o* also means uterus. Use it to write a term that means:

5. any uterine disease _____
6. inflammation of the uterus _____
7. uterine hemorrhage _____

The combining form *vagin/o* means vagina. Use it to write a term that means:

8. relating to the vagina _____
9. vaginal hernia _____

- 10. inflammation of the vagina _____
- 11. relating to the vagina and labia _____

The combining form *colp/o* also means vagina. Use it to write a term that means:

- 12. visual examination of the vagina using an instrument _____
- 13. suture of the vagina _____

The combining form *prostat/o* means prostate gland. Use it to write a term that means:

- 14. removal of the prostate _____
- 15. pertaining to the prostate _____
- 16. inflammation of the prostate _____

The combining form *vesicul/o* means seminal vesicle. Use it to write a term that means:

- 17. disease of the seminal vesicle _____
- 18. inflammation of the seminal vesicle _____

The combining forms *orchid/o*, *orchi/o*, and *orch/o* refer to the testes. Write a term that means:

- 19. inflammation of the testes _____
- 20. disease of the testes _____
- 21. testicular pain _____



EXERCISE 14-5 Surgical Procedure Term Identification

Name the anatomical parts operated on in the following procedures.

- 1. salpingectomy _____
- 2. hysterectomy _____
- 3. tubal ligation _____
- 4. colporrhaphy _____
- 5. mammoplasty _____

6. oophorectomy _____
7. orchiectomy _____
8. vasectomy _____
9. balanoplasty _____
10. mastectomy _____



EXERCISE 14-6 Matching Terms with Definitions

Match the terms in Column 1 with the correct definitions in Column 2.

TERM	DEFINITION
1. ____ vas deferens	A. combination of sperm and associated liquids that nourish the sperm
2. ____ prostate gland	B. pain in the ovary
3. ____ spermatogenesis	C. organs that produce and store male gametes
4. ____ epididymis	D. duct leading out of the epididymis
5. ____ semen	E. production of sperm
6. ____ orchalgia	F. inflammation of an ovary
7. ____ testes	G. pain in the testes
8. ____ hysterectomy and bilateral oophorectomy	H. release of the female gamete from the ovary
9. ____ ovarialgia	I. organ in which the male sperm become functional; lies on top of the testes
10. ____ hysteropexy	J. excision of the uterine cervix
11. ____ period of gestation	K. surgical fixation of the uterus
12. ____ oophoritis	L. the female gamete
13. ____ ovulation	M. surgical removal of the uterus and right and left ovaries
14. ____ ovum	N. time lapse between zygote formation and birth
15. ____ cervicectomy	O. gland that surrounds the urethra; secretes alkaline fluid that assists in sperm motility



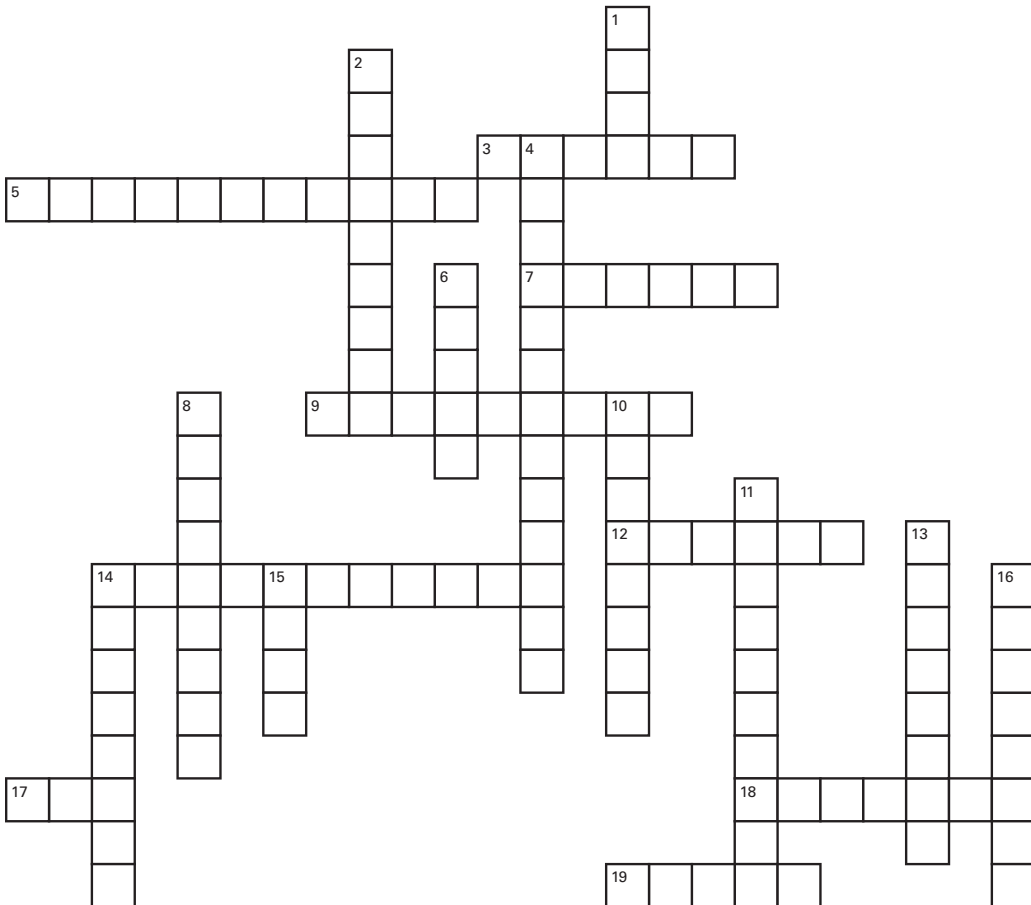
EXERCISE 14-7 Abbreviations

Identify the following abbreviations:

1. BPH _____
2. D&C _____
3. OB _____
4. TURP _____



EXERCISE 14-8 Crossword Puzzle: Reproductive System



ACROSS

3. neck of the uterus
5. endoscopic examination of the abdomen
7. root word for ovary
9. cutting and sealing the vas deferens, male sterilization
12. dark pigmented area around nipple
14. inflammation of the prostate
17. root word for vas deferens and vessel
18. another term for fallopian tube
19. root word for woman

DOWN

1. root word for vulva
2. GC
4. growth of endometrial tissue outside of the uterus
6. tissue that partially covers the entrance to vagina
8. herniation of urinary bladder into vaginal wall
10. beginning of menstruation
11. instrument used to examine the vagina and cervix
13. area between the external vulva to the anus
14. narrowing of the opening of the prepuce so foreskin cannot be retracted
15. abbreviation for transurethral resection of the prostate
16. inflammation of the testis



CHAPTER 14 QUIZ

Multiple Choice

1. The surgical removal of testes is called:
 - a. orchidectomy
 - b. vasectomy
 - c. circumcision
 - d. cauterization
2. A prolapsed uterus means that the uterus is:
 - a. bent backwards on itself
 - b. descended down into the vagina
 - c. tipped forward
 - d. tipped backward
3. Menarche is:
 - a. the beginning of menstruation
 - b. the end of menopause
 - c. part of the first trimester
 - d. another name for gestation
4. Cryptorchidism is:
 - a. underdeveloped testicles
 - b. small ovaries
 - c. ruptured ovaries
 - d. undescended testicles
5. Removal of fluid from the area around the fetus to analyze is called:
 - a. cervicentesis
 - b. amniocentesis
 - c. intrauterine analysis
 - d. none of the above
6. The surgical procedure that removes the prostate gland is called a:
 - a. vasectomy
 - b. prostatectomy
 - c. vasoligation
 - d. circumcision
7. A Papanicolaou test is done to detect:
 - a. fibroids
 - b. metritis
 - c. cancer of the cervix
 - d. ovarian cancer
8. A difficult or painful monthly blood flow is termed:
 - a. dysmenorrhea
 - b. menorrhea
 - c. dysmetrorrhagia
 - d. menometrorrhagia
9. A colposcope is used to visualize the:
 - a. testis
 - b. epididymis
 - c. cervix
 - d. vagina

True or False

Place an X in the “True” or “False” column next to each statement. Write the correct answer in the “Correction, if False” column for any statements you identify as false.

Statement	True	False	Correction, if False
10. Fertilization is the development that occurs between the formation of the zygote and birth of the child.	_____	_____	_____

- | | | | |
|---|-------|-------|-------|
| 11. The tubes between the ovaries and the uterus are called the fallopian tubes. | _____ | _____ | _____ |
| 12. The joining of the male and female gametes is called ovulation. | _____ | _____ | _____ |
| 13. IVF is an abbreviation for intravenous filtration. | _____ | _____ | _____ |
| 14. The term for the release of the female gamete is proliferation. | _____ | _____ | _____ |
| 15. The male ductwork that acts as a part of both the male urinary and male reproductive systems is called the urethra. | _____ | _____ | _____ |
| 16. Hysteralgia is pain in the uterus. | _____ | _____ | _____ |
| 17. Obstetrician is the medical specialty concerned with the medical care of women during pregnancy and childbirth. | _____ | _____ | _____ |
| 18. Endometriosis is difficult or painful menses. | _____ | _____ | _____ |
| 19. Mammography is examination of cells from a mucosal surface, especially the uterine cervix. | _____ | _____ | _____ |