

FEMALE REPRODUCTIVE SYSTEM

Vulva: the external female genitals

Mons venernis (pubis): a rounded mass of fatty tissue over the pubic bone

Labia majora: major lips

Labia minora: minor lips

Clitoris: the highly sensitive female genital structure; plays a large role in sexual arousal and orgasm; consists of a shaft, glans, and spongy tissue that fills with blood during excitement

Prepuce: the foreskin of the clitoris or penis; formed from the upper portion of the labia minora

Urethra: the transport tube leading from the bladder to the outside of the body

Urethral meatus: the opening of the urethra, above the vaginal opening

Vagina: the passage that leads to the internal reproductive organs; birth canal, structure for heterosexual intercourse

Cervix: the opening/ end of the uterus toward the vagina

Uterus: the womb; the hollow, thick-walled, muscular organ where the fertilized egg develops

Fallopian tubes: a duct that guides a mature ovum from the ovary to the uterus (the oviduct); a pair of tubes that extend for the top of the uterus

Ovaries: one of two female reproductive glands that produce ova (eggs) and sex hormones; female gonads

MALE REPRODUCTIVE SYSTEM

Penis: the male genital structure consisting of spongy tissue that becomes engorged with blood during sexual excitement

Glans penis:

Scrotum: a pouch that contains a pair of sperm-producing male gonads (testes)

Testicles: one of two male gonads; where sperm is produced (testes)

Epididymus: a storage duct for maturing sperm; located at the surface of each testis

Vas deferens: a tube that carries sperm from the epididymis through the prostate gland to the seminal vesicles

Prostate gland: an organ in the male reproductive system; produces some of the fluid in semen which help nourish sperm

Seminal vesicles: a tube leading from the vas deferens to the ejaculatory duct; secretes nutrients for semen

Ejaculatory ducts: a tube that carries mature sperm to the urethra so they can exit the body upon ejaculation

Cowper's gland: small organ that produces preejaculatory fluid

FEMALE SEXUAL MATURATION

Puberty: period of biological maturation during adolescence

Changes in puberty are induced by estrogen and progesterone in females

Progesterone: most important female sex hormone that induces the development of female secondary sex characteristics during puberty; regulates the menstrual cycle and sustains pregnancy

Physical changes: breast development, rounding of hips and butt, pubic hair, increased growth rate (8-13, 9-15)

Menstrual cycle: monthly ovarian cycle that leads to menstruation (loss of blood and tissue lining the uterus) in the absence of pregnancy

Menarche: the first menstrual period (varies with ethnicity, genetics, and nutritional status)
28-day cycle on average

-**Menses:** the portion of the menstrual cycle characterized by menstrual flow

-**Estrogenic phase:** begins when menstrual flow ends; the pituitary gland begins to produce increasing amounts of follicle-stimulating hormone (FSH) and luteinizing hormone (LH)

Under the influence of FSH, an egg-containing ovarian follicle begins to mature producing more estrogen. Stimulated by estrogen, the endometrium thickens with large numbers of blood vessels and uterine glands

Endometrium: the lining of the uterus

-Ovulation: the release of a mature egg (ovum) from an ovary; occurs about 14 days prior to menstrual flow

Corpus luteum: part of ovarian follicle left after ovulation, which secretes estrogen and progesterone during the second half of menstrual cycle

-Progestational phase: endometrium continues to develop, readying itself to receive and nourish a fertilized ovum; when pregnancy occurs the onset of menses is prevented

MALE SEXUAL MATURATION

Reproductive maturation of boys occurs about two years later than that of girls (about age 10 or 11)

- Testicular growth is the first sign.
- Pubic hair and facial hair begin to develop after genitals grow. Penis usually reaches full size by age 18.
- Hair on the chest, back, and abdomen increase later in development.
- The voice deepens as a result of the lengthening and thickening of the vocal chords.
- Boys grow taller for about 6 years after the first signs of puberty.

SEXUAL RESPONSE CYCLE

Vasocongestion: the engorgement of tissues that results when more blood flows into an organ than its flowing out (increased muscular tension culminates in rhythmic muscular contractions during orgasm)

1. Excitement phase

Men: penis becomes erect as tissues are engorged with blood; the testes expand and are pulled upward within the scrotum

Women: the clitoris, labia, and vaginal walls are engorged with blood and the vaginal walls become moist with lubricating fluid

2. Plateau phase: extension of excitement phase

Men: penis becomes harder; the testes become larger

Women: lower part of the vagina swells, as its upper end expands and vaginal lubrication increases

Both: heart rate doubles & respiration becomes faster

3. Orgasmic phase (orgasm): rhythmic contractions occur

Men: contractions in the penis, urethra, prostate gland, seminal vesicles, and muscles in the pelvic and anal regions → ejaculation of semen

Women: contractions occur in the lower part of the vagina and in the uterus, pelvic region, and anus

4. Resolution phase: all changes during excitement phase are reversed; excess blood drains from tissues, muscles in the region relax, and genital structures return to their unstimulated state

General reactions: nipples become erect, women's breasts swell, skin of chest becomes flushed

Male orgasm: ejaculation of semen; then enter refractory period-cannot be restimulated to orgasm

Female orgasm: no refractory period and can immediately be restimulated to orgasm

SEXUAL PROBLEMS IN WOMEN

Vaginitis: inflammation of the vagina, caused by a variety of organisms

Candida: yeast infection

Trichomonas: overgrowth of a variety of bacteria

Endometriosis: growth of endometrial tissue (tissue normally found lining the uterus) outside of the uterus

PRINCIPLES OF CONTRACEPTION

Barrier methods: physically block the sperm from reaching the egg (diaphragms, condoms, etc)

Hormonal methods: alter the biochemistry of the woman's body; prevent ovulation and produce changes that make it more difficult for the sperm to reach the egg if ovulation does occur (BC)

Natural methods: based on the fact that egg & sperm have to be present at the same time for fertilization (abstinence)

Surgical methods: female and male sterilization (prevent transport of the sperm or eggs to the site of conception)

BIRTH CONTROL PILLS

Oral Contraceptives (combination pills): estrogen & progestin; most common; taken orally, daily; prevent ovulation, thicken cervical mucus, inhibit implantation

-Advantages: high effectiveness, easy to use, sexual spontaneity, predictable periods, decreased symptoms, reversibility

Reduced: breast disease, anemia, PID, ovarian cysts, endometrial and ovarian cancers, colon and rectal cancers

-Disadvantages: no STI protection, female responsibility, \$, physical and psychological side effects; lower effectiveness if over weight/smoker, history of circulatory problems, strokes, heart disease, breast or uterine cancer, hypertension, diabetes, and vaginal bleeding cannot use

-Effectiveness: .3-8.7% failure rate

CONTRACEPTIVE SKIN PATCH

Ortho Evra patch: thin 1 ¾ square patch; releases estrogen and progestin into blood stream; prevention is the same as OCs; worn for 1 week then replaced for 3 consecutive weeks

-Advantages: highly effective, high compliance, sexual spontaneity, decreased menstrual flow & symptoms, reversibility

-Disadvantages: no STI protection, female responsibility, physical discomfort, skin irritation, blood clots

-Effectiveness: .3-8.7% failure

VAGINAL CONTRACEPTIVE RING

Nuva Ring: 2 in flexible ring; contains estrogen and progestin; prevention is same as OCs; ring removed during 4th week

-Advantages: highly effective, sexual spontaneity, decreased menstrual flow & symptoms, menstrual regularity, reversibility

-Disadvantages: no STI protection, physical and psychological side effects, vaginal irritation

-Effectiveness: .3-8.7% failure

CONTRACEPTIVE IMPLANTS

Implanon: progestin only; single implant for 3 years; inhibits ovulation, thickens cervical mucus, affects uterine lining

-Advantages: highly effective, sexual spontaneity, fast reversibility, low risk of blood clots & cardiovascular complications (no estrogen)

-Disadvantages: no STI protection, bothersome, \$, need for professional insertion, menstrual irregularities, headaches, nausea, acne, mood swings

-Effectiveness: .1% failure

INJECTABLE CONTRACEPTIVES

Depo-Provera: injectable progestin every 12 weeks

-Advantages: highly effective, sexual spontaneity, lower risk of blood clots and cardiovascular complications, only periodic injections

-Disadvantages: no STI protection, menstrual irregularities, weight gain, longer reversibility, decreased bone density

-Effectiveness: .3-6.7% failure