ORGAN REPRODUKSI

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Textbooks

Reproductive Functions of the Male
Male Sexual Anatomy

- External male genitals:
  - Penis
  - Scrotum

- Internal male genitals:
  - Testes
  - Epididymides
  - Ductus (vas) deferens
  - Urethra
  - Seminal vesicles
  - Prostate gland
  - Cowper’s gland
Functions: Urination and Copulation
Functions: Transport urine & semen
Function: Maintain temperature of testes approx. 3°C below normal body temp.
Superficial inguinal ring (end of inguinal canal)
Function: Produce sperm and testosterone
Function: Produce Sperm

Testis

Seminiferous Tubules

Testis

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Testis Cross Section

Interstitial Cells

Produce Testosterone
Function: Sperm storage and maturation
Function: Transport sperm to urethra
Function: Produce 60% of alkaline semen including fructose to provide energy for sperm, and PG-Fibrinogen.
Function: Produces up to 1/3 of the semen & includes nutrients & enzymes to activate sperm.
Function: Secretes mucous & alkaline buffers to neutralize acidic conditions of urethra.

Cowper’s Gland
The reproductive functions of the male can be divided into three major subdivisions:

1. spermatogenesis, which means simply the formation of sperm;

2. performance of the male sexual act;

3. regulation of male reproductive functions by the various hormones.
Physiologic Anatomy of the Male Sexual Organs

- The testis is composed of up to 900 coiled *seminiferous tubules*, each averaging more than one half meter long, in which the sperm are formed.
- The sperm then empty into the *epididymis*, another coiled tube about 6 meters long. The epididymis leads into the *vas deferens*, which enlarges into the *ampulla of the vas deferens* immediately before the vas enters the body of the *prostate gland*.
- *Two seminal vesicles*, one located on each side of the prostate, empty into the prostatic end of the ampulla, and the contents from both the ampulla and the seminal vesicles pass into an ejaculatory duct leading through the body of the prostate gland and then emptying into the *internal urethra*. 
• **Prostatic ducts**, too, empty from the prostate gland into the *ejaculatory duct* and from there into the *prostatic urethra*.

• Finally, the urethra is the last connecting link from the testis to the exterior. The urethra is supplied with mucus derived from a large number of minute urethral glands located along its entire extent and even more so from bilateral bulbourethral glands (Cowper’s glands) located near the origin of the urethra.
Function of the Seminal Vesicles

- Each seminal vesicle is a tortuous, loculated tube lined with a secretory epithelium that secretes a mucoid material containing an abundance of fructose, citric acid, and other nutrient substances, as well as large quantities of prostaglandins and fibrinogen.

- During the process of emission and ejaculation, each seminal vesicle empties its contents into the ejaculatory duct shortly after the vas deferens empties the sperm. This adds greatly to the bulk of the ejaculated semen, and the fructose and other substances in the seminal fluid are of considerable nutrient value for the ejaculated sperm until one of the sperm fertilizes the ovum.

- Prostaglandins are believed to aid fertilization in two ways: (1) by reacting with the female cervical mucus to make it more receptive to sperm movement and (2) by possibly causing backward, reverse peristaltic contractions in the uterus and fallopian tubes to move the ejaculated sperm toward the ovaries (a few sperm reach the upper ends of the fallopian tubes within 5 minutes).
Function of the Prostate Gland

- secretes a thin, milky fluid that contains calcium, citrate ion, phosphate ion, a clotting enzyme, and a profibrinolysin
- During emission, the capsule of the prostate gland contracts simultaneously with the contractions of the vas deferens so that the thin, milky fluid of the prostate gland adds further to the bulk of the semen.
- A slightly alkaline characteristic of the prostatic fluid may be quite important for successful fertilization of the ovum, because the fluid of the vas deferens is relatively acidic owing to the presence of citric acid and metabolic end products of the sperm and, consequently, helps to inhibit sperm fertility.
• Also, the vaginal secretions of the female are acidic (pH of 3.5 to 4.0). Sperm do not become optimally motile until the pH of the surrounding fluids rises to about 6.0 to 6.5.
• Consequently, it is probable that the slightly alkaline prostatic fluid helps to neutralize the acidity of the other seminal fluids during ejaculation, and thus enhances the motility and fertility of the sperm.
Semen

- ejaculated during the male sexual activity
- composed of the fluid and sperm from the vas deferens (about 10 per cent of the total), fluid from the seminal vesicles (almost 60 per cent), fluid from the prostate gland (about 30 per cent), and small amounts from the mucous glands, especially the bulbourethral glands.
- bulk of the semen is seminal vesicle fluid, which is the last to be ejaculated and serves to wash the sperm through the ejaculatory duct and urethra.
- average pH of the combined semen is about 7.5, the alkaline prostatic fluid having more than neutralized the mild acidity of the other portions of the semen.
- The prostatic fluid gives the semen a milky appearance, and fluid from the seminal vesicles and mucous glands gives the semen a mucoid consistency.
A clotting enzyme from the prostatic fluid causes the fibrinogen of the seminal vesicle fluid to form a weak fibrin coagulum that holds the semen in the deeper regions of the vagina where the uterine cervix lies. The coagulum then dissolves during the next 15 to 30 minutes because of lysis by fibrinolysin formed from the prostatic profibrinolysin. In the early minutes after ejaculation, the sperm remain relatively immobile, possibly because of the viscosity of the coagulum.

As the coagulum dissolves, the sperm simultaneously become highly motile.

Once they are ejaculated in the semen, their maximal life span is only 24 to 48 hours at body temperature.

At lowered temperatures, however, semen can be stored for several weeks, and when frozen at temperatures below -100°C, sperm have been preserved for years.
Figure 17.2 Fertilization.

a. During fertilization, a single sperm enters the egg. b. A head of a sperm has a membrane-bound acrosome filled with enzymes. When released, these enzymes digest away the jelly coat around the egg, and the acrosome extrudes a filament that attaches to a receptor on the vitelline membrane. Now the sperm nucleus enters and fuses with the egg nucleus, and the resulting zygote begins to divide. The vitelline membrane becomes the fertilization membrane, which prohibits any more sperm from entering the egg.
Effect of Temperature on Spermatogenesis

- Increase temperature of the testis can prevent spermatogenesis by causing degeneration of most cells of the seminiferous tubules besides the spermatogonia. In these patients is unlikely to be successful.

- The reason the testes are located in the dangling scrotum is to maintain the temperature of these glands below the internal temperature of the body, although usually only about 2°C below the internal temperature.

- Thus, the scrotum theoretically acts as a cooling mechanism for the testes (but a controlled cooling), without which spermatogenesis might be deficient during hot weather.
Male Sexual Act

- Neuronal Stimulus for Performance of the Male Sexual Act
- glans penis
  ✓ The most important source of sensory nerve signals for initiating the male sexual act
  ✓ contains an especially sensitive sensory end-organ system that transmits into the central nervous system that special modality of sensation called *sexual sensation*.
  ✓ The slippery massaging action of intercourse on the glans stimulates the sensory end-organs, and the sexual signals in turn pass through the *pudendal nerve*, then through the *sacral plexus* into the sacral portion of the *spinal cord*, and finally up the cord to undefined areas of the *brain*.
- Impulses may also enter the spinal cord from areas adjacent to the penis to aid in stimulating the sexual act.
• Sexual sensations can even originate in internal structures, such as in areas of the urethra, bladder, prostate, seminal vesicles, testes, and vas deferens.

• Mild infection and inflammation of these sexual organs sometimes cause almost continual sexual desire, and some “aphrodisiac” drugs, such as cantharidin, increase sexual desire by 

irritating the bladder and urethral mucosa, inducing inflammation and vascular congestion.
Psychic Element of Male Sexual Stimulation

• Simply thinking sexual thoughts or even dreaming that the act of intercourse is being performed can initiate the male act, culminating in ejaculation.

• Nocturnal emissions during dreams occur in many males during some stages of sexual life, especially during the teens.
Integration of the Male Sexual Act in the Spinal Cord

- brain function is probably not necessary for its performance because appropriate genital stimulation can cause ejaculation in some animals and occasionally in humans after their spinal cords have been cut above the lumbar region.
- The male sexual act results from inherent reflex mechanisms integrated in the sacral and lumbar spinal cord, and these mechanisms can be initiated by either psychic stimulation from the brain or actual sexual stimulation from the sex organs, but usually it is a combination of both.
How does the male apparatus work?
Stages of the Male Sexual Act

1. Penile Erection—Role of the Parasympathetic Nerves.
  - first effect of male sexual stimulation, and the degree of erection is proportional to the degree of stimulation, whether psychic or physical.
  - caused by parasympathetic impulses that pass from the sacral portion of the spinal cord through the pelvic nerves to the penis. These parasympathetic nerve fibers, release nitric oxide and/or vasoactive intestinal peptide in addition to acetyl-choline. The nitric oxide especially relaxes the arteries of the penis, as well as relaxes the trabecular meshwork of smooth muscle fibers in the erectile tissue of the corpora cavernosa and corpus spongiosum in the shaft of the penis.
  - This erectile tissue consists of large cavernous sinusoids, which are normally relatively empty of blood but become dilated tremendously when arterial blood flows rapidly into them under pressure while the venous outflow is partially occluded.
  - Also, the erectile bodies, especially the two corpora cavernosa, are surrounded by strong fibrous coats; therefore, high pressure within the sinusoids causes ballooning of the erectile tissue to such an extent that the penis becomes hard and elongated. This is the phenomenon of erection.
Figure 20.23  Role of nitric oxide in penile erection and the action of Viagra. Nitric oxide is released as a neurotransmitter by particular parasympathetic axons, and is secreted as a paracrine regulator by endothelial cells of vessels in the penis (eNOS = endothelial nitric oxide synthase). Nitric oxide stimulates the production of cyclic GMP (cGMP), which serves as the intracellular second messenger in the mechanism of smooth muscle relaxation that leads to erection. The enzyme phosphodiesterase (PDE) breaks down cGMP, and it is this enzyme that is inhibited by the drug sildenafil (Viagra).
Figure 80-6

Erectile tissue of the penis.
Lubrication, a Parasympathetic Function

- The parasympathetic impulses cause the urethral glands and the bulbourethral glands to secrete mucus. This mucus flows through the urethra during intercourse to aid in the lubrication during coitus.

- However, most of the lubrication of coitus is provided by the female sexual organs rather than by the male.

- Without satisfactory lubrication, the male sexual act is seldom successful because unlubricated intercourse causes grating, painful sensations that inhibit rather than excite sexual sensations.
Emission and Ejaculation—Function of the Sympathetic Nerves.

- Culmination of the male sexual act.
- When the sexual stimulus becomes extremely intense, the reflex centers of the spinal cord begin to emit sympathetic impulses that leave the cord at T-12 to L-2 and pass to the genital organs through the hypogastric and pelvic sympathetic nerve plexuses to initiate emission, the forerunner of ejaculation.

Emission
- begins with contraction of the vas deferens and the ampulla to cause expulsion of sperm into the internal urethra.
- Then, contractions of the muscular coat of the prostate gland followed by contraction of the seminal vesicles expel prostatic and seminal fluid also into the urethra, forcing the sperm forward.
- All these fluids mix in the internal urethra with mucus already secreted by the bulbourethral glands to form the semen.
Ejaculation

- The filling of the internal urethra with semen elicits sensory signals that are transmitted through the pudendal nerves to the sacral regions of the cord, giving the feeling of sudden fullness in the internal genital organs.
- Also, these sensory signals further excite rhythmical contraction of the internal genital organs and cause contraction of the ischiocavernosus and bulbocavernosus muscles that compress the bases of the penile erectile tissue. These effects together cause rhythmical, wavelike increases in pressure in both the erectile tissue of the penis and the genital ducts and urethra, which “ejaculate” the semen from the urethra to the exterior.
- Rhythmical contractions of the pelvic muscles and even of some of the muscles of the body trunk cause thrusting movements of the pelvis and penis, which also help propel the semen into the deepest recesses of the vagina and perhaps even slightly into the cervix of the uterus.
- This entire period of emission and ejaculation is called the male orgasm.
- At its termination, the male sexual excitement disappears almost entirely within 1 to 2 minutes and erection ceases, a process called resolution.
Human Sexual Response

- Stages of sexual response
  - Excitement/arousal
  - Plateau
  - Orgasm
  - Resolution
Changes in the Genitals

**Excitement**
- Full erection of penis
- Partial erection
- Unstimulated state
- Testes elevate toward perineum
- Skin of scrotum tenses, thickens, and elevates

**Plateau**
- Cowper's gland secretion
- Testes increase in size and are fully elevated
- Scrotum thickens
- Cowper's gland
- Prostate enlarges
- Color of penile glans deepens
1. Excitement/Arousal Phase

- Vascongestion of penis results in erection.
- Meatus dilates.
- Scrotal skin tenses, thickens.
- Testes begin elevation.

2. Plateau Phase

- Coronal ridge of the glans increases in diameter and turns a deeper reddish purple.
- The Cowper's gland may release fluid.
- Testes become completely elevated and engorged when orgasm is imminent.
Orgasm

Vas deferens contracts
Internal sphincter of bladder contracts
Penile contractions
Urethral contractions
Prostate gland contracts
Seminal vesicle contracts
Anal sphincter contracts

Resolution

Erection disappears
Testes descend
Unstimulated state
Loss of testicular congestion
Scrotum thins and folds return
3. Orgasmic Phase

Contractions of vas deferens and seminal vesicles expel sperm and semen into urethra.

Prostrate expels fluid into the urethra.

Rectal sphincter contracts.

Sperm and semen expelled by rhythmic contractions of urethra.

4. Resolution Phase

Testes descend.

Erection subsides.

Scrotum thins, folds return.
Ejaculation

- How fast does it leave the body?
- How far can it go?
- How much is released?
- Is it really released as a stream?
- Muscle contractions are 0.8 seconds apart
Can you stop ejaculation?

Sure! Just press here
Male Response Cycle

SEX RESPONSE CYCLE

ORGASM

MEN ONLY-REFRACTORY PERIOD

PLATEAU

EXCITEMENT

RESOLUTION

TIME

ONE OF SEVERAL TYPICAL RESPONSE CYCLES FOR WOMEN BUT THE MOST COMMON RESPONSE AMONG MEN
Men, Sexuality, and Art

“Man Posing”
Lucian Freud, 1985

“The Wrestlers”
The original: 350 B.C.
“David”
Michelangelo 1504

“Dionysus”
Praxiteles circa 350 B.C.
Marsyas

(Photograph)
George Platt Lyness, 1953
Male Anatomy

“Eros 3”
Oil on canvas
Thomas
The Penis

What’s normal?
Is size really important?
Two out of three men think that their penis is too small, even though it is average size. Why?
YOU'RE A SHITTY PIANIST...

...YOU'RE AN INTROVERT, TOO...

...AND YOU AREN'T THAT HANDSOME...

...SO WHY DO I HANG AROUND YOU?

MY TEN INCH PENIS.

YEAH, THAT MAKES SENSE.
A human’s penis is 4-6 inches long when erect (3-5 inches otherwise).
Who’s problem is it?

You or your partner’s? If it is yours, you might need therapy, or surgery, or.....

Buy a penis extension...
The Corona and Frenulum

- Foreskin
- Sulcus
- Frenulum
- Glans
- Corona
- Urethral opening (meatus)
Masturbation

“The good thing about masturbation is that you don't have to dress up for it.” Truman Capote

Bonobo apes do it; humans do it…
Use your hands, or…
Purchase some help!
Can you break an erection?
You’re darn right!

Peyronie’s Disease
Affects 1 out of 100 men
Usually after age 40
Cause is unknown
What happens as men age?
How many orgasms does a male have each year?

- Age 20: 104
- Age 30: 121
- Age 40: 84
- Age 50: 52
- Age 60: 35
- Age 70: 22
- Age 80: Who’s counting??
What happens with age?

- The angle of the dangle changes
  - Age 20: +10 degrees
  - Age 30: +20 degrees
  - Age 40: +1 degree
  - Age 50: -1 degree
  - Age 70: -25 degrees

- It gets smaller (20-25%)

- Refractory period changes
Reproductive Functions of the Female
Female Anatomy and Physiology

“Female Nude Interior No 5”
Jim Read
“Seated Nude”
Bronze
Jean Doyle

“Twisted Female Nude Torso”
Thomas Hart Benton
"Awakening"
Oil on Canvas 2005
Audrey Shwidkiy

"Pensamiento"
Differntiation of Sex Organs

Undifferentiated Stage Prior to 6th Week

- Genital groove
- Urogenital fold
- Genital tubercle
- Labioscrotal swelling
- Anus

Female

7th-8th Week

- Genital tubercle (clitoris)
- Labial swelling
- Vulval groove
- Anus

Male

12th Week

- Genital tubercle (penis)
- Urethral groove
- Scrotal swelling
- Anus

Female

- Clitoris
- Opening of urethra
- Opening of vagina
- Labia minora
- Labia majora

Male

- Penis
- Urethral closure
- Scrotum
**Homologous Structures - Adult**

- **Prostate gland**
- **Corpus spongiosum**
- **Corpus cavernosum of the penis**
- **Urethral surface of the penis**
- **Glans penis**
- **Penile prepuce (foreskin)**

**Homologous Organs**

- **Glans penis**
- **Penile prepuce (foreskin)**
- **Corpus cavernosum of the penis**
- **Urethral surface of the penis**
- **Prostate gland**
- **Scrotum**
- **Corpus spongiosum**

- **Glans Clitoris**
- **Clitoral prepuce (hood)**
- **Corpus cavernosum of the clitoris**
- **Labia minora**
- **Skene’s glands (either side of urethra)**
- **Labia majora**
- **Vestibular bulbs (either side of the vaginal opening)**
EXTERNAL STRUCTURES: THE VULVA

- Mons pubis
- Clitoris
- Labia majora
- Labia minora
Mons Pubis

- Latin for pubic mound
  - The pad of fatty tissue
  - Pubic hair
  - Sensitive to stimulation
EXTERNAL STRUCTURES: THE VULVA

- Mons veneris
- Labia majora (major lips)
- Labia minora (minor lips)
- Perineum
- Prepuce of clitoris
- Clitoral glans
- Urethral opening
- Introitus (vaginal opening)
- Anus
Tour of the Vulva

Clitoris: Glans Clitoris

- Highly sensitive structure of the female external genitals.
- Is the only organ in the human body whose only function is pleasure.
- Consists of:
  - **Glans**
  - **Shaft**: has small spongy structures that engorge with blood during sexual arousal.
  - **Internal crura** (roots)
- Covered by clitoral hood
- Stimulation of clitoris is the most common way that most women achieve orgasm.
- External part of the clitoris has about the same # of nerve endings as the head of the penis.
CLITORIS ANATOMY

Glans clitoris

Corpus cavernosum

Crus clitoris

Urethral opening

Bulb of vestibule

Vaginal opening
CLITORIS

- Erectile internal structure
  - Two 3.5” long branches called crura
  - Crura contain two corpora cavernosa: hollow chambers that fill with blood and swell during arousal

- Orgasmic
  - Enlarges initially, then retracts beneath hood just before and during orgasm
  - Follows same pattern with repeated orgasms, though swelling is less pronounced
COMPARATIVE ANATOMY: CLITORIS AND PENIS
LABIA MAJORA

- Two folds of spongy flesh extending from the mons pubis toward the perineum
- May have hair present
- Contain a significant concentration of nerve endings
**Labia Minora**

- Small folds within the labia majora that meet above the clitoris to form the clitoral hood
- Significant variation in appearance
- Contain a significant concentration of nerve endings
- Swell during sexual arousal
- Enclose the vestibule
Tour of the Vulva

**Labia minora** (inner lips):
- Located within outer lips and may protrude between them.
- Hairless folds of skin that join at the prepuce (clitoral hood) and extend down past urinary and vaginal openings.
- Contain sweat glands, blood vessels, and nerve endings.
- Vary considerably in size, shape, and color; become darker in color during pregnancy.
Vestibule, Labia Minora, Majora
BARTHOLIN’S (VESTIBULAR) AND SKENE’S GLANDS

- Clitoris
- Labia minora
- Urethra
- Skene’s glands
- Vagina
- Bartholin's glands
GLANDS

- **Lesser Vestibular** (Paraurethral, Skene's) Male Homolog = prostate located on the upper wall of the *vagina*, around the lower end of the *urethra*. They drain into the urethra and near the urethral opening **Function** - mucus production to aid lubrication during intercourse

- **Greater Vestibular** (Bartholin's) Male Homolog = bulbourethral glands located slightly below and to the left and right of the opening of the *vagina*. They secrete *mucus* to provide lubrication, especially when the woman is *sexually aroused*
Clitoris
Urethral opening
Hymen

Annular hymen
Septate hymen
Cribriform hymen

Imperforate hymen
Parous introitus (after childbirth)
INTERNAL STRUCTURES

- Vagina
- Cervix
- Uterus
- Fallopian tubes
- Ovaries
INTERNAL STRUCTURES

(a) Side view

(b) Front view
**Fungsi:** Menerima penis & semen dan berperan sebagai jalan lahir dan aliran menstruasi.
Vagina

- Two reproductive functions:
  - Encompasses penis during coitus (vaginal intercourse)
  - Birth canal
  - 3” to 5” inches in length

- **Introitus**: the lower third of the vagina
  - The majority vaginal nerve endings

- **Hymen**: thin membrane that partially covers introitus

- **Grafenberg Spot** (G-spot)
  - An erotically sensitive area on front wall of the vagina mid-way between pubic bone and cervix
  - Female ejaculation
Hymen
**FUNGSI:** Sebagai jalan untuk sperma, implantasi blastokis, menyediakan nutrisi bagi fetus dan mengeluarkan bayi.
FEMALE INFERTILITY

- Uterine muscle tumor
- Benign (>95%)
- 25-30% of women
NORMAL SHAPE OF UTERUS
Fibroid Uterus
Female Infertility - Uterus

- Mullerian defects (congenital)
  - Absent uterus
  - Bicornuate/septate
Mullerian Defect
FUNGSI: Mukosa servikal mensekresikan mukus menghambat masuk ke uterus.
**Fungsi:** Bagian uterus tempat implantasi terjadi.

Endometrium
**FUNGSI:** KONTRAKSI OTOT

Myometrium
**Fungsi**: Saluran untuk oosit dan tempat fertilisasi.

Uterine Tubes
BLOCKED TUBES CAUSE INFERTILITY
FUNGSI: MENGHASILKAN OOSIT & HORMON ESTROGEN DAN PROGESTERON.
**FUNGSI:** Menyapu permukaan ovarium untuk mengambil oosit ke tuba ovarium.

**Fimbriae**
OTHER STRUCTURES

- Urethra: tube through which urine passes
- Urethral opening
- Perineum: area between genitals and anus
- Pelvic floor
FEMALE PERINEUM AND MUSCULATURE
OTHER STRUCTURES

- **Anus**: opening of rectum
  - Contains two sphincters (circular muscles that open and close like valves)
  - Dense supply of nerve endings
  - The lining of the rectum is fragile
    - In anal sex play, care must be taken not to rupture the delicate tissues
    - Condom and Lubrication
MAMMARY GLANDS [ BREASTS]

- Present in both sexes - normally only functional in females
- Developmentally they are derived from sweat glands
- Contained within a rounded skin-covered breast anterior to the pectoral muscles of the thorax
- Slightly below center of each breast is a ring of pigmented skin, the areola - this surrounds a central protruding nipple
- Internally - they consist of 15 to 25 lobes that radiate around and open at the nipple
- Each lobe is composed of smaller lobules - these contain alveoli that produce milk when a women is lactating
- non-pregnant women - glandular structure is undeveloped - hence breast size is largely due to the amount of fat deposits
**Breasts**

- Reproductive function of female breasts is to nourish offspring through lactation
  - Composed of fatty tissue and 15-25 lobes that radiate around a central nipple
  - **Areola:** the ring of darkened skin around nipple
  - Nipples erect in response to stimulation, cold, or sexual arousal
  - Women differ in the breast stimulation they find pleasurable
THE FEMALE BREAST

- Suspensory ligaments
- Ribs
- Fat
- Chest wall
- Areola
- Nipple
- Milk ducts
- Mammary glands
- Alveoli
Breasts

What’s normal?

What are they made of?
SEXUAL RESPONSE MODELS

- Masters and Johnson
- Kaplan
- Loulan
FEMALE SEXUAL RESPONSE MODEL

- Masters and Johnson 4 Phase Model:
  - excitement
  - plateau
  - orgasm
  - resolution
FEMALE SEXUAL RESPONSE MODEL

- Kaplan’s Tri-Phasic Model
  - Desire
  - Excitement
  - Orgasm
**Female Sexual Response Model**

- Loulan’s Sexual Response Model:
  - Incorporates biological and affective dimensions
    - Willingness
    - Desire
    - Excitement
    - Engorgement
    - Orgasm
    - Pleasure
Two people make a conscious decision to have sex even if there might not be emotional or physical desire.

Some form of thought, fantasy, or erotic feeling causes individuals to seek sexual gratification. (An inability to become sexually aroused may be due to a lack of desire, which can have a variety of causes.)

Physical and/or psychological stimulation produces characteristic physical changes. In men, increased amounts of blood flow to the genitals produce erection of the penis; the scrotal skin begins to smooth out, and the testicles draw up toward the body. Later in this phase, the testes increase slightly in size. In women, vaginal lubrication begins, the upper vagina expands, the uterus is pulled upward, and the clitoris becomes engorged. In both women and men, the breasts enlarge slightly, and the nipples may become erect. Both men and women experience increasing muscular contractions.

Sexual tension levels off. In men, the testes swell and continue to elevate. The head of the penis swells slightly and may deepen in color. In women, the outer third of the vagina swells, lubrication may slow down, and the clitoris pulls back. Coloring and swelling of the labia increase. In both men and women, muscular tension, breathing, and heart rate increase.

Increased tension peaks and discharges, affecting the whole body. Rhythmic muscular contractions affect the uterus and outer vagina in women. In men, there are contractions of the tubes that produce and carry semen, the prostate gland, and the urethral bulb, resulting in the expulsion of semen (ejaculation).

The body returns to its unaroused state. In some women, this does not occur until after multiple orgasms.

Pleasure is one purpose of sexuality and can be defined only by the individual. One can experience pleasure during all or only some of the above stages, or one can leave out any of the stages and still have pleasure.
DESIRE: MIND OR MATTER?

- A complex interaction between
  - The neural system –sensory input
  - Hormones
- Occurs throughout many parts of the body
- Sexual Satisfaction Research
EXPERIENCING SEXUAL AROUSAL

- Vasocongestion
- Myotonia
- Vaginal Sweating
- Tenting
- Labia may enlarge or flatten and separate
- Sex flush

- Clitoris swells
- Breathing and heart rate increase
- Nipples become erect, breasts may enlarge
- Uterus elevates
ORGASM

- As excitement increases
  - Clitoris retracts beneath clitoral hood
  - Vaginal opening decreases by about 1/3
  - Orgasmic platform

- Continued stimulation brings **orgasm**:  
  - Rhythmic contractions
  - Pleasure
STAGES OF SEXUAL RESPONSE: WOMEN

- Unaroused
  - Clitoral shaft and glands swell; glans retracts beneath hood
  - Labia minora deepen in color and enlarge
  - Labia majora separate from the vaginal opening
  - Bartholin’s glands may secrete a small amount of fluid

- Excitement
  - Uterus elevates further
  - Upper part of vagina expands
  - Vaginal wall forms orgasmic platform
  - Color of labia deepens
  - Clitoris withdraws under clitoral hood

- Late Excitement or Plateau
  - Constrictions in uterus
  - Rhythmic contractions in vagina
  - Rectal sphincter contracts

- Orgasm
  - Clitoris remains retracted under hood
  - Orgasmic platform contracts
  - Anal sphincter contracts

- Resolution
  - Uterus lowers
  - Seminal pool
  - Orgasmic platform disappears
  - Vagina returns to normal
  - Clitoris returns to unaroused position
FEMALE SEXUAL RESPONSE

1. Excitement/Arousal Phase
   - Uterus elevates.
   - Bladder
   - Pubic bone
   - Clitoris enlarges.
   - Vaginal lubrication begins.
   - Inner labia swells.

2. Plateau Phase
   - Uterus elevates and increases in size.
   - Inner two-thirds of vagina expand and lengthen.
   - Outer third of vagina forms orgasmic platform.
   - Clitoris retracts under hood.
Female Sexual Response

3. Orgasmic Phase
- Uterus contracts.
- Orgasm platform contracts.
- Rectal sphincter contracts.

4. Resolution Phase
- Uterus shrinks, returns to its normal position.
- Cervix drops to its unaroused position.
- Vagina returns to its unaroused position.
- Clitoris descends to its unaroused position.
Is the G-Spot real?
G-Spot

- Pubic bone
- Approximate location of G-spot
- Emptied bladder
- Uterus
- Cervix
- Anus
- Anterior vaginal wall
- Urethra
- Urethral opening (exit point for ejaculate)
BREAST CHANGES

Excitement
- Size increases
- Nipple becomes erect
- Superficial veins become more visible

Plateau and orgasm
- Further size increase
- Areolar engorgement (may partially hide nipple)
- Superficial veins become more visible

Resolution
- Breasts return tounaroused size in five to ten minutes
- Rapid disappearance of sex flush
- Rapid loss of tumescence in nipples and areolae
Female Response Cycle

WOMEN-VARIATIONS ON RESPONSE CYCLE

ORGASM  ORGASM  ORGASM

PLATEAU

EXCITEMENT

RESOLUTION

TIME

THREE OTHER COMMON RESPONSE CYCLES FOR WOMEN
What happens as women age?

I’m scared to find out…
- Thinning of vaginal lining
- Increased time for arousal and lubrication
- Fewer muscle contractions with orgasm
- Resolution at about the same rate
Objectives

• Define sexual identity, and discuss the major components of sexual identity, including biology, gender identity, gender roles, and sexual orientation.

• Identify major features and functions of sexual anatomy and physiology.

• Discuss the options available for the expression of one’s sexuality.

• Classify sexual dysfunctions, and describe major disorders.
Your Sexual Identity

- Sexual identity – the recognition and acknowledgement of oneself as a sexual being; is determined by a complex interaction of genetic, physiological, environmental, and social factors
Sexual Orientation

- Heterosexual
- Homosexual
- Bisexual
- Transsexual
Options for Sexual Expression

- Celibacy
- Autoerotic behaviors
- Sexual fantasies
- Masturbation
- Kissing and erotic touching
- Manual stimulation
- Oral-genital stimulation
- Vaginal intercourse
- Anal intercourse
Variant Sexual Behavior

• Group Sex
• Transvestism
• Fetishism
• Exhibitionism
• Voyeurism
• Sadomasochism
• Pedophilia
• Autoerotic asphyxiation
Difficulties That Can Hinder Sexual Function

- Sexual desire disorders
- Sexual arousal disorders
- Orgasm disorders
- Sexual performance anxiety
- Sexual pain disorders
Prevalence of Sexual Problems in Men and Women

- Low desire
- Arousal problem
- Lack of orgasm
- Rapid orgasm
- Pain during sex

Percentage

Men
Women

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Drugs and Sex

- Alcohol
- “Date rape” drugs
Do men and women have much in common?

“After the Temptation”
Kelly Borsheim
Intersex
(formerly true hermaphroditism)
Axillary Cording
Trunkal Cording
Painful Drain Site

Bilateral Mastectomy with TRAM reconstruction, Chemotherapy, No radiation
TERIMAKASIH