

# GEE 15 GENDER AND SOCIETY

## CHAPTER 2: BIOMEDICAL PERSPECTIVE ON GENDER AND SEXUALITY BIOMEDICAL

### TOPIC: ANATOMY AND PHYSIOLOGY OF REPRODUCTION

#### Pre-assessment Activity

On a separate sheet.

#### Lesson Objectives:

1. Differentiate the female and the male reproductive systems; and
2. Understand the basis for physiologic processes in female and males.

Humans experience various physical and emotional changes from childhood to adulthood. These changes are gradual and progress at different ages and speed in different people.

Each person has a pair of **gonads**: *ovaries* are female gonads; *testes* are the male gonads. The gonads produce germ cells and sex hormones. The female germ cells are *ova* (egg) and the male germ cells are *sperm*.

#### THE BIOLOGICAL FEMALE

The female sexual anatomy is designed for the production and fertilization of ovum, as well as carrying delivering infant offspring. Puberty signals the final development of primary and accessory organs that support reproduction.

#### A. The female external genitalia consists of the following:

- Labia majora – outer lips surrounding all the other structure.
- Prepuce – clitoral hood (foreskin above and covering clitoris);
- Clitoris – glans (head), shaft, and crura (root), sensitive to stimulation;
- Labia minora – inner lips surrounding the vestibule where sweat and oil glands, extensive blood vessels, and nerve endings are located;

#### DEFINITION OF TERMS:

**Human reproductive system** - organ system by which humans reproduce and bear live offspring.

**Reproduction** – process of producing offspring.

**Genitals** – external sex organs

#### Primary sex

**characteristics** – sex characteristics that are present at birth.

#### Secondary sex

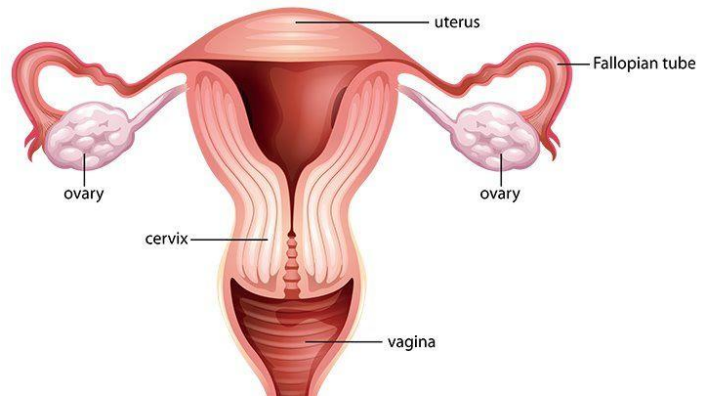
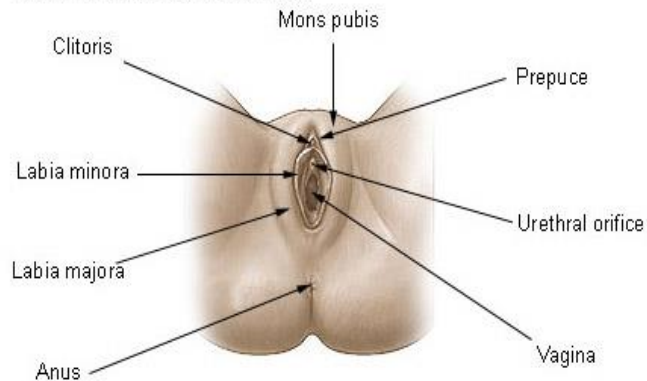
**characteristics** – sex characteristics that emerge during puberty.

**Gonads** – reproductive organs of human.

**Puberty** - is a **phase** of rapid growth, at the end of which the body reaches reproductive maturity.

- Urethral opening – end of tube connecting to bladder and used for urination;
- Vaginal opening – also called introitus;
- Mons pubis - located over the pubic bone and the pubic symphysis joint. It also contains glands that begin secreting pheromones. These are substances involved in sexual attraction.

### Female External Genitalia



### B. The female internal reproductive structures:

- Vagina – collapsible canal extending from vaginal opening back and upward into body to cervix and uterus.
- Cervix – small end of uterus to which vagina leads. It is the opening in cervix leading to leading to interior of uterus;
- Uterus – womb, organ within pelvic zone where fetus is carried;
- Fallopian tubes – carry egg cells from ovaries to uterus, this is where fertilization occurs; and
- Ovaries – produce estrogen and progesterone.

### Puberty

The menstrual cycle marks the beginning of puberty in females. The first episode occurs between 11 to 15 years of age referred to as *menarche*.

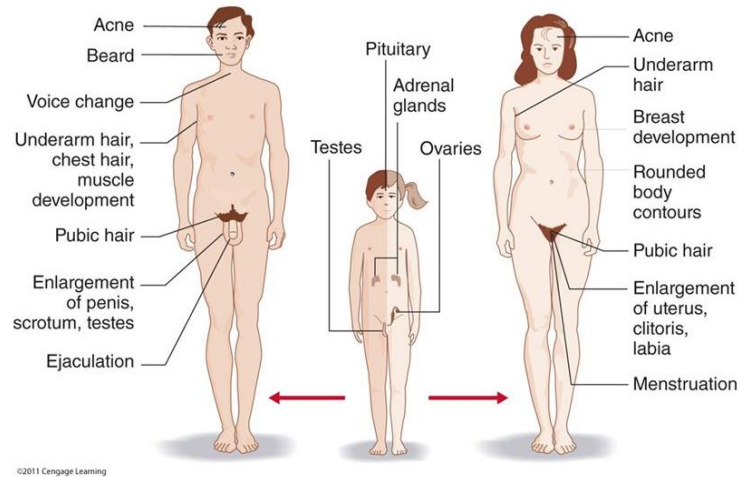
Female secondary sexual characteristics emerge after puberty:

1. widening of hips and pelvis – accommodates giving birth, but also results in downward shift in center of gravity.
2. enlargement of breasts – the glandular tissue of the breasts responds to sex hormones. It also produces milk toward the end of pregnancy and after childbirth in response to hormone levels.

More female characteristics:

- Generally shorter than men;
- Greater proportion of body weight composed of fat than men;
- Two X chromosomes reduces expression of many sex-linked conditions;
- Lower mortality rate at every age and longer projected lifespan than men.

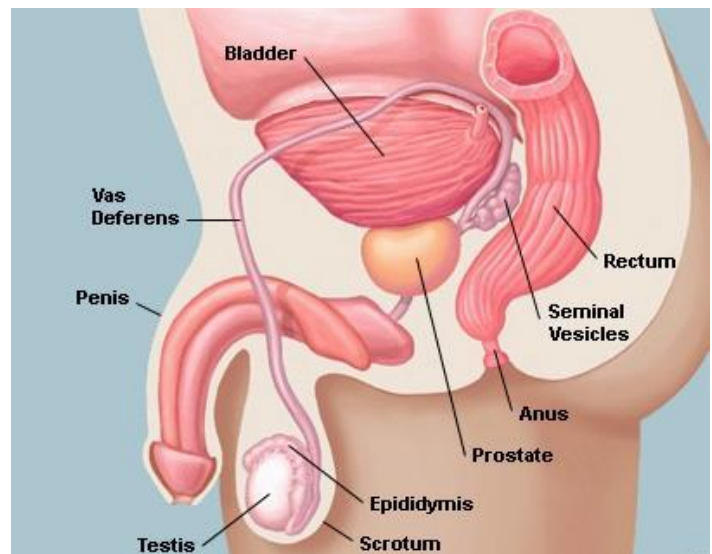
## Puberty

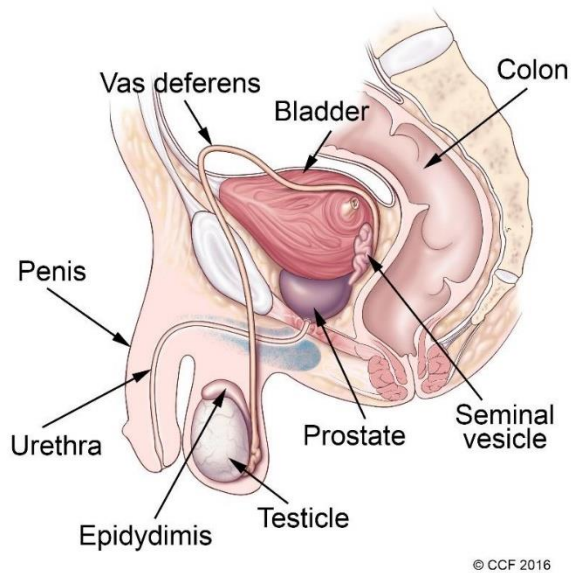


### THE BIOLOGICAL MALE

The male sexual anatomy is designed for the production and delivery of sperm for fertilization of the female's ovum. Puberty signals the final development of primary and accessory organs that support reproduction.

- A. The male external genitalia consist of the following structures:
- Prepuce – foreskin covering head of penis, removed in male circumcision;
  - Penis glans (head), shaft, and root.
  - Corona – rim of glans where it arises from shaft;
  - Frenulum – thin strip of skin connecting glans and shaft on underside of penis;
  - Scrotum – sac that encloses the two compartments housing the testes;
  - Urethral opening – found on head of penis and used for urination and semen delivery by which male ejaculates;
  - Perineum – area of skin separating the genitalia from the anus.





#### B. The male internal reproductive organs:

- Testes – produce androgen, particularly large quantities of testosterone; also produce sperm cells in unlimited quantity over the entire course of lifespan.
- Testicle - they are two oval-shaped organs located inside the scrotum. It produce testosterone and make sperm.
- Vas deferens – travels from testicle toward urethra carrying sperm;
- Seminal vesicles – two glands that produce alkaline fluid rich in fructose sugar, comprising some 70% of semen volume.
- Prostate – gland producing alkaline that account for about 30% of semen volume.
- Urethra – tube within penis that carries sperm and semen the rest of the way to the opening of the penis.

#### More Male Characteristics:

- Generally taller and greater proportion of body weight composed of water;
- Proportionately larger heart and lungs, presumably to handle greater blood fluid volume;
- Exposure to greater levels of testosterone resulting in heavier body and facial hair, but also increased frequency and degree of baldness;
- Single X chromosome resulting in sex-linked conditions such as colorblindness and hemophilia.

#### Male secondary sexual characteristics that emerge after puberty:

- No monthly cycle
- Elongation of vocal cords (lower voice)
- Broader shoulders
- Deeper chest cavity

## TOPIC: FUNCTIONS OF REPRODUCTIVE SYSTEM AND CONSEQUENCES OF RISKY SEXUAL BEHAVIOR

### Lesson Objectives:

1. Define fertilization, conception and pregnancy;
2. Explain how pregnancy occurs and its prevention;
3. Identify the complications of early pregnancy in the growing adolescent.
4. Understand the risky sexual behaviors of the growing adolescent;
5. Identify trouble signs that can lead to risky behaviors and its complications; and
6. Discuss how to avoid risky behaviors.

### The Process of Reproduction

Although human beings are fully sexually differentiated at birth, the differences between males and females are accentuated at puberty. This is when the reproductive system matures, secondary sexual characteristics develop, and the bodies of males and females appear more distinctive.

#### How does one ovulate?

The major landmark of puberty among females is the onset of the menstrual cycle, the monthly ovulation cycle that leads to menstruation (loss of blood and tissues lining the uterus) in the absence of pregnancy. The menstrual cycle is from the first day of a period until the day before the next period starts.

Normally, it lasts around 28 days, on the average, but can be as short as 21 or as long as 40. Whatever the length, ovulation will happen about 10-16 days before the start of the next period.

#### How does pregnancy occur?

For pregnancy to proceed, the sperm needs to meet up with an egg. Pregnancy officially starts when a fertilized egg implants in the lining of the uterus. Pregnancy happens 2-3 weeks after sexual intercourse.

Conception is the process that begins with fertilization of an egg by the sperm and ends with implantation. Ejaculation or coming releases the sperm via the penis into the vagina. The sperm swims through the female's cervix, into the womb, and finally, into the fallopian tubes.

#### DEFINITION OF TERMS:

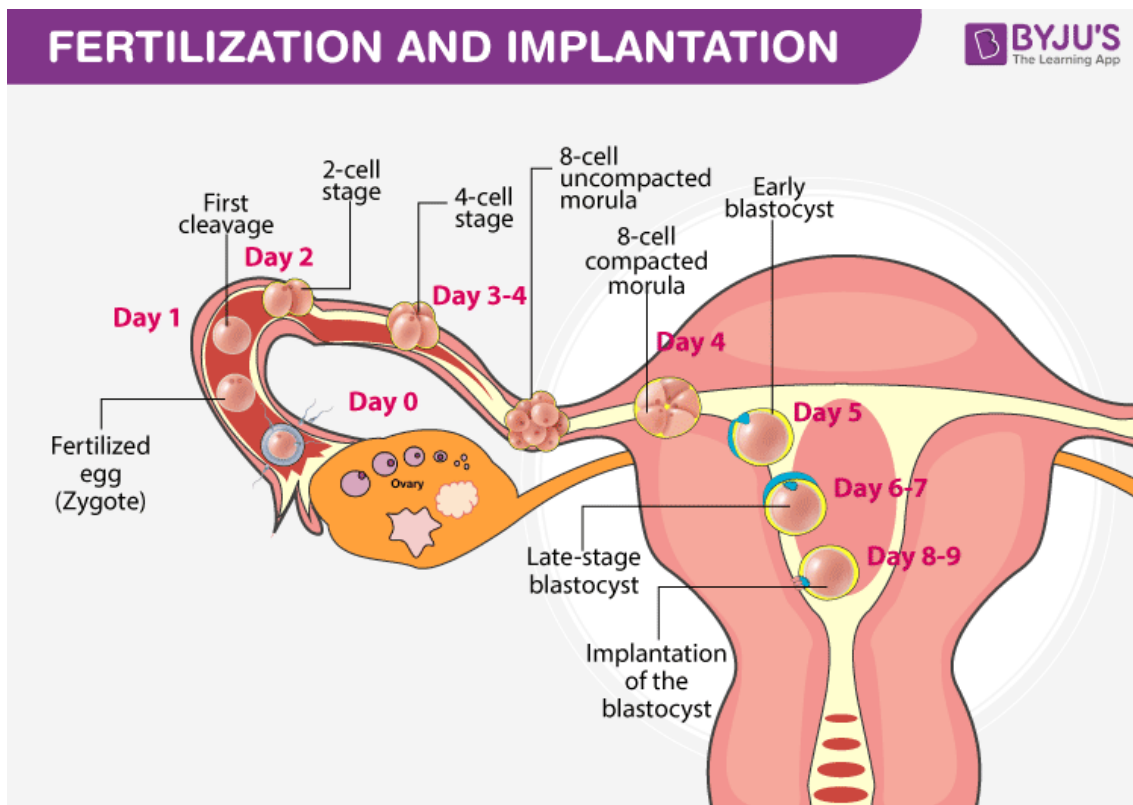
**Ovulation** – the process when a mature ovum is released from the ovary and travels to the fallopian tube for possible fertilization.

**Fertilization** – union of the sperm and the ovum.

**Pregnancy** – the process when an offspring develops within the mother's womb.

Once the egg or ovum has been released into the fallopian tube, hundreds of sperm swim up to reach it. Finally, the sperm penetrates the egg in the fallopian tube where fertilization takes place and eventually, becomes an embryo. Once the embryo (fertilized egg) attaches to the inner lining of the uterus (endothelium), a fetus develops within five to seven days from a ball of cells floating in the uterus, which officially begins pregnancy.

A normal pregnancy lasts 32-42 weeks (nine months). This is measured from the first day of the last period. After eight weeks, the embryo is officially referred to as a fetus.



## Teenage or Unwanted Pregnancy

### What can be done to prevent teenage pregnancy?




Equipping the youth with the knowledge, skills, and attitudes necessary to protect themselves against unwanted pregnancy and provide them access to reproductive healthcare are needed.

What are the health effects of early pregnancy in the growing adolescent?





- "Obstructed labor" is the result when a woman is under 20, the pelvic area (the bone surrounding the birth canal) is still growing and may not be large enough to allow the baby to easily pass through the birth canal.
- Uterus may tear during the birth process if the young woman is not physically mature.
- Other complications:
  - Excessive vomiting, severe anemia, hypertension, convulsions, difficulty in breast feeding, premature and low birth weight babies, infection, prolonged labor, high maternal mortality or death.



### CHART FOR CONTRACEPTION

Type of Contraceptive Method	Picture	How it Works	Effectiveness	Benefits	Instruction for Use	Benefits other than Contraception
Male Condom: rubber sheath that fits over the penis	 Condom	Rolled over the penis	80-85%	Low cost, easily accessible, and reduces risk of STDs/STIs	Do not use with oil-based lubricants such as creams and lotions	Can be effective in prevention of STIs and HIV/AIDS
Implantable Hormone Device	 Implant	Continuous release of hormones	99%	Continuous birth control for five years	Implant of the capsule in the upper arm; done by the doctor	None
Calendar Method: woman predicts the day of ovulation by keeping a calendar of the	 Calendar rhythm method	Allows the woman to keep track of "safe" days for sex.	Theoretically 85% but in reality about 60%	No cost and under the control of the woman	Woman must keep track with the help of a calendar	None

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length or each menstrual cycle						
Sterilization: vasectomy for males and tubal ligation for females	 Surgical sterilization	Passageway for the sperm or the egg is surgically tied	Theoretically 100%, but exceptions have been known to take place	Highly effective, permanent, and one time expense	Doctor performs an operation	None
Birth control Pill: contains synthetic oestrogen	 Pill	Alters natural ovulation cycle	Theoretically 99-100%, but women have conceived on the "pill"	Low cost, easily available, and controlled by the woman	Taken daily after menstrual cycle begins	None
Birth Control Injection: given in the first days of the menstruation and then every 2-3 months	 Injection		Not known		Given by the doctor	None
Withdrawal: removal of the penis from the vagina before ejaculation		Prevents the semen from going into the vagina	Theoretically, 85% but in reality, about 70%	No cost under the control of the man and woman involved	Dependent on the man	None
Intrauterine Device (IUD)	 IUD	Inserted inside the uterus by a Doctor	Theoretically 95-98%	Long-lasting and relatively inexpensive		

## RISKY BEHAVIORS OF ADOLESCENTS

### Pre-assessment Activity

On a separate sheet.

### Lesson Objectives:

1. Understand the risky behaviors of the growing adolescent;
2. Identify trouble signs that can lead to risky behaviors and its complications; and
3. Discuss how to avoid risky behaviors.

Risk-taking is a normal part of adolescent development. It is defined as participation in potentially health compromising activities with little understanding of, or in spite of an understanding of, the possible negative consequences.

Adolescents experiment with new behaviors as they explore their emerging identity and independence. During this period, adolescents may begin to explore alternative health behaviors including smoking, drinking alcohol, drug use, sexual intimacy, and violence.

The Department of Health, in its Adolescent and Youth Health Policy (2000), has identified the following health risks: substance use, premarital sex, early childbearing, abortion, HIV/AIDS, violence, accidents, malnutrition, and mental health.

### TROUBLE SIGN among TEENS:

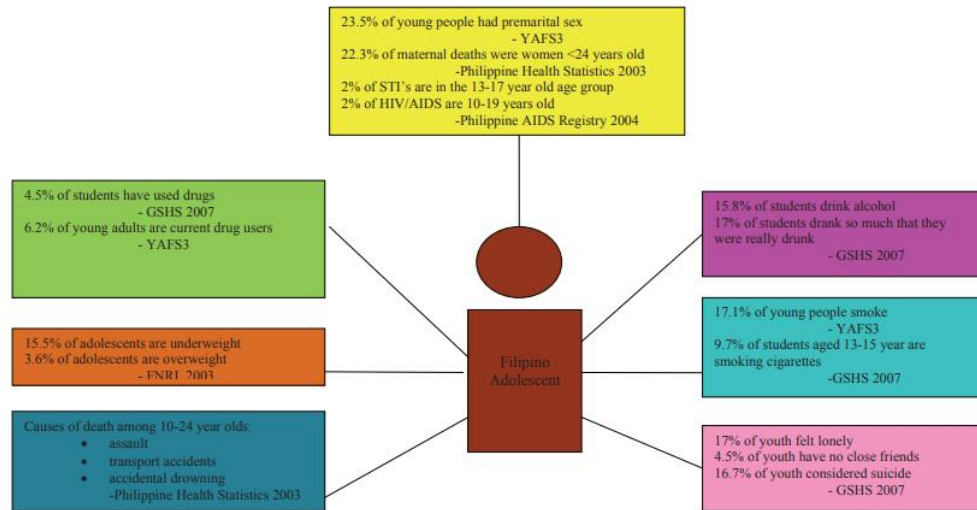
- Sexual promiscuity;
- Regular use of drugs and alcohol;
- Repeated violation of the law or school regulation;
- Running away more than once in three months;
- Skipping school more than once in three months;
- Aggressive outburst/impulsiveness
- Dark drawings or writings;
- Deterioration in hygiene;
- Oppositional behavior;
- Refusal to work/non-compliance;
- Chronic lateness;
- Falling asleep in class;
- Changes in physical appearance; and
- Excessive daydreaming.

### DEFINITION OF TERMS:

**Risk** – the probability that a hazard in the environment can negatively affect the individual.

**Risk-taking** – a behavior of doing something regardless of potential loss.

Identified Sexual Risks that were found among the growing Filipino adolescents are as follows:



\* adapted from DOH Adolescent Job Aid Manual 2009

## HARMFUL PRACTICES

Common drugs abused by young people and their effects:

1. **Marijuana** (also known as Cannabis, Grass, Joint, Splif, Hashish, Pot, Weed). Usually people smoke the leaves but the leaves and the stem can be made into tea, or even cookies. The effects vary. Some people become relaxed and happy while others feel panic or fear.

Effects:

- Marijuana causes increase in heart rate and dilation of certain blood vessels in the eyes, which creates the characteristics of blood-shot eyes.
- Chronic bronchial irritation
- Impairment of long term memory
- Gum disease
- Increased risk of cancers of the mouth, jaw, tongue and lungs;
- Impairment of the immune system
- Decreased testosterone levels
- Decreased sperm counts
- Increased sperm abnormalities
- Impaired fetal growth and development among pregnant women users

2. Mairungi (also known as Khat, Qat, and Mirraa)

A stimulant leaf that is chewed in much of East Africa. Chewing Mairungi can help someone feel more awake, confident, and energetic and can reduce hunger.

Effects:

- Sleeplessness
- Anxiety
- Aggressive behavior
- Hallucinations
- Unable to get an erection for men users

3. Alcohol

This is the most common drug and is used worldwide. At first, alcohol causes relaxation and people feel less self-conscious. However, more alcohol, people gets drunk; reaction time slows down and thinking straight becomes difficult.

Effects:

- Slurred speech
- Aggressive behavior that leads to fights, rape or other kinds of violence
- Vomiting
- Unconsciousness
- dying
- unsafe sex
- impaired ability to make healthy and safe decisions

4. Cigarettes (tobacco, cigars)

Reasons why people start smoking:

- Peer influence
- Seductive advertisements
- Influence by older role models like siblings or celebrities

Effects:

- Death
- Addiction
- Lung cancer
- Emphysema
- Bronchial disorder
- Cardiovascular diseases
- Respiratory illness in children

5. Cocaine (also known as Crack, Coke, C, Charlie, Nose candy, Toot, Bazooka, Big C, Cake, Lady, Stardust, Coco, Flake, Mister coffee)

It is often called the "champagne of drugs" because of its high cost. It makes one feel like his/her body is going fast, His/her heart races and the "highs" and "lows" are sudden. Crack is a much stronger form of cocaine. It comes in a white powdered form and looks like hard white rocks. It can be smoked or injected.

Effects:

- High body temperature
- Fast heart beat
- Increased breathing rate
- Make you feel over confident
- Make you more alert with extra energy
- Convulsions
- Seizures
- Strokes
- Cerebral hemorrhage
- Heart failure
- Destroys nose tissues
- Reportorial problems
- Weight loss

6. Heroin (also known as Hammer, Horse, H, Junk, Nod, Smack, Skag, White, Beige, White lady, White stuff, Joy powder boy, Hairy, Harry, Joy powder)  
This is a drug obtained from morphine and comes from the opium poppy plant. It slows down the user's body and mind. A very strong painkiller and the most dangerous if mixed other drugs. It can be injected, snorted, smoked or inhaled. Inhaling the Heroin is often called "chasing the dragon."

Effects:

- Extremely powerful rush and a high that usually last between four to six hours.
- Feeling of well-being
- Relief from pain
- Fast physical and psychological dependence
- Nausea and vomiting
- Sleepiness
- Loss of balance
- Loss of concentration
- Loss of appetite
- Overdose results to death
- Increased possibility of contracting AIDS and HIV
- Unsafe sex

7. Amphetamines (also known as Speed, Ice, Browns, Footballs, Hearts, Oranges, Wake ups, Black beauties, Crystal meth, Crack meth, Cat, Jeff amp, Dexies, Rippers, Bennies, Browns, Greenies, Pep pills)  
Amphetamines are stimulants that affect a person's system by speeding up the activity of the brain and giving energy. It can be swallowed, snorted, injected or smoked. It's a synthetic drug or man-made).

Effects:

- Increase heart rate
- Faster breathing
- Increase blood pressure
- Increased body temperature
- Increased sweating

- More confident and alert
- Extra energy
- Reduce appetite
- Sleeping difficulty
- Talkativeness
- Anxiousness
- Irritable
- Panic attacks
- Strong psychological dependence

8. Ecstasy (also known as Adam, Essence, MDM, MDMA, XTC, Eve, MDE, MDEA)  
Ecstasy is a stimulant, in a form of tablet. It speeds up the users system by increasing his/her physical and emotional energy. It is a synthetic drug (or man-made). These pills can come in many different colors. Some ecstasy tablets have pictures on them, such as doves, rabbits, or champagne bottles. It is usually swallowed.

Effects:

- Feeling happy, warm, loving and more energetic
- Feel emotionally close to others
- Might say or do things that he/she usually would not
- Nausea and vomiting
- Rise in blood pressure and heart rate
- Possible death due to overheating of the body
- Dehydration or loss of water in the body
- Feelings of depression and tiredness are common after stopping the drug
- Brain and liver damage

9. Inhalants and solvents

These are chemicals that can be inhaled, such as glue, gasoline, aerosol sprays, lighter-fluid, etc. These are not drugs as such and are in fact, legally available on shops. However, they are abused widely, particularly among the street youth. This used by soaking a rag in inhalant; placing the rag in bag or sack and then placing the bag over the face, and inhaling the vapors.

Effects:

- Gives the user a "high" feeling for a very brief period of time
- Feeling numb
- Dizzy
- Confused
- Drowsy
- Headaches
- Nausea
- Fainting
- Accelerated heartbeat
- Disorientation
- Hallucinations
- Damages lungs, kidney and liver
- Suffocation, convulsions and comas

**Tips to avoid illegal-Drug use:**

- ✓ You do not need to take drugs to be liked by other people.
- ✓ You do not need to take drugs to feel brave or courageous.
- ✓ You do not need drugs to cope with sorrow or disappointments.
- ✓ You have, inside you, the strength and inner resources to deal with any situation and any problem.

Remember...

Whatever problem you are facing, there are people available to help you.

You can talk to a friend, a teacher, a parent, or a trusted person at your church or mosque.

**Post Assessment Test**

On a separate sheet.

## TOPIC: INTERSEX

### Lesson Objectives:

4. Define and understand intersex conditions;
5. Identify the causes and various types of intersex; and
6. Discuss nature and nurture of human development.

### What is an Intersex?

As discussed in the first chapter, most embryos are consistent on the five biological definitions of sex, namely, chromosomes, gonads, hormones, internal and external reproductive structures. However, this is not always the case. In around 23/10,000 births, these five definitions of sex are not consistent, resulting in what is referred to as an **intersexed birth**.

Intersex people are individuals born with any of several sex characteristics including chromosome patterns, gonads, or genitals that, according to the Office of the United Nations High Commissioner for Human Rights, "do not fit typical binary notions of male or female bodies".

### What are the causes of Intersex?

#### I. CHROMOSOMAL INCONSISTENCIES

The variations in the sex chromosomes that typically received from parents are accounted for a large portion of intersex births. The father will typically donate either an X or Y chromosome, whereas the mother typically contributes an X chromosome.

However, many intersex individuals have chromosomal combinations other than XY (which are normally associated with males) or XX (typically associated with females). Variations in internal sex organs, external genitalia, and sex hormones (including testosterone and estrogen) can result from these combinations.

#### Types of Chromosomal Inconsistencies:

##### 1. Turner's Syndrome (X)

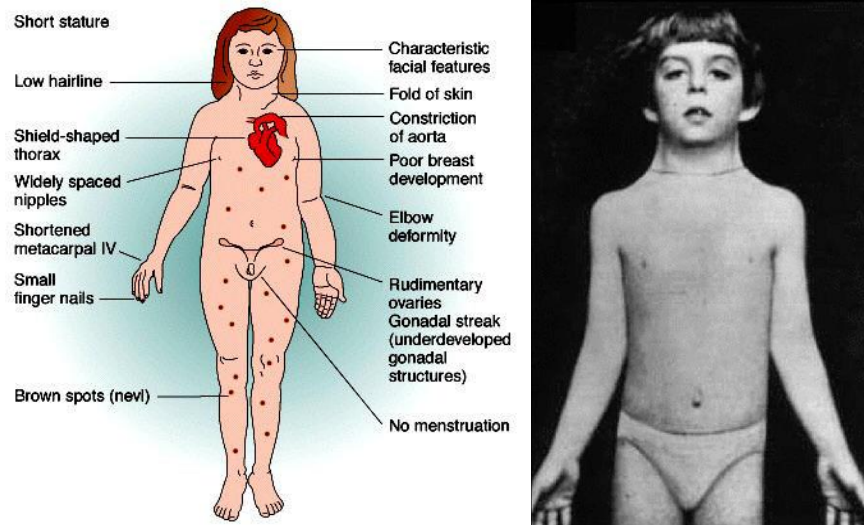
If the sperm fails to divide properly, that is, if what is called *nondisjunction* occurs, one kind of sperm produced will have neither an X nor a Y chromosome. If this sperm fertilizes a normal egg, the offspring will have only an X chromosome.

#### DEFINITION OF TERMS:

**Intersex** – refers to individuals born with any of several sex characteristics including chromosome patterns, gonads, or genitals.

**Nondisjunction** – the failure of one or more pairs of homologous chromosomes or sister chromatids to separate normally during nuclear division, usually resulting in an abnormal distribution of chromosomes in the daughter nuclei.

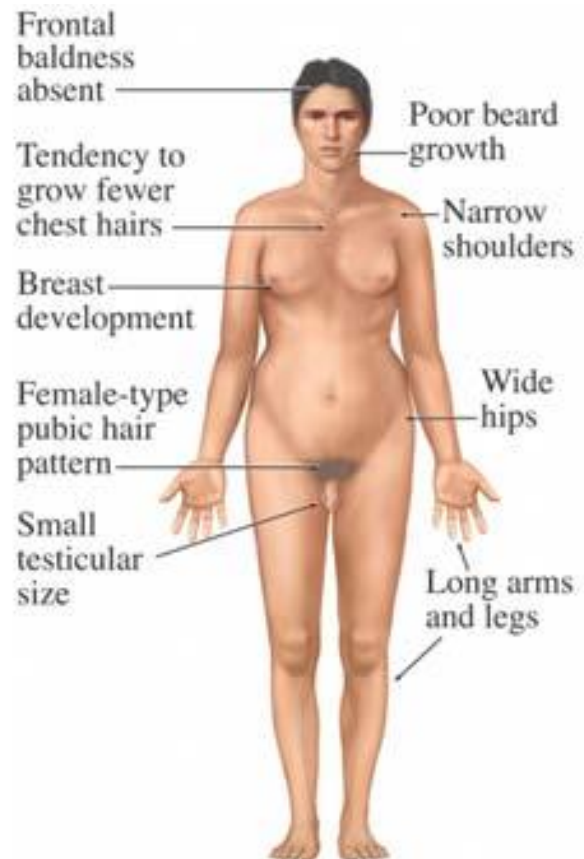
The person appears to be a female because although it lacks ovaries, it possesses some external female characteristics. This condition is estimated to occur in about 4/10,000 live births (Fausto-Sterling, 2000: 53).



## 2. Klinefelter's Syndrome (XXy syndrome)

Another case of *nondisjunction* is a sperm produced with both an X and a Y chromosome, or two Y chromosomes, resulting in the *XXY chromosome* abnormalities. It typically occurs in roughly 9/10,000 live births. Individuals with this type of conditions are reported to have no interest in sex due to their lower level of testosterone, and the presence of extra X stops development of male structures, resulting in sterility (unable to produce children).

Moreover, a person born with this chromosomal characteristic has the height of a normal male, with long legs, an absent or weak sex drive, "feminized" hips, some breast development, and a small penis and testes (Money and Ehrhardt, 1972).



### 3. Jacob's syndrome (XYY syndrome)

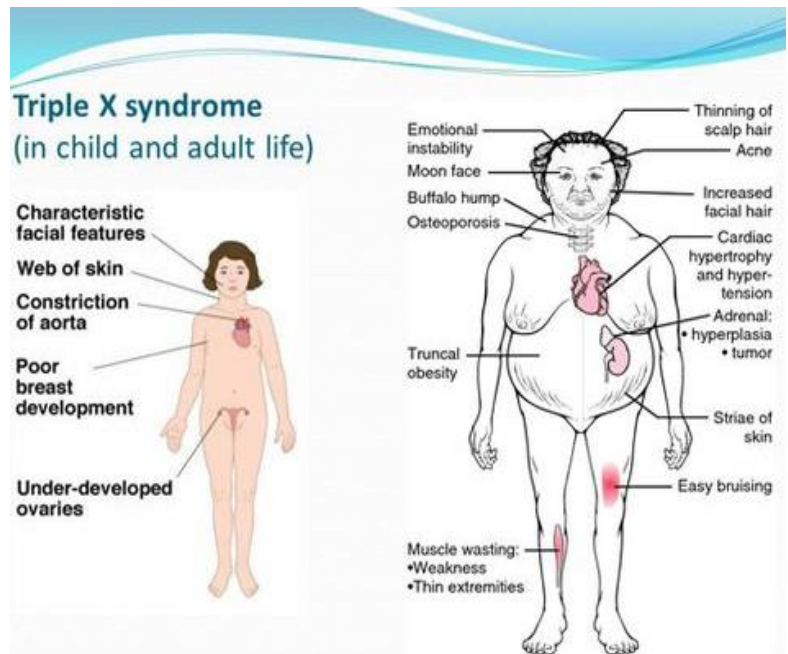
A person born with this chromosomal characteristic is an anatomical male with no physical abnormalities, except for unusual height. The extra Y chromosome does not result in the person's having more androgens than an XY male. Such persons appear to be able to reproduce successfully and rarely come to the attention of investigators, except through large-scale screening of newborns. Persons with this conditions are usually taller than normal males, has speech problems, weaker muscles or hypotonic, delayed puberty, aggressive, but they have normal appearance.

- hypotonia
- involuntary muscle movements
- taller-than-average height
- larger head dimensions
- low testosterone levels
- infertility



### 4. Triple X Syndrome (XXX or Trisomy X)

People born with this chromosomal characteristic are anatomically females and show few visible signs of abnormality, although they tend to be taller than XX females and have a slightly higher incidence of learning disorders. This too occurs roughly in 1/2,000 live births. These individuals has usually delayed motor development and speech. Their IQ level is low. Other children are also reported to have ADHD conditions.



## II. HORMONAL INCONSISTENCY TYPES

Another caused by intersex is the hormonal inconsistencies. Hormones that is released throughout the body is dependent on the various signaling pathways, which are responsible for consistent activities until any fluctuations occur in them. The abnormal activities of hormones are the precursor to many disorders.

When a hormone is present in the blood in excess or insufficient amounts, hormonal imbalances result. Changes in weight, a decrease in sex drive, and acne are typical signs of these inconsistencies. Below are the following conditions which results from hormonal inconsistencies.

### 1. Adrenogenital syndrome (AGS) or Congenital adrenal hyperplasia (CAH)

**Internal: female**

**External: masculinized**

- **A chromosomally female** receives an **excessive amount of androgens**
- Untreated females with AGS have normally functioning ovaries and normal internal female sexual organs but a **masculinized external appearance**.
- This can vary from a slightly **enlarged clitoris** to a nearly **normal-size penis** with an empty scrotum.
- If treated with cortisol from birth on, these females will have a later menarche than normal but will be able to conceive, lactate, and deliver babies normally.
- Androgen Insensitivity or testicular feminization
- Phenotypically female
- Symptoms do not appear until puberty
- Absent menses
- External genitalia are normal
- Vaginal depth is short
- Not ovaries – atrophic testes
- Slightly longer limbs and larger hands and feet, minimal or no acne, larger teeth, well developed breast.
- Greater incidence of meibomian gland dysfunction (dry eye syndromes and light sensitivity.)

### 2. Androgen Insensitivity Syndrome (AIS) - (Hormonal Inconsistency Types)

**Internal: male**

**External: female/woman**

- Fetuses that are **chromosomally male** with genitals that are ambiguous (unclear) or that look **more like a clitoris** than a penis.
- It cannot be treated by administering androgen after birth because the cells remain incapable of responding to androgen. At puberty, AIS persons **develop breasts and a feminine body shape, and identify as females**.
- Results in female genitals, including a shallow, but nonfunctional vagina
- Raised as girls, they assume a female gender identity and thrive as females

### 3. Fetally Androgenized Females

**Internal: female**

**External: male/man**

- Chromosomally normal females exposed to **excessive androgens**
- At birth genitals appear to be male
- **“Corrected” by minor surgery**, most still reject a **female gender identity** with some assuming a **male gender identity and** behavior

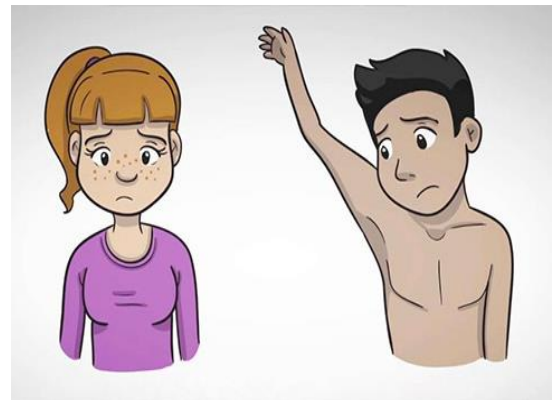
**4. DHT-Lacking Males**

**Raised as females then suddenly sprout into males at puberty**

- Males who cannot produce crucial DHT
- *Dihydrotestosterone*, a hormone with powerful androgenic actions, causes the body to mature during puberty and is responsible for many of the physical characteristics associated with adult males.
- Result – female appearing external genitals, at least initially
- Typically raised as girls, they suddenly sprout into males at puberty
- In one study, 16 of 18 cast off their female gender identity and happily assumed male sex roles

**Primary vs. secondary sex characteristics**

- Primary Sex Characteristics: sexual organs that are present at birth.
- Secondary Sex Characteristics: changes that emerge during puberty.
  - caused by hormones released at the time of puberty, which usually is around two years earlier in girls than in boys.
  - visible **secondary sex characteristics** include pubic hair, enlarged breasts and widened hips of females, and facial hair and Adam's apple on males.



**Hirsutism**

- The growth of coarse, dark hair in areas where women typically grow fine hair or no hair at all: above the lip and on the chin, chest, abdomen, and back.
- caused by an increased level of male hormones (androgens)
- Although all women produce androgens, increased levels of androgens can lead to hirsutism.

**NATURE VS. NURTURE**

The nature versus nurture debate involves the extent to which particular aspects of behavior are a product of either inherited (i.e., genetic) or acquired (i.e., learned) influences. **Nature** is what we think of as pre-wiring and is influenced by genetic inheritance and other biological factors. **Nurture** is generally taken as the influence of external factors after conception, e.g., the product of exposure, life experiences and learning on an individual.