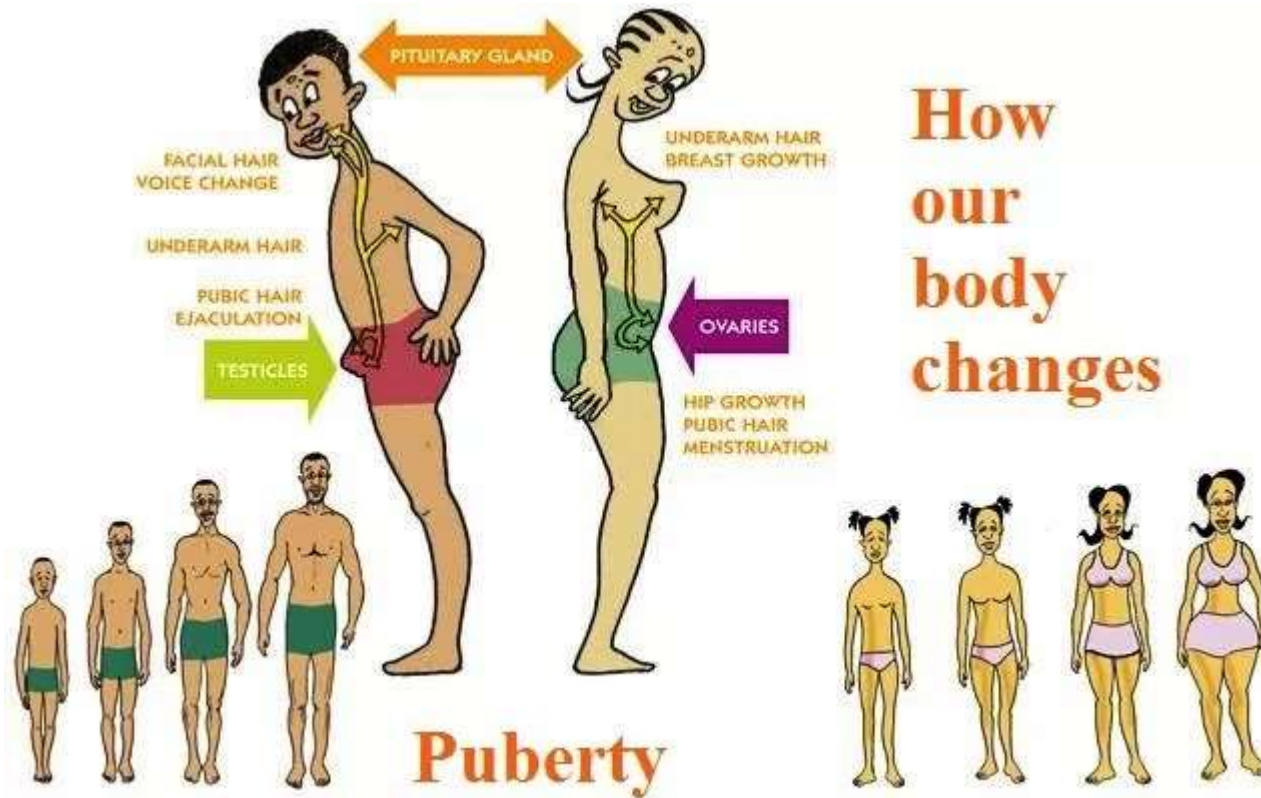


Puberty:



How
our
body
changes

Puberty

Puberty – came from the Latin word PUBERTAS which means “age of manhood”

- The period of rapid physical maturation involving hormonal and bodily changes that takes place in early adolescence
- The awkward stage
- Stage in development during which maturation of the sexual apparatus occurs and reproductive capacity is attained

Characteristics of Puberty

➤ **Puberty is an overlapping period**

- It encompasses the closing years of childhood and the beginning years of adolescence
- pubescents / pubescent children – children that are not yet sexually matured

➤ **Puberty is a short period**

- Lasts 2 – 4 years only
 - > rapid matures – children who pass through puberty in two years or less
 - > slow matures – children who pass through puberty in 3-4 years to complete the transformation into adults

➤ **Puberty is divided into stages**

1. **Prepubescent** – this stage overlaps the closing year or two of childhood

- One who is no longer a child, but not yet an adolescent
- The secondary sex characteristics begin to appear but the reproductive organs are not yet fully developed.

2. **Pubescent** – this stage occurs at the dividing line between childhood and adolescence; the time when the criteria of sexual maturation appears

- Secondary sex characteristics continue to develop and cells are produced in the sex organs

3. **Postpubescent** – this stage overlaps the first year or two of adolescence

- Secondary sex characteristics become well developed and sex organs begin to function in a mature manner.

➤ **Puberty is a time of rapid growth and change**

- Puberty growth spurt – lasts for a year or two before children become sexually mature.

Puberty Growth Spurt

- 8.5 – 11.5 y/ o ; peak 12.5 y/o ~ girls
- 10.5 – 14.5 y/o; peak 15.5 y/o ~ boys

➤ **Puberty is a negative phase**

- (Charlotte Buhler): negative attitudes of pubescent children are characteristic mainly of the early part of puberty.
- More pronounced in girls than boys

➤ **Puberty occurs at a variable age –**

- Can occur between 5-19 yrs.

Girls – 11- 15 yrs

Boys – 12 – 16 yrs

Criteria of puberty

- The criteria most often used to determine the onset of puberty and to pinpoint a particular stage of puberty that the child has reached are the menarche , nocturnal emissions, and X-RAY of bone development
- The menarche is more correctly considered a midpoint in puberty in girls
- The nocturnal is a criteria used for the development in boys

- There are four stages which represents the criteria of puberty .
 1. Menarche – Girls first menstruation
 2. **Adrenarche** - hormonal changes in the
 3. Spemarche- boy's first ejaculation of semen
 4. Gonadarche – sexual maturation and development of reproductive maturity during puberty

□ X-RAY of different parts of the body , but especially the hands and the knees , during the preadolescent growth spurt can reveal whether puberty had began and the rate at which puberty is progressing

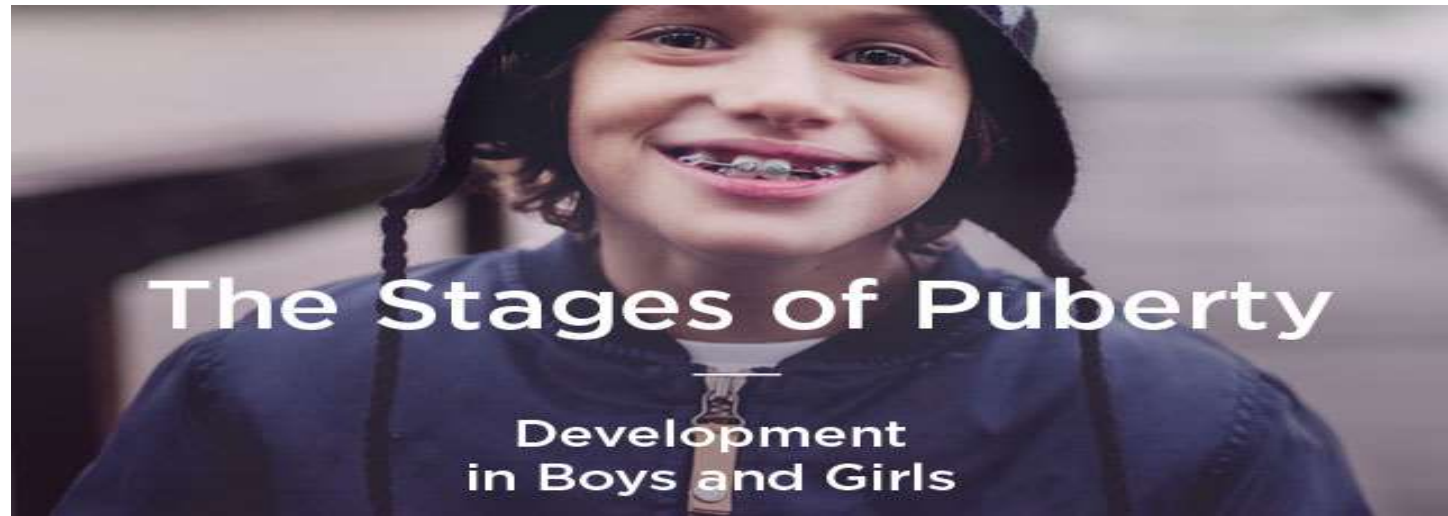
Causes Of Puberty

- At the present time , it is known that about five years before children become sexually mature , there is a small excretion of the sex hormones in both boys and girls .
- The amount of the hormones increases as the time passes and this eventually leads to the maturing of the structure and the function of the sex organs .
- It has been established that there is a close relationship between the pituitary gland , located at the base of the brain and the gonads

Age of puberty

- The onset of puberty varies
- among individuals. Puberty
- usually occurs in girls between the ages of **10** and **14**, while in boys it generally occurs later, between the ages of **12** and **16**.
- **In American culture today** approximately 50 percent of all(girls mature between 12.5 and 14.5 years) with the average maturing at 13.
- The average (boy becomes sexually mature between the ages of 14 and 16.5) with 50% of all boys maturing between 14 and 15.5 years





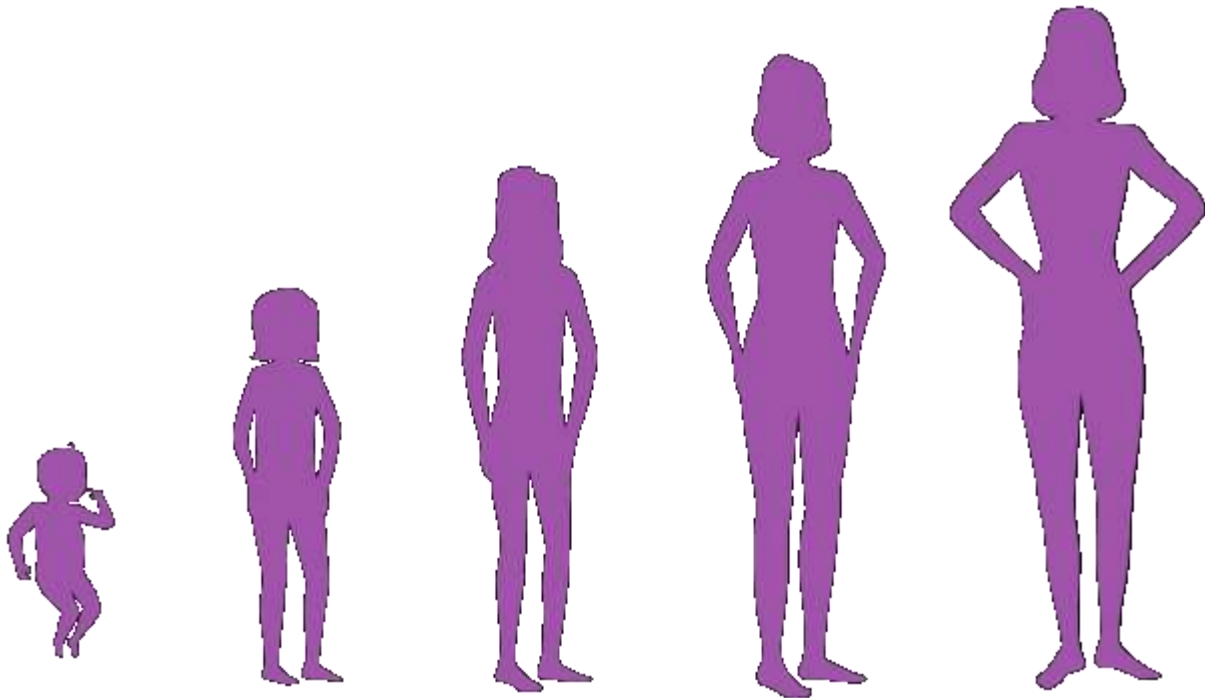
- The remaining 50% in each group is about evenly divided between those who mature later than average (the early matures and the late matures).
- Between the ages of 12 and 14, different between the sexes are especially marked with many more girls having becomes mature than boys
- The difference is related in the larger and more mature bodies of the girls and in their more mature, more aggressive and more sex conscious behavior.

- There is evidence that boys and girls in the **UNITED STATES** are reaching puberty earlier now than in past generations.
- (This is true also in **Europe** and especially in the **Scandinavian countries** .
- The explanation for this is better health , better prenatal, an postnatal medical care , and better nutrition.
- Children who are **slow in starting to mature** the late matures usually mature more rapidly once they get started than the average child and often even rapidly than those who entered puberty earlier than the average
- **Fast matures** have greater spurts of rapid growth , their periods of accelerated and halted growth come abruptly , and than attain adult proportion very quickly

- Individual differences in age and rate of maturing are more common than similarities, even among children in the same family.
- As Johnston has pointed out
- ***The time clock which governs the development process in children is an individual one***

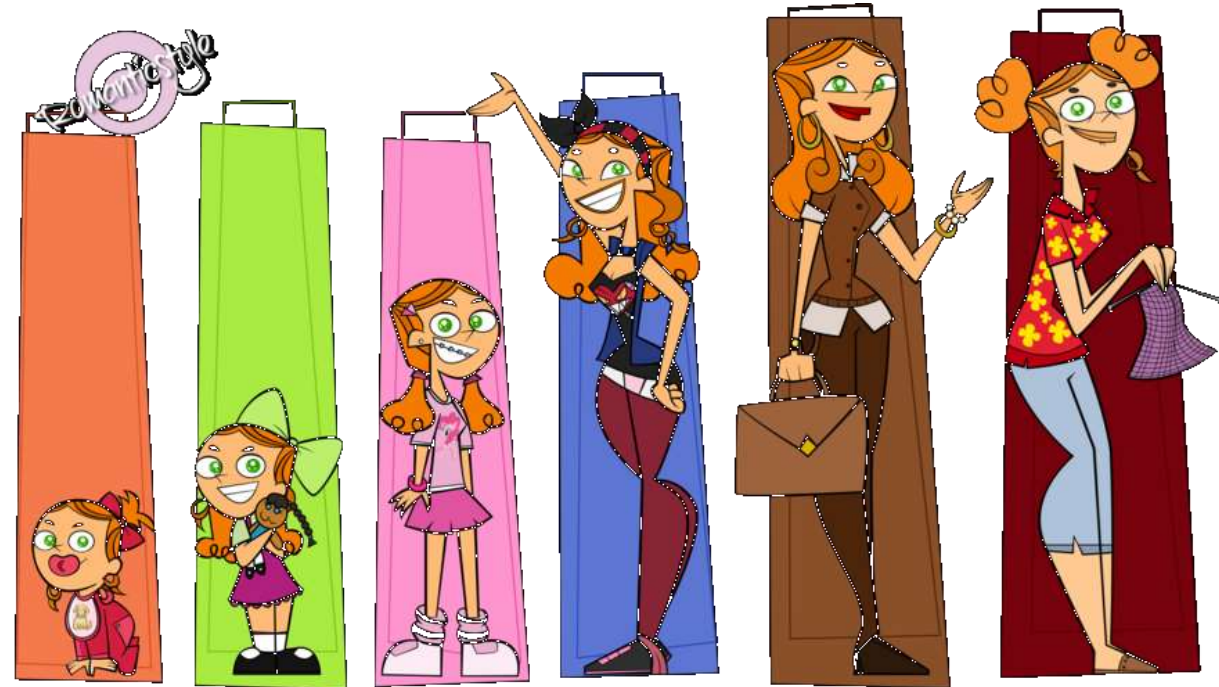


Body changes at puberty:



During puberty:

- Four important physical changes occur which transform the child's body into that of an adult:
- Changes in body size
- Changes in body proportions
- The development of primary sex characteristics
- The development of secondary sex characteristics



Changes in body size:

- Height and weight: (for Girls)

Gender	Average annual increase	Two years preceding the menarche	After menarche	Around 18
Girls	The year preceding the menarche= 3 inches	Average increase is 2.5 inches per year	Growth slows down to 1 inch a year	Growth comes to a standstill
	Though 5-6 inch increase is not unusual	Total of 5.5 inches		

(for Boys):

Gender	Rapid growth in years	After puberty
Boys	Starts on average= 12.8 Ends on average= 15.3 peak occurring= 14	Growth decelerates and continuous on slow rate till 20-21

Because of the longer growth period, boys achieve greater height by the time they mature than girls do.

Weight:

- Weight gain not only comes from fat but also from muscle and bone
- That's why even they gain weight rapidly, they often look thin and scrawny
- Girls experience greatest weight gain just before and after menarche
- For boys the maximum gain in weight comes a year or two later than for girls and reaches its peak at sixteen

Changes in body proportions:

Size:

- Certain areas become proportionally too big because they reach their mature size
- Apparent in nose, feet and hands

Trunk:

- The thin long trunk begins broaden at hips and shoulders and waistline develops
- Trunk lengthens and waistline drops, thus giving the body adult proportions

Maturity:

- Boys who mature early usually have broader hips than boys who mature late and for girls its voice versa

Cont..

Legs:

- Before puberty legs are disproportionately long in relation to trunk and continues to be so until the child is approximately fifteen.
- In late maturing children, the leg growth continues for a longer time than in early matures.
- Early matures= short legged
- Late matures= long legged

Arms: the same as in legs

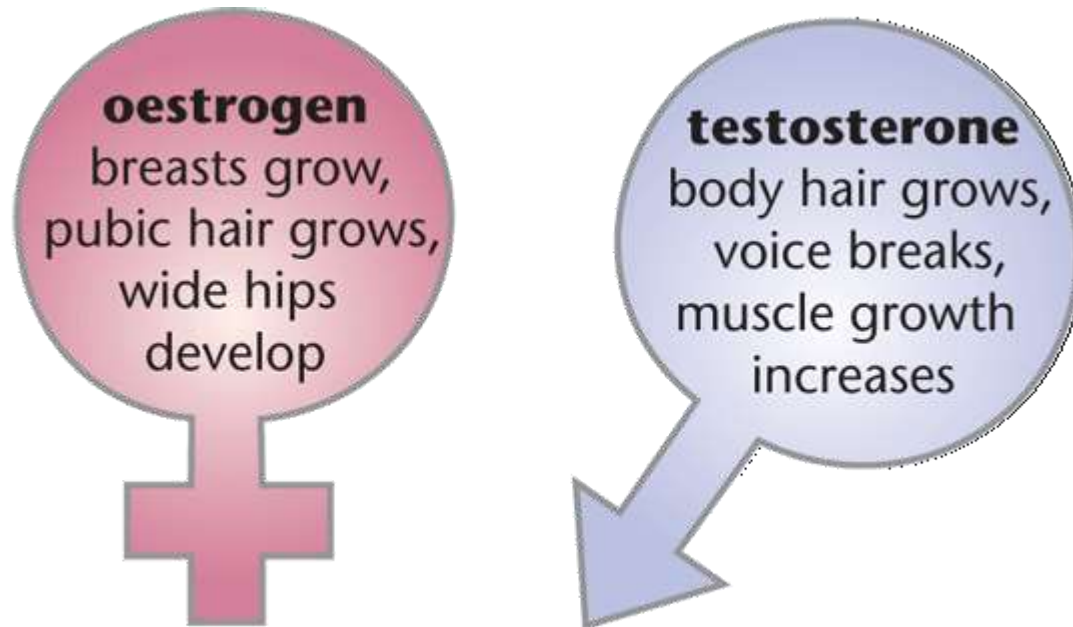
Primary sex characteristics:

- Humans are born with very obvious **primary sex characteristics** (or **body structures directly concerned with reproduction**) that allows us to tell males from females, such as the penis in men and the vagina in women, **secondary sex characteristics**, on the other hand, are features which appear at puberty (though they later become equally as prominent).



Secondary sex characteristics:

- Secondary characteristics are features such as pubic hair, breast development in females, and beards in males. The list below shows:



In men, these include:

- More pronounced body hair characteristics (beard, chest, etc.) and usually more coarse
- Heavier musculature
- Angular features (i.e. square jaw, triangular mid region)
- Narrow hips
- Muscular pectorals (chest)
- Less fat tissue overall
- Deeper voice

In women, these include:

- Less pronounced body hair characteristics (mostly in pubic region, hair all over is usually finer)
- Lighter musculature
- Rounded features (i.e. softer facial features, hourglass mid-region)
- Wider hips (for child bearing)
- More pronounced breasts with more fatty tissue
- More fat tissue overall
- Higher voice

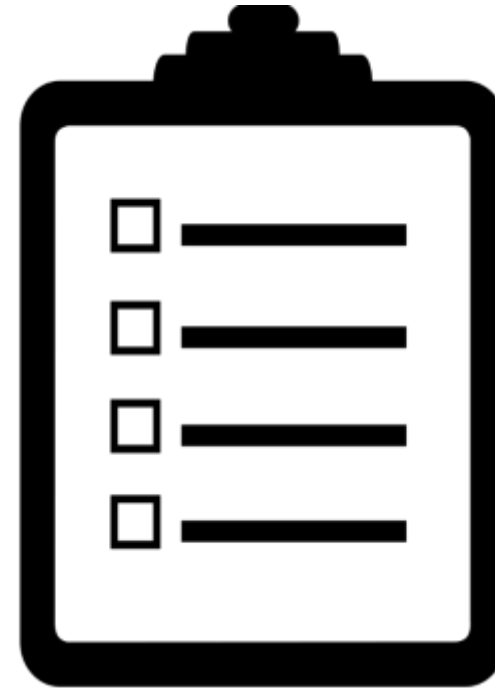
- **Effect of Puberty Changes:**
- The physical changes of puberty affect every area of the body both externally and internally
- Even though these effects are normally only temporary
- They are severe enough while they last to bring about a change in habitual pattern of behavior, attitude and personality

- **Effects on Physical Well-being :**

- Rapid growth and body changes are likely to be accomplished by fatigue, listlessness, headaches, backache, cramps, abdominal pain, swelling of legs and ankles, depression.
- Digestive disturbances are frequent, and appetite is finicky
- The prepubescent child is upset by glandular changes and changes in the size and position of internal organs.

Sources of concern

- **Concerns about normalcy.**
- Concerns about sex-Appropriateness
- ✓ **Concern about size**
- ✓ Concern about weight
- ✓ **Concern about genitalia**
- ✓ Concern about secondary sex characteristics



Sources of concern

- One of the developmental tasks of growing up is that of accepting the newly developed body.
- Childhood ideals.
- Lack of knowledge. (slow growth)
- Different children worry about different parts of their bodies.
- Girls.(physical app.)
- 2 concerns
 1. whether certain characteristics are normal
 2. whether they are sexually appropriate.

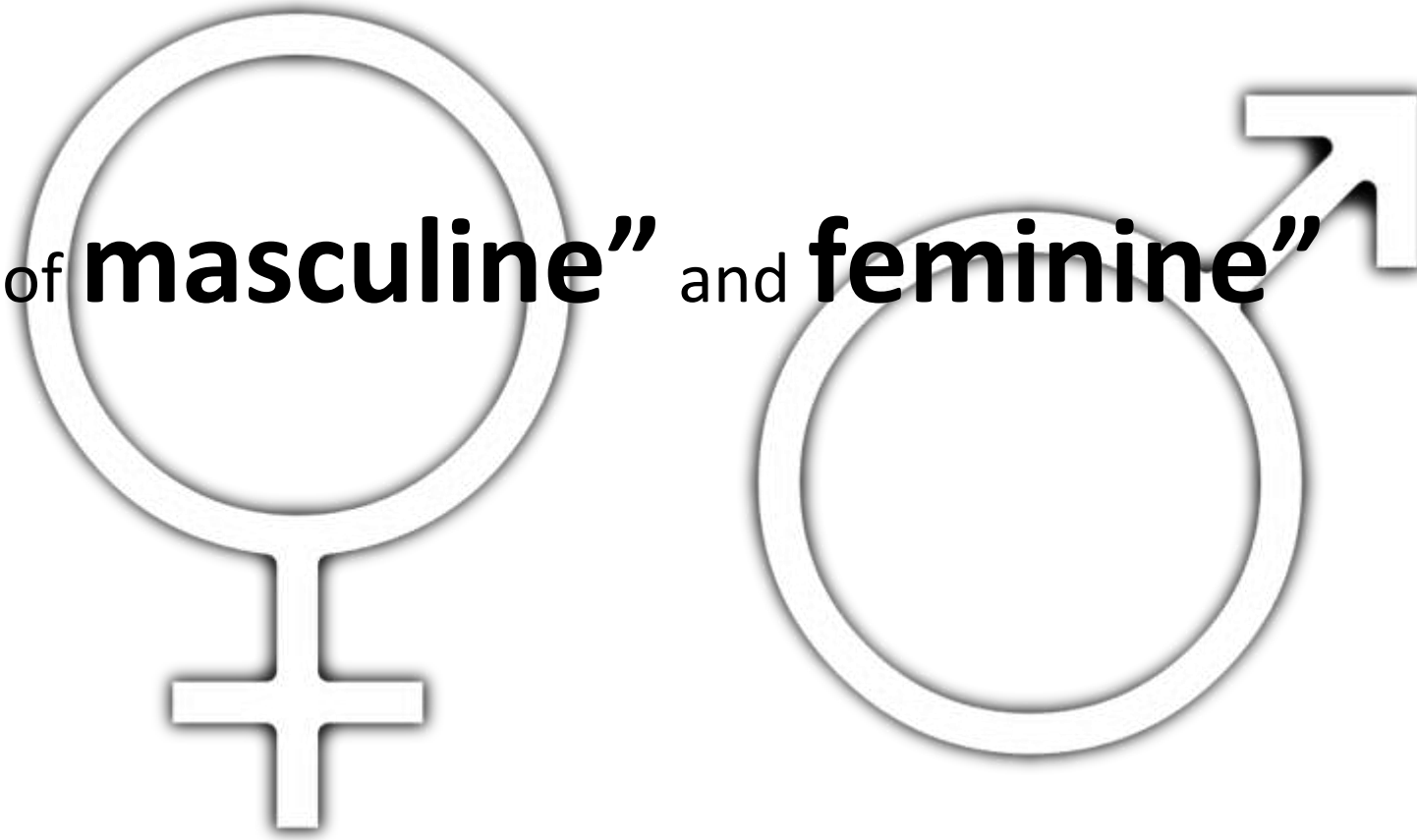
Concerns about Normalcy.

- Boys concern
- Girls concern
- Concerns of boys and girls
- Sex organs
- Body disproportions
- Awkwardness
- Age of maturing
- Masturbation



Concerns about **Sex-Appropriateness**

Stereotype of **masculine**" and **feminine**"



Concern about **size**

Concern about **weight**

In our culture fat is considered unattractive and overweight girl who compare herself with movie stars and cover girls.

- **For a boy fat is considered as sexually inappropriate.**

Concern about **Genitalia**

Concern about secondary sex characteristics

- A feminine is suppose to have fair complexion. (vary from culture to culture).
- For boys facial hair, the development of large muscles on shoulders and arm regions and voice changes come in late puberty

Hazards of Puberty

- Generally serious because of long-range consequences.
- The psychological hazards of puberty are more numerous and more far reaching in their effects than the physical ones.
- Only a small percentage of pubescent children are affected by the physical hazards, while all are affected by psychological ones but to varying degree.

- **Physical Hazards:**

- Most pubescent children do not feel up to par physically, actual illness is less common during this period.
- There is less likelihood of mortality at this time than in the earlier or even the post-pubescent years. Many deaths reported due to accidents are the result of suicide, which they attempt because of severe depression.
- The major physical hazards of puberty are due to slight or major malfunctioning of the endocrine glands that control the puberty growth spurt and the sexual changes that take place.

- **Psychological Hazards:**

- Long-term psychological effects of puberty are more important than immediate effects.

- 1. Unfavorable Self-Concept:** few children pass through puberty without developing unfavorable self-concepts. Those are the children who, earlier, had good opinions of themselves, had enough self-confidence to play leadership role in their peer group.

- Unfavorable self-concepts in puberty can be due to personal origin and some environmental. Most of pubescent's have unrealistic concepts about their appearance and abilities. Pubescent's watch their bodies change as they observe their awkward behavior, which make them disillusioned.

- Pubescent's tend to be unsocial if not antisocial in their behavior. Unfavorable treatment from others seriously affects self-concept, causing them to have negative attitude. They become withdrawn from others, contributing little in actions or speech to the group, or they become aggressive or defensive, retaliate as they regard them unfair treatment, which increases unfavorable social attitude towards them even more.

- This becomes foundation for inferiority complex, unless remedial steps are taken to correct it.

Con't...

2. Underachievement: With rapid physical growth comes weakening of energy. Which leads to lack of enthusiasm and attitude of boredom towards any activity that requires effort. Underachievement begins around fourth or fifth grade in school.

Girls accept the cultural stereotype about themselves, they realize that it is not regarded as “feminine” to be achievers, especially when their achievements are higher than boys. This encourages girls to work below their capacities, which eventually becomes a habit. As a result many pubescent's grow up to be underachievers. Unless remedial steps are taken to correct them, they lead to life changing underachievement's.

Con't...

3. Lack of preparation for puberty changes: when pubescent's are psychologically unprepared for both the physical changes and psychological changes that take place at puberty, undergoing these changes maybe traumatic experience. As a result, they are likely to develop unfavorable attitudes toward these changes.

Children are embarrassed to ask questions about puberty and that is why they never talk to their parents, teachers, or peers about these physical changes. It is preferable to educate them already.

Early and late maturers think that there is something wrong and that there development is abnormal as compare to their peers. The more they look different, the more they will feel inferior.

Con't...

4. Acceptance of changed bodies: One of the important developmental tasks of puberty is acceptance of the changed bodies. There are several reasons pubescent boys and girls are dissatisfied with their bodies and find it difficult to accept them, two most prominent reasons are: First, almost all children build up an ideal physical self-concept based on concepts from different sources of ideal individuals. Second, traditional beliefs about a gender-appropriate appearance tend to color pubescent children's attitudes in ways that interfere with their acceptance of their own changed bodies.

Cont...

5. Acceptance of socially approved gender roles: Throughout childhood, strong pressure is put on boys to play socially approved masculine gender which, in most social groups, is a traditional role which emphasizes the superiority. Because of the advantages and prestige associated with traditional male gender role, most boys are not willing but eager to play it. This is why boys have no problem accepting their gender role.

On the other hand it is hard for girls to accept their gender role because of somewhat blurred concept and they also face difficulty behaving in a manner that conforms to the stereotype. Few girls have lesser problems because they are also taught like boys, their traditional gender roles. However, other girls find it difficult to adjust because they prefer equal rights and equal opportunities. Which makes accepting hard and hazardous for psychological health.

For many girls, psychological hazards become intensified by their periodic discomfort. While not all girls are victims of periodic discomfort.

Realization that boys are not subject to periodic discomforts makes them resist traditional gender roles even more.

Unfavorable attitudes towards menstruation intensifies even more when older women call them "curse". It has been reported that unfavorable attitude towards menstruation prolong throughout lives and cause them depression.

Cont...

6. Deviations in sexual maturing: Deviations in sexual maturing is the most serious psychological hazard in their age and specially affects only those children who are deviant from their age-mates. As is true of the late childhood years, it is difficult for pubescent to be acceptant about anything that makes them different and thus, in their view, inferior.

Children who deviate in sexual maturing thinks that there is something wrong with them. They are concerned about being normal in present and in future.

Early maturers, have advantages but they still manifest personality difficulties. These difficulties occur because they tend to look older than their age-mates and then have to act according to their looks. If they fail to do so, they are criticized about it and it leads to dissatisfaction, inadequacy and inferiority.

Late maturers, who look younger than they are, maybe treat accordingly by their family and friends, which makes them doubt their abilities to do what their age-mates do.

Slow matureres, have more time to adjust to the physical changes than rapid maturers.

Cont...

Concern about that they will ever grow-up counteracts this favorable effect. In the case of boys, this may lead to “locker room syndrome”.

Some deviants of sexual maturing develop into habitual day-dreamers, some may develop a hypercritical attitude towards others, and some might become restless people but if they desire for social acceptance strong enough, they can break these habits.

Not all early and late maturers are damaged. Some, in fact, benefit.

Early-maturing boys normally become socially active and popular, holding leadership roles in the peer group. This behaviors also persists in later life because of habituation.

By contrast, middle-aged men who were late maturers were found to cling to the “little boy” patterns of behaviors. Hence, they tend to be less socially active, less successful in business, and less likely to be selected for leadership roles.

Cont...

Long-term effects of deviant maturing on girls leads one to believe that early matures tend to have aggressive personality and they will remain the same way later in life.

Late-maturers, by contrast, who were better adjusted personality and do well socially remain to do so during adulthood, unless conditions unrelated to sexual maturing interfere with this pattern.