

**ALLAMA IQBAL OPEN  
UNIVERSITY, ISLAMABAD**  
ONLINE WORKSHOP



**PHYSICAL DEVELOPMENT**  
IN  
**ADOLESCENT PSYCHOLOGY**  
CC 8653

**Presented by:**

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# ADOLESCENT PSYCHOLOGY



## PHYSICAL DEVELOPMENT

## OBJECTIVES

After reading this unit, the learners will be able to:

- Understand what biological changes occur during adolescence period
- Comprehended importance of norms and individual differences at puberty
- Conceptual knowledge of hormonal control of puberty
- Grasp the idea of pubertal change and its effects on individuals

# INTRODUCTION



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## BIOLOGICAL CHANGES DURING ADOLESCENCE

- Age is appropriate for assessing biological changes
- Adolescence is often divided into early (10-13 years) middle (14-16 years) and late (17-19 years)
- Other important variables are sex and external factors (nutrition and environment)
- Many biological changes take place during the adolescent years.

### **Internal and External Influences at Work**

- Internal - Chronic illness, nutrition
- External factors – Stress in the family
- Similar factors affect boys and girls differently

# BIOLOGICAL CHANGES DURING ADOLESCENCE

## Biological Changes

- Puberty is a transitional period between childhood and adulthood during which a growth spurt occurs, secondly sexual characteristics appear, fertility is achieved, and psychological changes take place.
- Pubertal changes – 8 to 14 in females and 9 to 15 in males.
- Brain growth continues into adolescence, changes in the brain stimulate cognitive development including abstract reasoning.
- Variations in the age of onset behavioral consequences during adolescence.
- Adolescence is to carry out crucial developmental tasks acquiring skills needed to carry out adult roles, gaining autonomy from parents' interaction with the same and opposite gender ect.

# BIOLOGICAL CHANGES DURING ADOLESCENCE

## Elements of Risk at Puberty

- Adolescent of today is different from what it was a few decades ago.
- Adolescents in USA fall in the habits of smoking, drugs, sexual relationships leading to infection from sexually transmitted diseases.
- The study shows that adolescents depend not only on their families but also on the neighborhood housing schools, workplace from which they learn important skills.
- Family income determines the settings in which adolescents spend their lives. Poverty exacts a significant price on adolescents' health, education etc.

## PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENDES

### *Five chief physical changes that take place during puberty*

- Rapid acceleration in growth
- Development of primary sex characteristics
- Development of secondary sex characteristics
- Change in body composition
- Change in circulatory and respiratory systems (strength and stamina)



# PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENDES

## The Endocrine System

The glands and organs that make hormones and release them directly into the blood so they can travel to tissues and organs all over the body – the endocrine system is made up of glands and organs that make hormones that control many important functions in the body.

## Functions of Hormones

Growth, metabolism and re-production

# PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENCES

## Main Function of Endocrine System

- Coordination of different processes in the body.
- It controls growth in which nervous system works
- Growth / development
- Metabolism
- Reproduction process
- Heart rate
- Blood pressure
- Appetite
- Sleeping and walking cycles
- Body temperature

## PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENDES

### Three Main Functions of Endocrine System

- Endocrine glands release hormones into the blood stream.
- Endocrine hormones help control mood, growth and development – metabolism and reproduction.
- The endocrine system regulates how much of each hormone is released

### Gonades (*male and female sex glands*)

These produce both sex hormones and sex cells. These are related with secondary growth. Both androgens and estrogens are produced by each genders.

### Somatic Development

## PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENCES

### Adolescent Growth Spurt

- Rapid growth increase in height and weight, 4.1 inches per year. Females 3.5 inches per year, two years earlier in females, bones become much harder etc.
- Males tend to gain more muscle weight and females more body fat, so males are more active in athletic events than females.

### Sexual Maturation

- Secondary sexual characteristics occur as teens develop the external appearance of man or a woman.

### Sexual Maturation in Boys and Girls

- (physical changes in boys and girls with respect to sexual maturation)

## PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENCES

### The Timing and Tempo of Puberty

- No specific or set time period for length of puberty, even then usually females start between 7 to 13 and males tend to start puberty between 10 to 14 years.

### Individual Differences in Pubertal Maturation. Factors that Cause Pubertal Maturation

- Genes
- Nutrition and health
- Step father / mother
- Biological relatives and genetically unrelated members

# PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENDES

## Psychological and Social Impact of Puberty

- Hormones can affect behavior
- Physical changes cause changes in self-image
- Different age groups underage difference nature of changes

## Puberty and Self-Esteem

### Adolescent Moodiness

- Fluctuation in moods
- Hormones also affect moods
- Mood of girls are related to hormones

## Puberty and Family Relations

### Impact of Specific Pubertal Events

- Biological changes usually respond positively
- Attitude of girls towards menarche

## PUBERTY: NOMRMS AND INDIVIDUAL DIFFERENCES

- **Impact of Early or Late Maturation**
- **Early vs Late Maturation in Girls**
- **Pubertal Changes and Eating Disorders**
- **Anorexia Nervosa and Bulimia**  
(food deprivation and overeating)
- **Physical Health and Health Care in Adolescence**  
Adolescents' behaviours affect physical health positively or negatively.

# HORMONAL CONTROL OF PUBERTY

- **Time to Change**

- Hormones go to work on different parts of males and females
- Androgens and estrogens cause a boy's and a girl's body to prepare for reproduction respectively.





# HORMONAL CONTROL OF PUBERTY

## • Taking Shape

As the body grows taller, Guys' overall structure changes in different direction / ways up to the end of puberty – boys and girls face increase in weight, length, breast enlargement, sexual organ etc.

- Girls have two ovaries and each ovary holds thousands of eggs. If egg is fertilized by a sperm cell, it stays in the uterus and grows into a baby.
- When the egg does not get fertilized, the uterus no longer needs the extra blood and tissue, so it leaves the body through the vagina as a menstrual period.

# HORMONAL CONTROL OF PUBERTY

- **Hair, Hair, Everywhere**
- **About Face – (Acne or Pimples)**
- **Putting the P.U in Puberty**
- **Change can Feel Kind of Strange**
- **Developing Differently – (Inside and Outside)**

# IMPACTS OF PUBERTAL CHANGE

- **Psychological Impact Of Puberty**  
(confusion, anger, rebellion etc.)
- **Bodily Dissatisfaction and Low Self-Esteem**
- **Mood Swings**  
(fluctuation among excitement, anger, anxiety, confusion, depression) and great emotional turmoil and distress for females.
- **Asserting Independence**  
(developing identity, separating from parents, experiencing unhealthy behaviours)
- **Sexual Awakening**  
(sexual arousal and affected by gender roles)

# IMPACTS OF PUBERTAL CHANGE

- **The Social and Emotional Impacts of Puberty**  
(needs, interests and moods change, romantic attitude, longing for popularity, fluctuating hormonal level etc.)
- **Lack of Sleep**  
Children moodiness, frustration and concentration ability is affected by lack of sleep. “circadian rhythm” – physical, mental and behavioral changes are influenced by hormones and make guys fully alert.
- **Adolescent Brains are Still Maturing**  
Incomplete brain development leads to cognitive and emotional immaturity that can frustrate parents. Mood swings make the things worse. So the adolescents need guidance and counseling for reasonable decision making.

# PHYSICAL DEVELOPMENT



YOU Thank

Gracias Merci

Arigato Dankscheen

Mehrbani bolzin Shukria

Komapsumnida Tingki

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Maake suksama Yaqhanyelay Efcharisto

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Paldies Tashakkur Maketai

Meraastawhy Dhanyabaad Chaita

Mairaka ekojy Tantapoch Maitzka Sakumo

Baika Ympagaratan Mimmonchar Atto Ganjito

anba Denkauga Agoyji Spesibo fakaave Spasibo

hui Sanco Maketai naban Souchubey's

cal Dai

Mars unacheesh Medawage Wabeeja