ADOLESCENT HEALTH

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OVERVIEW

- Define adolescent age.
- Adolescent's physiological and behavioural characteristics.
- Importance of adolescent health.
- Adolescent health problems: physical, psychological and social problems.
- Common adolescent health problems in Saudi Arabia.
- Approach to common adolescent health problems in primary health care.
- The role of family, school and community in adolescent health care.

MCQ-1

What is the age of adolescence ?

A- 15-20

B- 9-13

C- 10 -19

D- 18-25

MCQ-2

The first sign of physical changes in girls is ?

A- Menarche.

B- Pubic hair.

C- Axillary hair.

D- Breast enlargement.

MCQ-3

Adolescents represent ..... of the population of Saudi Arabia ?

A- 10%

B- 18%

C- 25%

D- 40%

MCQ-4

The leading cause of death in adolescence group of age is?

A- Road Traffic Accidents (RTAs)

B-Self inflected injuries (e.g. suicide)

C- STDs.

D- Poverty.

MCQ-5

The leading cause of disability & illness is ?

A- Drug abuse.

B-Depression.

C- RTA.

D- Violence.

”

Adolescence is a journey from childhood to the world of an adult, a time of physical, psychological and emotional change. Adolescents are no longer children, but not yet adults. They can put themselves at risk without thinking of the consequences. They get fascinated by many rowdy and thrilling adventures and actions and start living in world of dreams imagining them to be an unbeatable personality

“

WHAT IS ADOLESCENT AGE?

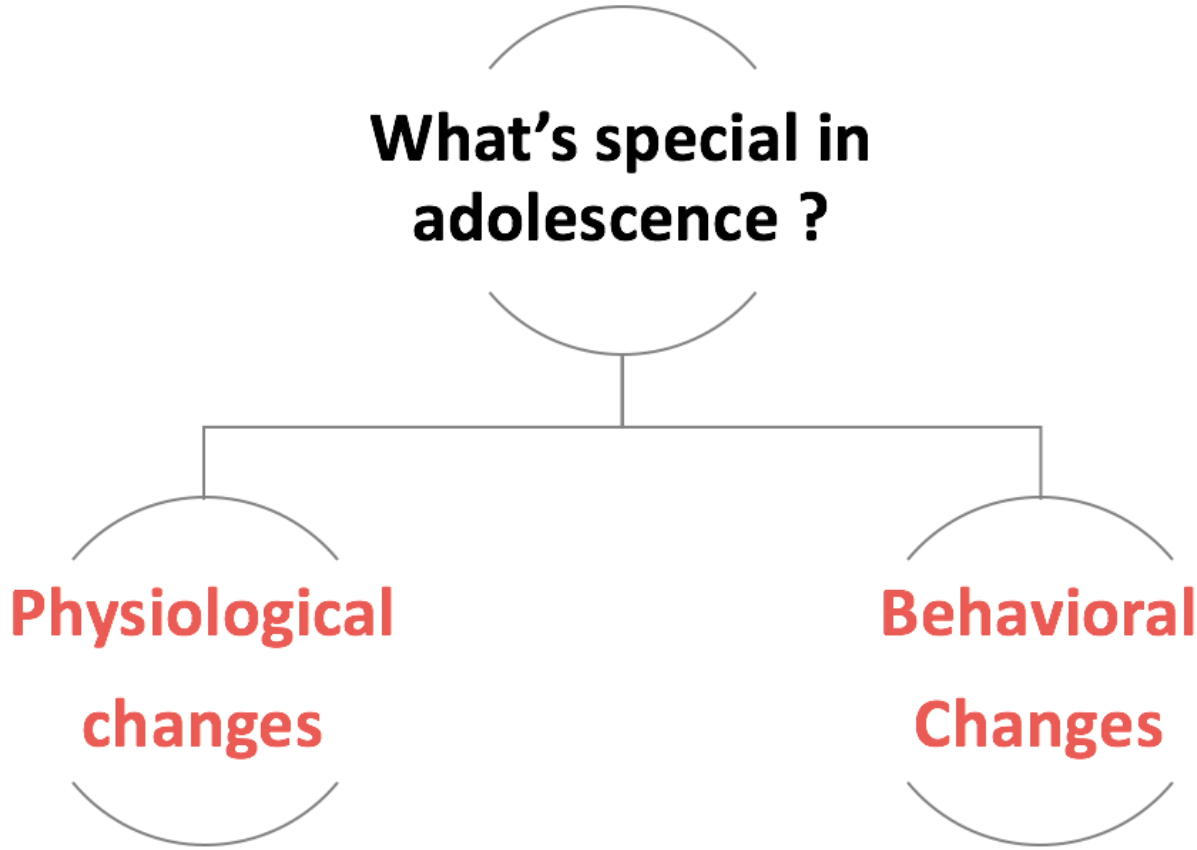
DEFINITION

WHO Definition of adolescents: the period in human growth and development that occurs after childhood and before adulthood, aged between **10 to19.**

But..

Age is not the whole story!

SOURCE: WHO.NET


What's special in adolescence ?
Physiological changes
Behavioral Changes

PHYSIOLOGICAL CHANGES

1- Neurodevelopmental
2- Hormonal
3- Sexual
4- Skeletal

** Physiological changes precede behavioral changes*

PHYSIOLOGICAL CHANGES

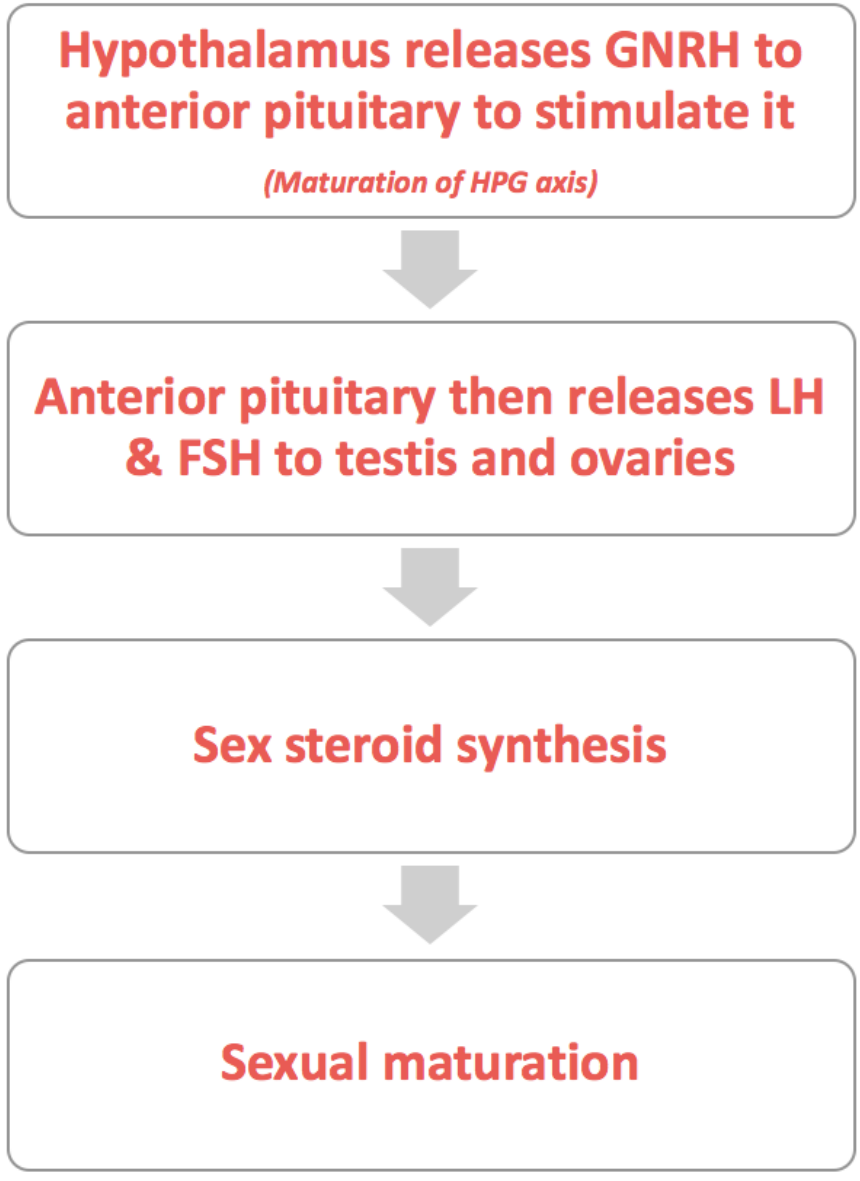
- Neurodevelopmental:

"These developments are linked to hormonal changes but are not always dependent on them. Developments are taking place in regions of the brain, such as the limbic system, that are responsible for pleasure seeking and reward processing, emotional responses and sleep regulation. At the same time, changes are taking place in the pre-frontal cortex, the area responsible for what are called executive functions: decision-making, organization, impulse control and planning for the future. The changes in the pre-frontal cortex occur later in adolescence than the limbic system changes."

-WHO, Adolescent development

PHYSIOLOGICAL CHANGES

- Hormonal:



PHYSIOLOGICAL CHANGES

- sexual:

In Girls	In Boys
Physical Changes Reflect progression in changes of the external genitalia and of sexual hair.	
1. Breast enlargement usually first sign. 2. Thelarche (Development of breast) 3. Menarche usually 2-3 yrs after breast development. 4. Growth spurt[1] peaks before menarche. 5. Pubic and axillary hair growth: sign of adrenal androgen secretion. 6. Starts at similar stage of apocrine gland sweat production and associated with adult body odour[2].	1. First signs often go unnoticed. 2. Testicular enlargement (12-13 yrs) 3. Prepubertal testis – 2 mls diameter 4. Puberty begins when volume reaches 4 mls 5. Penile and scrotal enlargement occur approximately 1 year after testicular enlargement. 6. Pubic hair appears at same time, 7. Begins of spermatogenesis; androgen secretion.

* Change in voice also occurs as part of the sexual development in males.

* Tanner staging system is used to evaluate these sexual characteristics.

PHYSIOLOGICAL CHANGES

- Skeletal:

There are growth spur associated with that age that involves :

1- Increase in the skeletal growth (height) . 2- increase in muscle mass.

In boys: height peak at age 13 with an average of 26 cm increase and weight gain mainly due to increase muscle growth.

In girls: height peak at age 11 with an average of 23 cm increase and weight gain mainly due to fat that develops in breast and hip.

BEHAVIORAL CHANGES

BEHAVIORAL CHANGES

- Cognitive and social changes: :

- Over the course of the second decade, adolescents develop stronger reasoning skills, logical and moral thinking, and become more capable of abstract thinking and making rational judgments (increasing cognitive and intellectual capacities).
- Starting to develop their sense of self. With this increasing self-identity, including their development of sexual identity, comes growing concern about other people's opinions, particularly those of their peers.
- They increasingly want to assert more autonomy over their decisions, emotions and actions and to disengage from parental control.(Seeking independence).
- Seeking for new experiences and engaging in more risks.

BEHAVIORAL CHANGES

- ## Emotional changes:

- Intense emotions at different times > unpredictable moods.
- More sensitive to emotions.
- More self conscious specially about physical appearance.

- ## Dietary changes:

- Obesity due to bad eating habits e.g. eating junk food and physical inactivity.
- Anorexia nervosa due to physical appearance perception.

IMPORTANCE OF ADOLESCENT HEALTH

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"By empowering today's youth, we will lay the groundwork for a more sustainable future for generations to come."

- UN Secretary-General Ban Ki-moon

AROUND 1 IN 6 PERSONS IN THE WORLD IS AN ADOLESCENT: THAT IS 1.2 BILLION PEOPLE AGED 10 TO 19.

In Saudi Arabia adolescents accounts for 25% of the population.

FIRST LET'S TALK FACTS

- Young people account for 15% of the disease and injury burden worldwide
- Roughly 70% of premature deaths among adults can be linked to behavior initiated during adolescence, such as tobacco use, poor eating habits, and risky sex.
- In 2012: Road traffic injuries were the leading cause of death, with some 330 adolescents dying every day.
- In 2015: An estimated 1.3 million adolescents died, mostly from preventable or treatable causes.

ADOLESCENT HEALTH PROBLEMS

01. EARLY PREGNANCY AND CHILDBIRTH

- Complications linked to pregnancy and childbirth are the second cause of death for 15-19-year-old girls globally.

- Some 11% of all births worldwide are to girls aged 15 to 19 years, and the vast majority are in low- and middle-income countries.

- Girls who do become pregnant need access to quality antenatal care.

02. HIV

- More than 2 million adolescents are living with HIV. Although the overall number of HIV-related deaths is down 30% since the peak in 2006 estimates suggest that HIV deaths among adolescents are rising.

03. Mental Health

- Depression is the top cause of illness and disability among adolescents and suicide is the third cause of death. Risk factors: Violence, poverty, humiliation and feeling devalued.

04. violance

- Violence is a leading cause of death. An estimated 180 adolescents die every day as a result of interpersonal violence. Globally, some 30% of girls aged 15 to 19 experience violence by a partner.

05. ALCOHOL AND DRUGS

- Harmful drinking among adolescents is a major concern in many countries. It reduces self-control and increases risky behaviors, such as unsafe sex or risky driving.
- It is a primary cause of injuries, violence and premature deaths. It also can lead to health problems in later life and affect life expectancy.

06. injuries

- Unintentional injuries are a leading cause of death and disability among adolescents.
- In 2012: due to road traffic accidents 120 000 adolescents died. Drowning is also a major cause of death among adolescents – 60 000, two-thirds of them boys, drowned.

07. MALNUTRITION AND OBESITY

- Many boys and girls in developing countries enter adolescence undernourished, making them more vulnerable to disease and early death. The number of adolescents who are overweight or obese is increasing in both low- and high-income countries.

08. Exercise and nutrition

- Available survey data indicate that fewer than 1 in every 4 adolescents meets the recommended guidelines for physical activity - 60 minutes of moderate to vigorous physical activity daily.

09.TOBACCO USE

- The vast majority of people using tobacco today began doing so when they were adolescents. Prohibiting the sale of tobacco products to minors and increasing the price of tobacco products through higher taxes, banning tobacco advertising and ensuring smoke-free environments are crucial
- Globally, at least 1 in 10 younger adolescents (aged 13 to 15) uses tobacco, although there are areas where this figure is much higher. Cigarette smoking seems to be decreasing among younger adolescents in some high-income countries.

COMMON ADOLESCENT HEALTH PROBLEMS IN ***SAUDI ARABIA***

"Saudi society is different from western societies in many respects. It is conservative society with strong Islamic values.

The pattern of adolescent's problems is expected to be different from that in the west. For example illegitimate teenage pregnancies are common in western world, but do not exist in KSA."

01. INJURIES

- Retrospective study in Saudi Arabia, 2001 – 2009
- Patients ≤18 years 3796 patients identified 32.1% suffered head injury (mean age 8.6 years; males 78.4%)
- Children under 12 years comprised 66.3%:
  1) Most common Motor vehicle crash (MVC) 34.2%
  2) followed by pedestrian injury (30.3%)
  3) falls (28.4%)
- High school students, leading cause is MVC (74.4%).

- Another study in Riyadh households, 2011
- most common injuries were falls (40.4%)
- Road Traffic Accidents (RTA) (15%)
- food intoxication (8.8%)
- Males > females (26% vs. 18%).

01. INJURIES

- Study done in 2013 Adolescents males who drive car 45% of them had a car accident.
- Study done in 2016 included 2382 youths aged 15 to 24 years old. Women were more likely to report that they never use seatbelts (82.2 % vs. 65.4 %).

02. HEALTH STATUS

- Jeeluna, 2015, 278 schools participated, 12,575 students participated.
- Weight: Only 54.8% had healthy weights 30% were overweight or obese 15.2% were underweight
- Vitamin D: Most (95.6%) adolescents were vitamin D deficient (<50 nmol/L)
- Hemoglobin: 10% were anemic.

02. HEALTH STATUS

- Dietary behaviors:
  1) Only 54.8% were found to consume breakfast daily/most of the time
  2) 38% fruits/day and 54.3% vegetables/day
  3) 38% carbonated beverages/day and 21.8% energy drink/day
- Activities: Females reported complete absence of exercise much more than males (59.3% vs. 31.7%)
- 42% spent at least 2 hours/day watching television. Considerable amounts of time were spent performing other sedentary activities
- Study done in 2016 included 2382 youths aged 15 to 24 years old.
- BMI: Only 45.9 % of men and 48.4 % of women had normal body mass index (BMI).
- daily consumption of at least five servings of fruits and vegetables was 6.6 %.
- prevalence of no or insufficient physical activity was 41.8 % in men and 75.6 % in women.

03. DEPRESSION AND ANXIETY DISORDER

- Mental health problems frequently start at this age group. A study carried out in Tiaf Governorate, Saudi Arabia, revealed that most important problems were anxiety (13.5%), somatic disorders (12.2%) obsession (10.8%), aggression (8.1%), delinquency and depression (4.1%).
- Study done 2007, 1723 male students recruited to this study, 59.4% had at least one of the three disorders, 40.7% had at least two and 22.6% had all the three disorders.

  1- (38.2%) had depression

  2- (48.9%) had anxiety

  3- 35.5% had stress
- Jeeluna: 14% had depression 6.7% had anxiety symptoms mental health problem were more prevalent among females

04. SMOKING

- Study in 2013, prevalence of cigarette smoking 12.7% the habit is more common in males (19.0%) than females (4.0%)
- Jeeluna 16% had ever smoked cigarettes 10.5% had ever smoked sheesha (water pipe)
- Men were more likely than women to smoke cigarettes or shisha

05. SUBSTANCE ABUSE

- Study done in 2013 The prevalence of drug use in this survey was 6.4% (10.6% in males and 0.8% in female)
- Jeeluna, 2015 16% reported solvent sniffing in the preceding month with females reporting this more than males (21.4% vs. 11.5%)

06. VIOLENCE AND BULLYING

- Jeeluna
- 25% reported exposure to bullying at school during the 30 days preceding the study
- 20% were involved in physical violence at school or community during the preceding year.

ROLE PLAY

HOW FAMILY PHYSICIANS APPROACH ADOLESCENTS

- Begin with the teen and parents discussing the teen's past medical history and parents' concerns
- Take parents' consent of to talk with the a adolescents in private.
- Establish ground rules for confidentiality
- Obtain information
- Maintain an open door policy and encourage adolescents and caregivers to seek help for problems early. .

APPROACH TO COMMON ADOLESCENT HEALTH PROBLEMS IN PHC

ROAD TRAFFIC ACCIDENTS

- Access to reliable & safe public transportation
- Road safety regulation and speed limit
- Laws forbidding adolescents aged less than 18 years from driving

OBESITY & HEALTH STATUS

- **Dietary management:** by reducing eating out, planning for healthy snacks, balanced diet, adequate intake of fruits and vegetables, fibers content of diet and avoidance of high calorie/high fat foods.
- **Physical activity enhancemen**t help in the prevention of overweight and obesity as well as for treatmen. Children and adolescents should engage in not less than 60 min of moderate
to vigorous physical activity per day to achieve optimum cardiovascular health.

- **Restrict sedentary behaviour** like watching TV, sitting in front of computers and video games. Screen time should be restricted to less than two hours per day as the opposite is associated with increased adiposity and higher weight status.

-**Medical & Surgical Treatment**

MENTAL HEALTH, DEPRESSION & ANXIETY

- Building life skills in ch adolescents and providing them with psychosocial support in schools and other community settings can help promote good mental health.
- Programs to help strengthen the ties between adolescents and their families are also important.
- If problems arise, they should be detected and managed by competent and caring health workers and referred to psychiatry

SMOKING, SUBSTABNCE ABUSE

- Prohibit sales of tobacco to minors
- Increase prices
- Ban smoking advertising
- Ensure smoke free environment

- Establish National programs for the awareness against substance
- Early detection of substance consumers
- Seek experts in adolescent suffering from addiction

WHAT'S OUR ROLE IN THIS ?

Role of Family

- Good parenting is crucial to children's lifelong health and safety. The health sector's promotion and support of parenting interventions is crucial for positive adolescent health and development.
- Guidance and set boundaries.
- Role modelling.

Role of School

- More years of schooling are associated with better health outcomes at the individual and population levels.
- Health promotion programs .
- Provide a safe environment for adolescents to express their opinion.
- Provides areas for physical activity.
- Promotes healthy eating.

Role of Community

1. Sports in promoting health: efforts by communities to engage adolescent boys (and, increasingly, girls) in health-promoting activities have often centred on sports—to increase physical activity, to provide opportunities to expand and strengthen social ties and networks and to strengthen adolescents' sense of belonging

2. Facilitating adolescents' participation: adolescents contribute in many ways to their families and communities, for example by taking responsibility for domestic chores and caring for elder and younger family members. create environments in which adolescents are able to develop abilities and skills that contribute positively to their health and interpersonal relationships.

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THAT'S ALL FOLKS

THANK YOU!

QUESTIONS ?...

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