

# PUBERTY AND ADOLESCENCE

# Adolescence

- **Adolescence**

  - The period of life from puberty to adulthood, corresponding roughly to the ages of 13 to 20

  - Latin word- 'adolescere'=to grow

  - Teen Age

- **Puberty**

  - The onset of adolescence, as evidence by rapid growth, rising levels of sex hormones, and sexual maturity

- **Menarche**

  - A girl's first menstrual period

puberty



# PUBERTY

- **Puberty** is the process of physical changes through which a child's body matures into an adult body capable of sexual reproduction to enable fertilization.
- It is initiated by hormonal signals from the brain to the gonads: the ovaries in a girl, the testes in a boy.
- In response to the signals, the gonads produce hormones that stimulate libido and the growth, function, and transformation of the brain, bones, muscle, blood, skin, hair, breasts, and sex organs.
- Derived from the Latin *puberatum* (age of maturity), the word *puberty* describes the physical changes to sexual maturation

# Puberty....

- On average, girls begin puberty at ages 10–11; boys at ages 11–12.
- Girls usually complete puberty by ages 15–17, while boys usually complete puberty by ages 16–17.
- The major landmark of puberty for females is [menarche](#), the onset of menstruation, which occurs on average between ages 12–13;
- for males, it is the first [ejaculation](#), which occurs on average at age 13
- Puberty which starts earlier than usual is known as [precocious puberty](#).
- Puberty which starts later than usual is known as [delayed puberty](#).

# Puberty....

- For boys, an androgen called testosterone is the principal sex hormone.
- The hormone that dominates female development is an estrogen called estradiol.

# Puberty....

- Puberty occurs through a long process and begins with a surge in hormone production, which in turn causes a number of physical changes.
- It is the stage of life in which a child develops secondary sex characteristics
- (for example, a deeper voice and larger adam's apple in boys, and development of breasts and more curved and prominent hips in girls)
- as his or her hormonal balance shifts strongly towards an adult state.

# Puberty....

- The major landmark of puberty for males is the first [ejaculation](#), which occurs, on average, at age 13.
- For females, it is [menarche](#), the onset of menstruation, which occurs, on average, between ages 12 and 13.



# Puberty....

- **Reproduction-related changes**
- Primary sex characteristics are those directly related to the [sex organs](#).
- In males, the first stages of puberty involve growth of the testes and scrotum, followed by growth of the penis.
- At the time that the penis develops, the [seminal vesicles](#), the [prostate](#), and the [bulb urethral gland](#) also enlarge and develop.
- 
- The first ejaculation of seminal fluid generally occurs about one year after the beginning of accelerated penis growth, although this is often determined culturally rather than biologically, since for many boys first ejaculation occurs as a result of masturbation.
- <sup>1</sup> Boys are generally fertile before they have an adult appearance.

# Puberty....

- In females, changes in the primary sex characteristics involve growth of the uterus, vagina, and other aspects of the reproductive system.
- Menarche, the beginning of menstruation, is a relatively late development which follows a long series of hormonal changes
- Generally, a girl is not fully fertile until several years after menarche, as regular ovulation follows menarche by about two years.
- Unlike males, therefore, females usually appear physically mature before they are capable of becoming pregnant.

# Puberty....

- Changes in [secondary sex characteristics](#) include every change that is not directly related to sexual reproduction.
- In males, these changes involve appearance of pubic, facial, and body hair, deepening of the voice, roughening of the skin around the upper arms and thighs, and increased development of the sweat glands.
- In females, secondary sex changes involve elevation of the breasts, widening of the hips, development of pubic and underarm hair, widening of the areolae, and elevation of the nipples.

# Adolescent Development



*\*Developed by the Center for School Mental Health (<http://csmh.umaryland.edu>)  
in collaboration with the Maryland School Mental Health Alliance (<http://www.msma.org>).*

# Stages of Development

## Adolescence

- Period of physical maturation
- Usually between ages 13 to 19
- Experience conflict of being more physically mature than emotionally
- Secondary sex characteristics fully develop



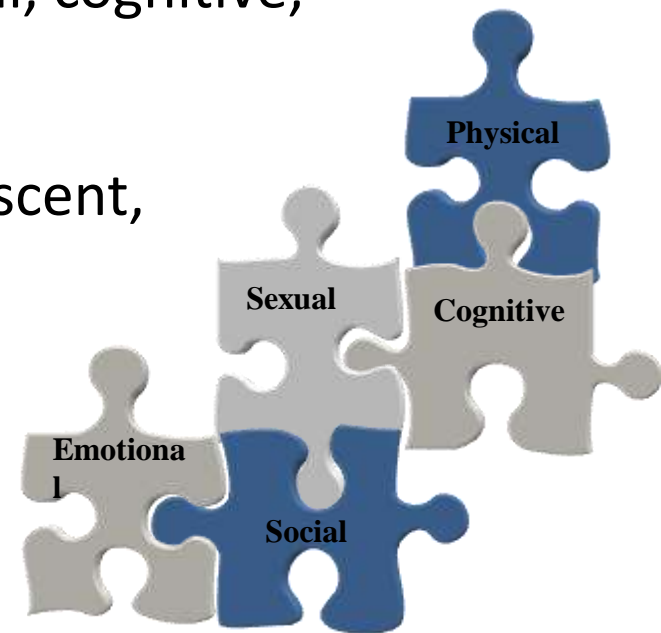
### Boy Secondary Sex Characteristics

- facial hair
- underarm hair
- pubic hair
- voice changes

### Girl Secondary Sex Characteristics

- breasts
- underarm hair
- pubic hair

- The term adolescence comes from the Latin verb *adolescere*, which means “to go into adulthood.”
- Transition between childhood and adulthood
  - From about the ages of 11-19
- Adolescence is a period of rapid physical, cognitive, sexual, social and emotional changes.
- It is an adjustment period for the adolescent, their parents, and those who are in frequent contact with them.



- A.T. Jersield defines, “Adolescence is that span of years during which boys and girls move from childhood to adulthood, mentally, emotionally, socially and physically.”
- Teenagers”
- “young men” and “young women” - or even “youths” (Late adolescence)
- adolescence is a period of “storm and stress.”

# Adolescent Development

Copyright 1996 Randy Glasbergen. [www.glasbergen.com](http://www.glasbergen.com)



**“At your age, Tommy, a boy’s body goes through changes that are not always easy to understand.”**



# Physical Development

---

- Onset of puberty begins the physical development of children
  - Puberty should take 3-6 years to complete
  - Growth Spurt
  - Secondary sex characteristics develop
  - Menstruation and hormonal changes
- Teens may sleep more
- Exercise to reinforce learning



# Physical devtpt

- Development during this period is governed by the ***pituitary gland through the release of the hormones testosterone (males) and estrogen (females)***.
- Physiological development converts :
  - the boy into a man
  - and the girl into a woman
  - and provides the basic for emotional, social, intellectual and economic maturity.
- Activation of the **endocrine glands** : increase in height, weight, changes in voice muscular growth, appearance of pubic hair, growth of hair on the face arms, legs
- changes often lead to confusion, **feeling of inadequacy**, insecurity and in some cases abnormal behavior

# Cognitive Development

---

- Adolescence appears to begin with a series of changes in cognitive ability
  - Thinking and reasoning
- Developing abstract thinking skills.
- Systematic searching for solutions



# Cognitive Development

---

- Ability to reason about hypothetical problems
- Intellectual interests expand and gain in importance
- Developing the ability to think about thinking in a process known as "metacognition"
  - Think about how they feel and what they are thinking

- **Hero-worshipping**
- **Hetero-sexuality**

# Social Development

---



- Greater autonomy and less dependence on parents.
  - Need increased age-appropriate independence and freedom
  - Parental support is still necessary
- Relationship with parents changes in three ways:
  1. As cognitive ability increases, their perceptions of parents change. Now, view them as individuals as well as parents
  2. Less time is spent with parents and families
  3. More conflict with parents

# Social Development

---

- More intimate relationships with peers
  - As less time is spent with family, peers become important during this time
- Beginnings of establishing an identity
- Reason in adult terms about moral issues and values

# Central tasks in psychosocial development of the adolescent

---

1. Autonomy from parents and family
  - Variations in parental behavior is necessary (value autonomy and disciplined will)
2. Establishing satisfying peer relationships and friendships. Learning intimacy.
  - Relationships with peers serve as prototypes for adult relationships
  - Peers provide emotional support



# Psychosocial development

---

## 3. Develop an identity

- Separate, distinct individual
- Consistency between one's own and other people's perceptions of one's identity.

## 4. Develop skills of moral reasoning

- Question social and political beliefs of adults
- Personal values and opinions become less absolute
- Political thought is less authoritarian

# Movement towards Independence

---

## Middle School to Early High School Years

- Struggle with sense of identity
- Feeling awkward or strange about one's self and one's body
- Focus on self, alternating between high expectations and poor self-esteem
- Interests and clothing style influenced by peers
- Moodiness
- Improved ability to express one's self
- Identification of parents faults
- Less overt affections shown to parents
- Complaints of parental interference
- Tendency to return to childish behavior

# Sexuality

---

Late high school years and beyond

- Feelings of love and passion
- Development of more serious relationships
- Firmer sense of sexual identity
- Increased capacity for tender and sensual love

# Morals, Values, and Self Direction

---

Late high school years and beyond

- Greater capacity for setting goals
- Interest in moral reasoning
- Capacity to use insight
- Increased emphasis on personal dignity and self-esteem
- Social and cultural traditions regain some of their previous importance

# Risk Taking

---

1. All teens take risks as a normal part of growing up. It is a tool to define and develop an identity. **Healthy risk taking is a valuable experience.**
2. Healthy adolescent risk-taking behaviors have a positive impact on an adolescent's development **and can include participation in sports, the development of artistic and creative abilities, travel, running for school office and others..**
3. Unhealthy risk-taking may appear to be a rebellion. This is normal for this age group.
4. **Red flags are persistent psychological problems, trouble at school, engaging in illegal activities and excessive unhealthy risk taking.**

# Risk Taking

---

Healthy risk-taking is a positive tool in an adolescent's life for discovering, his or her identity.

## Unhealthy Risk Taking

Dangerous dieting and eating disorders

Using drugs and alcohol

Running away, staying out all night

Unprotected sexual activity

Gang violence, weapons, bullying, or scapegoating

Stealing, shoplifting

## Healthy Alternatives

Physical activities such as sports

Extreme outdoor activities with appropriate guidance (white water rafting, rock climbing..)

Creative arts, developing hobbies

Open communication, talking about sex

Volunteering, participating in student exchange program, seeking out new friends

Part-time job, involvement in community activities

# ADOLESCENCE

- Sexual maturation is one of the most significant developments during this time.
- Like physical development, there is significant variability in the age at which individuals attain sexual maturity.
- Females tend to mature at about age thirteen, and males at about fifteen.
- Development during this period is governed by the pituitary gland through the release of the hormones testosterone (males) and estrogen (females).

# Adolescence.....

- Adolescence is an important period for cognitive development as well

In early adolescence, individuals can classify and order objects, reverse processes, think logically about concrete objects, and consider more than one perspective at a time

- . Adolescents are trying on new roles, new ways of thinking and behaving, and they are exploring different ideas and values.



# Adolescence.....

- Adolescence is characterized by a conflict between identity and role confusion.
- During this period, individuals evolve their own self-concepts within the peer context.
- In their attempts to become more independent adolescents often rely on their peer group for direction regarding what is normal and accepted.
- They begin to pull away from reliance on their family as a source of identity and may encounter conflicts between their family and their growing peer-group affiliation.

# Adolescence.....

- With so many intense experiences, adolescence is also an important time in emotional development. Mood swings are a characteristic of adolescence.
- While often attributed to hormones, mood swings can also be understood as a logical reaction to the social, physical, and cognitive changes facing adolescents, and there is often a struggle with issues of self-esteem.
- As individuals search for identity, they confront the challenge of matching who they want to become with what is socially desirable
- . In this context, adolescents often exhibit bizarre and/or contradictory behaviors.
- The search for identity, the concern adolescents have about whether they are normal, and variable moods and low self-esteem all work together to produce wildly fluctuating behavior.

# Adolescence.....

- The impact of the media and societal expectations on adolescent development has been far reaching.
- 
- Young people are bombarded by images of violence, sex, and unattainable standards of beauty.
- This exposure, combined with the social, emotional, and physical changes facing adolescents, has contributed to an increase in school violence, teen sexuality, and eating disorders.
- The onset of many psychological disorders, such as depression, other mood disorders, and schizophrenia, is also common at this time of life.

# Adolescence

## Social and Personal Development

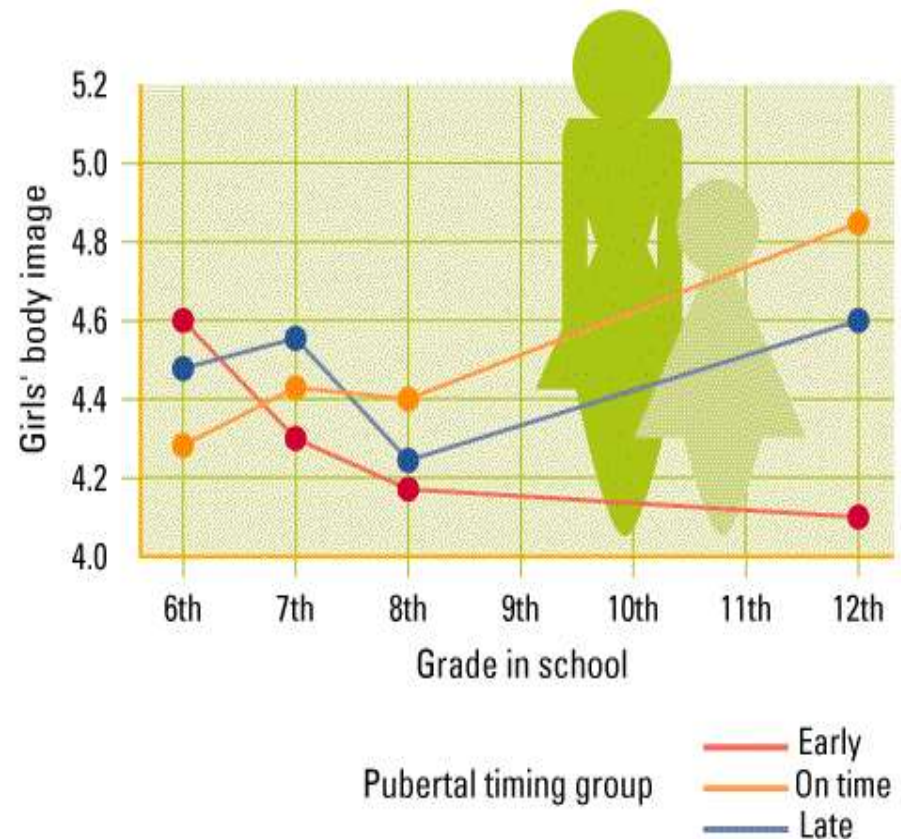
- Peer Influences
  - Adolescent relationships are intimate.
  - Adolescents begin to discover friendships with other-sex peers.
  - Conformity rises steadily with age, peaks in ninth grade, and then declines.

# Adolescence

## Puberty

### The Timing of Puberty and Body Images in Girls

- Girls who mature earlier than their peers are usually less satisfied with their size, weight, and figure.



# Adolescent Development

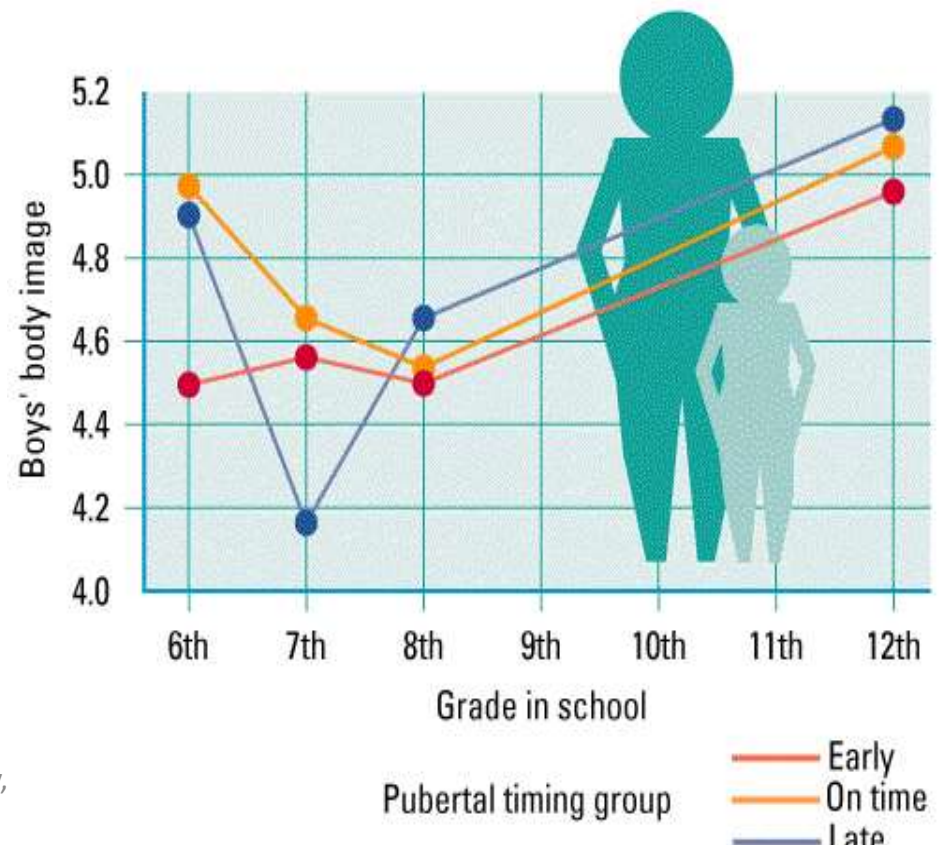
- Adolescents who are still close with their parents are less likely to engage in risky behaviors
  - Drugs, booze, sex etc.
- May start to view their friends as more important than their parents or guardians
- Peer pressure peaks at age 14 and steadily decreases after

# Adolescence

## Puberty

### The Timing of Puberty and Body Images in Boys

- Boys who mature later than their peers have negative body images, but they are only temporary.



# Adolescence

## Adolescence and Mental Health

- The stereotypic images of adolescents are:
  - Mood swings, identity crises, anxiety, rebelliousness, depression, drug use, and suicide
- Three perceived sources of difficulty in adolescence are:
  - Conflict with parents, risk-taking behavior, and mood disruption
- Conflict with parents and risk-taking do occur, but the idea that adolescents are in a state of distress is exaggerated.

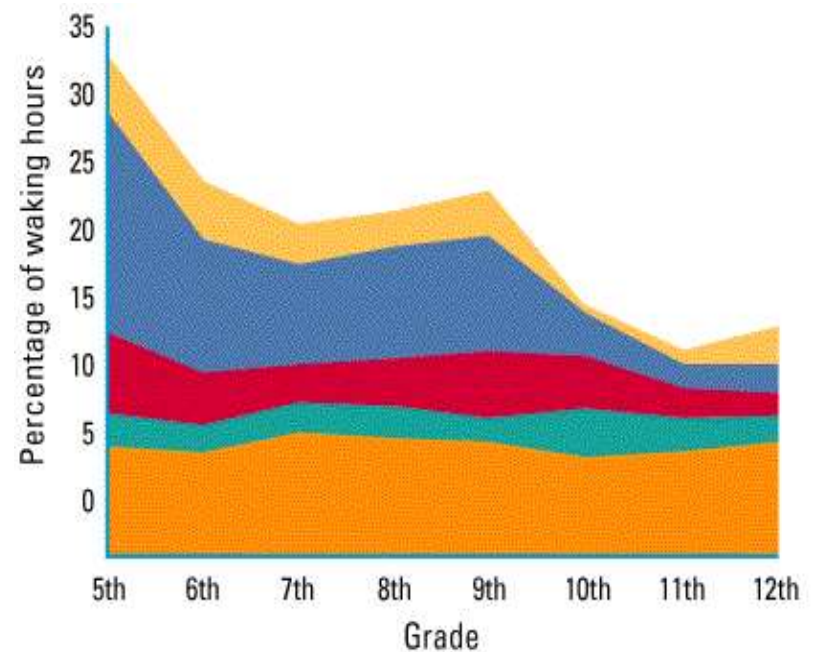


# Adolescence

## Social and Personal Development

### Adolescent Disengagement

- The proportion of time spent with the family decreases almost 3% per year
- This decline was not found for time spent alone with parents
- **Identity Crisis**
  - **An adolescent's struggle to establish a personal identity, or self-concept**



# Adolescent Depression

- At this age they try to find who they are and where they fit socially
- Changing relationship with parents is what causes depression the most, with peers is second
- Can be extremely intense with hormonal changes
- Emotional instability is a part of adolescence

# Problems of Adolescence stage

- **Sex Problems**
- **Emotional Problems**
- **Social Problem:** customs and traditions/values
- **Educational Problem**
- **Problem of leisure**