



THE ADOLESCENT: Growth and Development, Anticipatory Guidance, and Common Concerns

Deena Garner, DNP, APRN, CPNP-PC

Disclosures

Deena Garner, DNP, APRN, CPNP-PC

- Has no financial relationship with commercial interests
- This presentation contains no reference to unlabeled/unapproved uses of drugs or products

Learning Objectives

Upon completion of this review, the course attendee should be able to:

- Compare early, middle, and late adolescence.
- Identify developmental milestones of the adolescent.
- Discuss data collection/history that should be collected at each health maintenance visit.
- Distinguish between normal and abnormal physical findings in the adolescent.
- Select screening tools that are appropriate for use in the adolescent.
- Discuss anticipatory guidance appropriate to the adolescent.
- Apply evidence-based guidelines to evaluate and manage common concerns in the adolescent population.

Adolescence Overview

- Rapid, erratic physical growth
- Bodily changes
- Many “rights of passage”
- Identity seeking
- Rebellion
- Self-examination
- Confrontation with reality
- Idealism and a rigid sense of morality and ethics
- Emancipation

I'm a moody teenager. I will go out of my way to make sure everyone is miserable at all times then complain because everyone else is "cranky".



som^{ee}cards
user card

Differences Between the Stages of Adolescence

| | Early adolescence | Middle adolescence | Late adolescence |
|----------------------------------|---|--|---|
| Age Range | 11 to 14 years | 15 to 17 years | 18 to 21 years |
| Overview | Characterized by growth spurt and development of secondary sexual characteristics, cognitive skills may not keep up | Essence of adolescence. Development of a separate identity from parents | Clearer self-concept: formed a distinct identity Well formed opinions and ideas |
| Physical development | Varies widely | Increased concerns about attractiveness | Physical development typically complete |
| Cognitive development | Daydreaming common, emerging reasoning skills | Intellectual sophistication, creativity, reasoning, logic, decision-making skills | Adult reasoning skills |
| Social and emotional development | Peers more important, may appear “anti-adult”, mood swings, conscious of bodies, development of own value system | Peer group but less anti-adult, dating, sexual experimentation, developing ego centrism increases risky behavior | Relate to family as adults, shaping of identity, committed partner relationships for many |

The Adolescent Wellness Visit

- Overview:
 - Must evaluate adolescent independently of parents
 - Effective interviewing important
 - Preserving confidentiality essential
 - Can use HEEADSSS mnemonic to address key aspects of interval history.

The HEEADSSS Format

- H: Home environment
- E: Education and Employment
- E: Eating
- A: Activities
- D: Drugs
- S: Sexuality & Sexual activity
- S: Suicide/depression
- S: Safety

The Adolescent Wellness Visit

• Health History

- Ask about concerns
- Specialty or emergency care since last visit?
- Has the patient or family member developed a new health condition or died?
- Consider social determinants of health to ask about social questions.
- Current Medication
 - Rx and OTC

• Review of Systems

- Headaches or dizziness
- Fainting or passing out?
- Vision or hearing problems
- Nose/throat
- Breathing problems or chest pain
- Abdominal pain, vomiting, problems with BM's
- Painful urination or other issues such as discharge, itching..
- Females: Ask about menstrual cycle
- Rash, moles
- Muscle aches, injuries,
- Fatigue

The Adolescent Physical Assessment

- Complete physical examination including:
 - Measurements: Height, Weight, BMI, and Blood Pressure
 - Observe and exam for SMR, acanthosis nigricans, atypical moles/nevi, piercings, signs of self-injury or abuse.

The Adolescent Physical Assessment

- Consider the "Perils" of Puberty:
 - Gynecomastia
 - Acne
 - MSK Issues/Injuries
 - GYN Issues
 - Myopia
 - Scoliosis
 - Psychological changes
 - Sexually Transmitted Infections

The Adolescent Physical Assessment

- Consider the "Perils" of Puberty:
 - Gynecomastia :occurs in approximately one-half of teenage boys at an average age of 13 years, and it persists for 6 to 18 months
 - Acne: the number of acne lesions increases, with a greater number of comedones than inflammatory lesions at all stages.
 - moderate or severe acne in early puberty, usually with other signs of androgen excess, should alert the clinician to the possibility of an endocrinologic disorder, such as non-classical congenital adrenal hyperplasia or polycystic ovary syndrome.
 - MSK Issues/Injuries: the greatest risk of damage to epiphyseal growth plates occurs during periods of peak height velocity, which also is the time of greatest change in bone mineral content
 - Peak incidence of distal radius fractures =age of peak height velocity.
 - Asynchronous growth= limited ROM in some joints
 - Osgood Schlatter disease is a common overuse injury

The Adolescent Physical Assessment

- Consider the "Perils" of Puberty:
 - GYN Issues
 - Myopia
 - Scoliosis

The Adolescent Physical Assessment

- Consider the "Perils" of Puberty:
 - Psychological changes
 - Sexually Transmitted Infections

Question 1

During adolescence, MSk injuries frequently occur during periods of peak growth velocity due to:

1. Limited participation in sports
2. The change in bone mineral content
3. Increased range of motion
4. Decreased muscle mass

Question 1

During adolescence, MSk injuries frequently occur during periods of peak growth velocity due to:

Answer: The change in bone mineral content

Question 2

Which condition is common during adolescence that results in objects being "blurry" from a distance?

1. Myopia
2. Exotropia
3. Esotropia
4. Amblyopia

Question 2

Which condition is common during adolescence that results in objects being "blurry" from a distance?

Answer: Myopia

Question 3

Appropriate management of gynecomastia in a 12 year old male is:

1. Refer to endocrinology for a work-up
2. Give testosterone supplements for a year
3. Refer to a pediatric plastic surgeon
4. Reassure that this is a temporary condition and will likely resolve without treatment

Question 3

Appropriate management of gynecomastia in a 12 year old male is:

Answer: Reassure that this is a temporary condition and will likely resolve without treatment

Adolescent Specific Screenings

- Screenings
 - Depression Screening
 - Dyslipidemia
 - STI's
 - HIV
 - Anemia (Selective)
 - Oral Health (Selective)
 - Hearing
 - Tobacco, Alcohol, Drug Use (Universal)
 - TB (Selective)
 - Vision

| | Typical Vaccinations | Adolescent Specific Screenings |
|----------|----------------------------------|---|
| 11 years | Tdap(#1), Men (#1), HPV(#1 & 2*) | <ul style="list-style-type: none"> Hearing Screen once between 11-14 years. Dyslipidemia once between 9-11 yrs. |
| 12 years | | <ul style="list-style-type: none"> Vision screening Hearing Screen once between 11-14 years. Depression Screen |
| 13 years | | <ul style="list-style-type: none"> Hearing Screen once between 11-14 years. Depression Screen |
| 14 years | | <ul style="list-style-type: none"> Hearing Screen once between 11-14 years. Depression Screen |
| 15 years | | <ul style="list-style-type: none"> Vision screening Hearing Screen once between 15-17 years. Depression Screen. HIV/STD once between the ages of 15 and 18 depending on sexual activity. |
| 16 years | Men (#2) | <ul style="list-style-type: none"> Hearing Screen once between 15-17 years. Depression Screen. HIV/STD once between the ages of 15 and 18 depending on sexual activity. |
| 17 years | | <ul style="list-style-type: none"> Hearing Screen once between 15-17 years Depression Screen Dyslipidemia once between 17-21 yrs HIV/STD once between the ages of 15 and 18 depending on sexual activity |
| 18 years | | <ul style="list-style-type: none"> Depression Screen Dyslipidemia once between 17-21 yrs HIV/STD once between the ages of 15 and 18 depending on sexual activity |
| 19 years | | <ul style="list-style-type: none"> Depression Screen Dyslipidemia once between 17-21 yrs HIV/STD once between the ages of 15 and 18 depending on sexual activity |
| 20 years | | <ul style="list-style-type: none"> Depression Screen Dyslipidemia once between 17-21 yrs HIV/STD once between the ages of 15 and 18 depending on sexual activity |
| 21 years | Tdap | <ul style="list-style-type: none"> Depression Screen Dyslipidemia once between 17-21 yrs |

Question 4

An 11 year old male is being seen for a wellness visit with no abnormal findings identified. When discussing the screenings that will be ordered at the current visit, the PNP notes the patient had a hearing and vision screening last year and no other screenings were noted. Which screening will be ordered?

1. Depression
2. Dyslipidemia
3. Vision
4. STI

Question 4

An 11 year old male is being seen for a wellness visit with no abnormal findings identified. When discussing the screenings that will be ordered at the current visit, the PNP notes the patient had a hearing and vision screening last year and no other screenings were noted. Which screening will be ordered?

Answer: Dyslipidemia

Adolescence

Developmental Management, Biophysical Health, and Anticipatory Guidance

Adolescence

- Physical changes
- Nutritional needs
- Emotional/psychological changes
- Sexually responsible behavior
- Start discussion of upcoming transition to adult care
- Healthy sleep habits
- Sexuality/breast or testicular self-examination
- Peer/parental relationships

- Psychosexual Development
 - Freud:
 - Genital stage
- Psychosocial Development
 - Erickson:
 - Identify vs Role Confusion
 - Intimacy vs Isolation
- Cognitive Development
 - Piaget:
 - Formal Operational

- Moral Development
 - Kohlberg
 - Post conventional

EVERY TEENAGERS #271
TEENAGERS ARE THE MOST
MISUNDERSTOOD PEOPLE ON
THE PLANET. THEY ARE
TREATED LIKE CHILDREN AND
EXPECTED TO ACT LIKE ADULTS.

everyteenagers.tumblr.com

Question 5

Considering Erikson's psychosocial development theory, what is likely the result of an adolescent not successfully achieving a sense of self?

1. They will be confused about their future
2. They will fail to trust others
3. They will be unable to think abstractly
4. They will move into the intimacy vs isolation phase

Question 5

Considering Erikson's psychosocial development theory, what is likely the result of an adolescent not successfully achieving a sense of self?

Answer: They will be confused about their future

- Physical Growth:

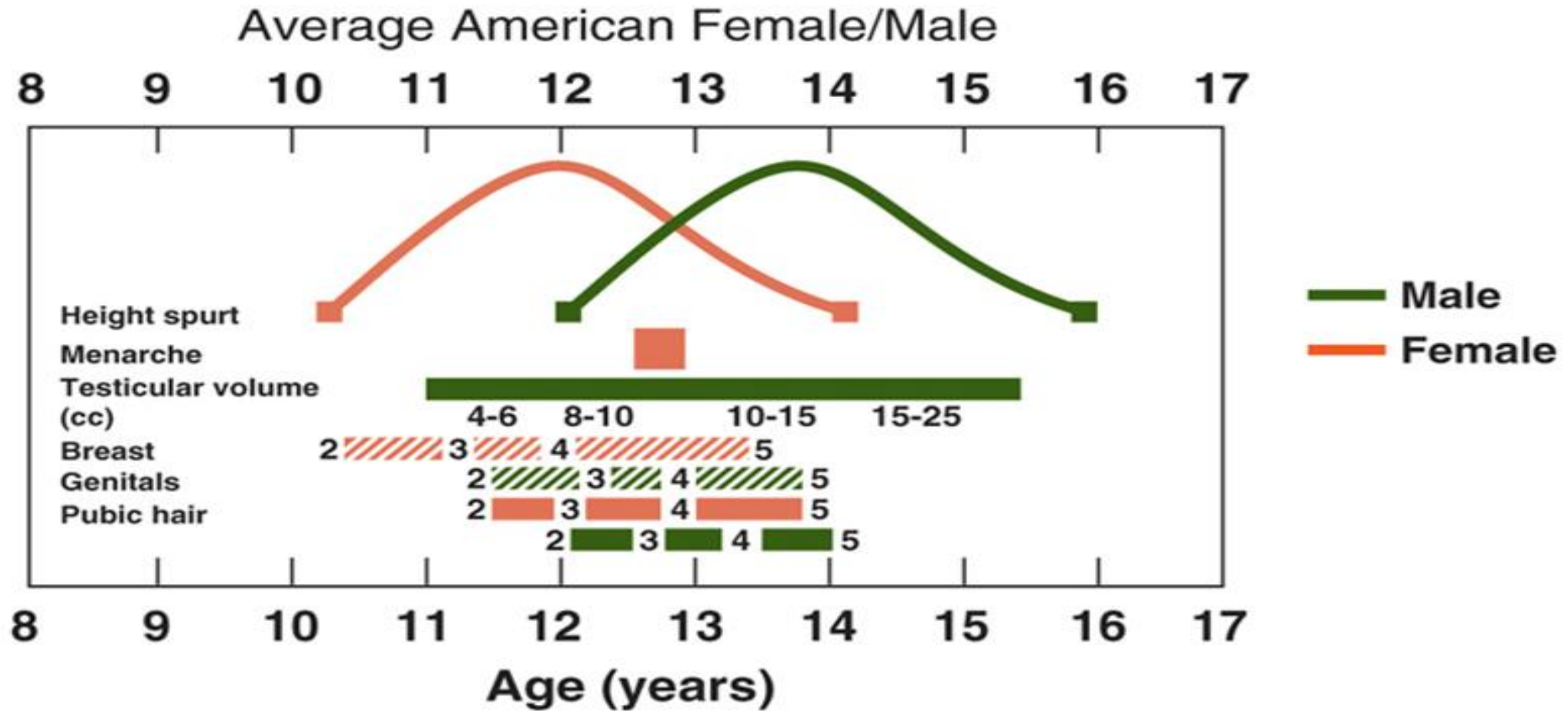
- **Females:** maximal growth spurt rate 6-12 months before menarche
- **Males:** growth spurt occurs later than females

Greatest gains between 10 & 14 for girls and 12 & 16 for boys

- **Normal variations in stature**

- Short stature is considered 2 SD below mean
- Familial Short Stature
- Constitutional Short Stature
- Accelerated growth is 2 SD above mean normal growth velocity

Sexual Maturity Rating



Adapted from Division of Adolescent Medicine, Children's Hospital Medical Center, Cincinnati, OH, 1995.

Female Sexual Development

Ovaries
increase in
size

Thelarche

- 9-10 years of age

Adrenarche

- 11.5 years of age

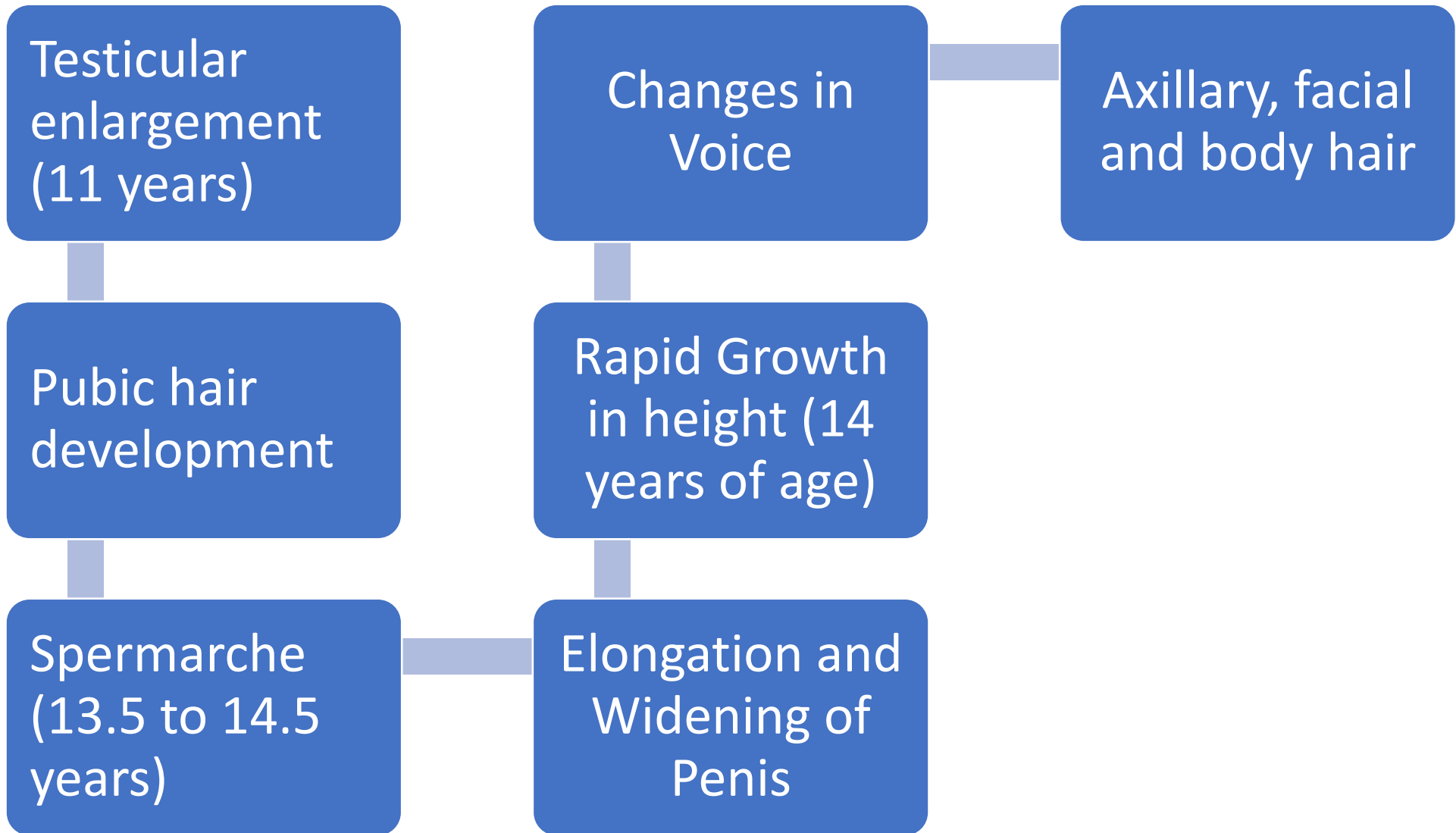
Rapid
Linear
growth

- 12 years of age

Menarche

- 12.5 years of age

Male Sexual Development



Question 6

The first physical sign is indicating the onset of female puberty is:

1. Sparsely distributed fine, pale pubic hairs
2. Breast buds
3. Menarche
4. Peak height velocity

Question 6

The first physical sign is indicating the onset of female puberty is:

Answer: Breast buds

Question 7

The first physical sign is indicating the onset of male puberty is:

1. Sparsely distributed fine, pale pubic hairs
2. Enlargement of testicles
3. Spermarche
4. Peak height velocity

Question 7

The first physical sign is indicating the onset of male puberty is:

Answer: Enlargement of testicles

Sexuality

- Two primary goals:
 - Help children achieve healthy sexual identity
 - Provide support for parents to guide their children through process
- Use approach appropriate to psychosocial development
- Consider all influences faced by adolescents
- Use answers in history to guide counseling
- Abstinence best pregnancy, STI, HIV prevention
 - Open discussion on contraceptives, STIs, and HIV/AIDS.
- Help adolescent identify someone they can openly discuss sensitive issues with who will not be embarrassed or judgmental

Sexual Behaviors, Self Concept, and Relationships

| | Typical Sexual Behaviors | Sexual Self-Concept | Sexual Role and Relationship |
|---------------------------|---|--|---|
| Adolescence, pre-pubertal | Menarche (female) Seminal emissions (male) | Concerns about body image | Same-sex friends Sexual experiences as part of friendship |
| Adolescence, early | Awkwardness in first sexual encounter Masturbation, petting May or may not be sexually active May be aware of or question sexual orientation | Anxiety over inadequacy, lack of partner, virginity | Appropriate sex friendships Dating |
| Adolescence, late | May or may not be sexually active May be aware of or question sexual orientation | Responsibility for sexual activity | Intimacy in relationships learned |
| Young adult | Experimentation with sexual positions, expressions Exploration of techniques | Responsibility for sexual health (e.g., contraception, STI prevention) Development of adult sexual value system, tolerance for others | Giving and receiving pleasure learned Long-term commitment to relationship developed |

- Lesbian, Gay, Bisexual, Transgendered, and Questioning Youth

- Sexual orientation has three components:
 - Sexual imagery: fantasies/attraction
 - Sexual behavior responsiveness
 - Self-identification as heterosexual, bisexual, homosexual
- Transgender identify selves as gender opposite of their biological sex
 - may have any sexual orientation

- Clinical findings

- Sensitization: occurs during childhood; identify selves as feeling different from same gendered friends
- Identity confusion: adolescence; begin to question whether they are homosexual
- Identity assumption: assumes a homosexual identity
- Commitment: internalized pledge to live as a homosexual/live in same-sex relationship

Question 8

Providing reassurance of “normalcy” during the course of an examination would be most important for:

1. Preschool children
2. Young school-age children
3. Older school-age children
4. Adolescents

Question 8

Providing reassurance of “normalcy” during the course of an examination would be most important for:

Answer: Adolescents

Healthy Eating

- Increased energy and protein requirement due to rapid growth in early adolescence and slows toward early adulthood.
- Require 2200–3000 calories/day
 - Approximately 45kcal/kg/day
- Adolescent girls at risk for iron deficiency
- Calcium and Vitamin D important related to growth spurts and bone growth
- Ask open ended sentences to assess typical intake.

Eating Disorders

- Evaluate for family history of problems involving nutrition, inadequate food intake, obesity, anorexia nervosa and bulimia, and poor eating habits
 - Discuss skipping meals
 - Caloric needs slow as they reach maturity
 - Vegetarian Diets
 - **Vegans:** Strict vegetarian, plant-based only
 - May be lacking in protein, vitamin B12, zinc, and iron
 - **Lactovegetarian:** adds milk and dairy products
 - **Lacto-ovo-vegetarian:** adds eggs, milk, and dairy products
- *Strict vegetarians may lack protein, vitamin B12, zinc and Fe

- Sleep

- Most get less than 8-9 hours recommended
- Reasons for inadequate sleep:
 - Biological shift in internal clock results in difficulty falling asleep
 - Early high school start times
 - Social and school obligations

Physical Activity and Sleep

- 60 minutes or more of physical activity daily
- Most get less than 8-9 hours of sleep
- Reasons for inadequate sleep:
 - Biological shift in internal clock results in difficulty falling asleep
 - Early high school start times
 - Social and school obligations
- Ask open ended questions to determine activity level and sleep routine.

Sports Participation and Over Use

- Burners and stingers
- Neck injury
- Head injury/Concussions
- Female Specific:
 - Anterior cruciate ligament (ACL) injuries higher in females
 - ACL injury prevention programs for many girls' sports
 - Patellofemoral joint, shoulder injuries
 - Stress fractures common with amenorrhea
 - Intensive training does not delay sexual maturation
 - Female athlete triad
 - Low energy availability with/without disordered eating pattern
 - Menstrual dysfunction (amenorrhea, oligomenorrhea)
 - Low bone density

Emotional Well Being

- Depression
- Anxiety
- PTSD
- Fighting/Bullying
- Academic Performance
- Disregard for rules/ authority figures
- Sexuality

Risk Reduction

- Connectedness with Family and Peers
- Connectedness with Community
- Social Media
- Tobacco, E-Cigarettes, Alcohol, Prescription or Street Drugs
- Pregnancy and STI's

Question 9

While interviewing a sixteen-year-old, all of the following statements are made. Which one contains information that should not be kept confidential?

1. "I have been sexually active with three of my boyfriends."
2. "I sometimes smoke marijuana"
3. "I want to get pregnant."
4. "Sometimes I feel I want to end my life."

Question 9

While interviewing a sixteen-year-old, all of the following statements are made. Which one contains information that should not be kept confidential?

Answer: "Sometimes I feel I want to end my life."