

MIDDLE CHILDHOOD: Growth & Development, Anticipatory Guidance, Common Concerns

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Disclosures

Sharon B. Stevenson DNP, APRN, PPCNP-BC

- Has no financial relationship with commercial interests
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Learning Objectives

- Identify developmental milestones of middle childhood.
- Discuss data collection/history that should be collected at each health supervision visit.
- Distinguish between normal and abnormal physical findings in middle childhood.
- List appropriate screening assessments that are appropriate for use with the middle childhood population.
- Examine “red flags” or factors that suggest at risk developmental problems or delay in the middle childhood population.
- Discuss anticipatory guidance appropriate to middle childhood.
- Apply evidence-based guidelines to evaluate and manage those common concerns in the middle childhood population.

Middle Childhood

- Ages 5 – 10 years
- Busy, active, curious, creative
- Advanced physical activities
- Master reading, writing, math science
- Become skilled socially
- Preschool innocence changes to adolescent complexity



Middle Childhood

- 5 & 6 year olds
 - Continues with steady growth and coordination
 - Improving language, communication, social ability
 - Major milestone starting school
 - **Key issue: school readiness & parent separation**
- 7 & 8 year olds
 - Pre-pubertal development (girls)
 - Team sports and extracurricular activities
 - Moral development progresses
- 9 & 10 year olds
 - Pubertal onset
 - Testicular enlargement (boys)
 - Same gender peer groups
 - Support self-esteem and self-confidence



Middle Childhood Wellness Visits

- Attend to the concerns of parents
 - **Social determinants of health**
 - Development and mental health
 - School
 - Physical growth and development
 - Safety

Middle Childhood

- Physical Growth:

- Boys & girls 2-3 kg average weight gain/year
- Boys & girls 5-6 cm average height/year
- Overweight: BMI at or above 85th percentile and below the 95th percentile for same age/sex. Obesity: BMI at or above the 95th percentile for same age and sex.
- Head size gets smaller, brain 90% of adult size

- Girls

- Breast buds as early as 8 years, average age 10 years
- **Puberty before age 8, precocious puberty evaluation**

- Boys

- **Puberty before age 9, precocious puberty evaluation**

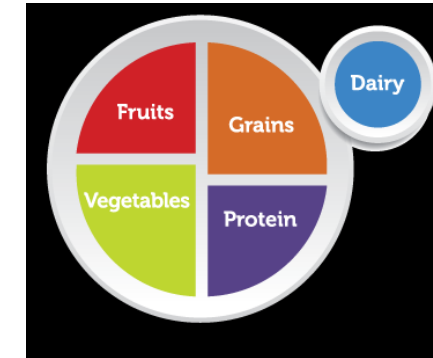
Middle Childhood

- Nutrition

- 1200-1800 calories/day
- 1000-1300mg Ca+; 600 IU vitamin D/day
- Limit juice to 4-6 oz. of 100% fruit juice each day
- Physical activity 60 minutes/day

- Sleep

- 3 to 5 years of age should sleep 10 to 13 hours per 24 hours (including naps) on a regular basis to promote optimal health.
- Children 6 to 12 years of age should sleep 9 to 12 hours per 24 hours on a regular basis to promote optimal health.



[Recommended Amount of Sleep for Pediatric Populations: A Consensus Statement of the American Academy of Sleep Medicine](#) endorsed by the AAP.

Middle Childhood Wellness Visit

- **History**

- Address parent/family concern
- PMH including ER or urgent care visits
- FH
- Social history
- Address questions to child

- **Surveillance of Development**

- **Review of Systems** with every wellness visit

- **Observation of Parent-Child Interaction**

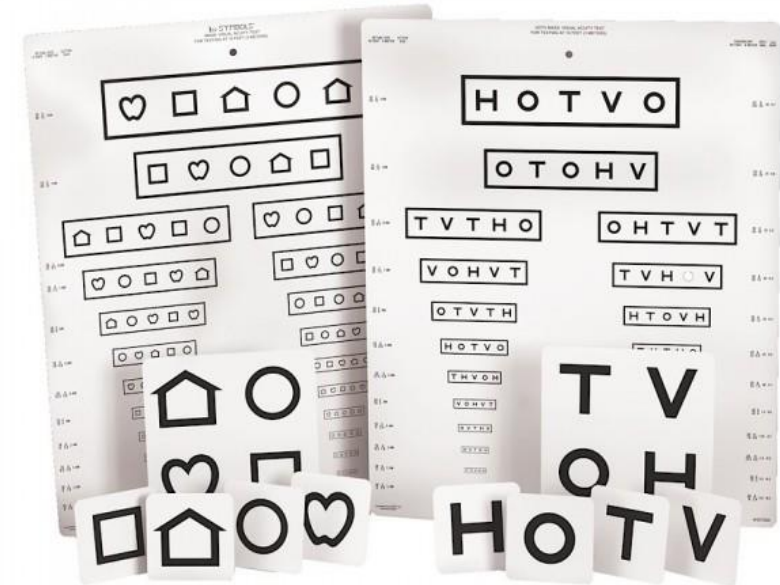
Physical Assessment (5 & 6 years)

- Complete physical examination
 - Height, weight, blood pressure
 - BMI
 - Eyes
 - Mouth
 - Neurodevelopment



Screenings

- 5 year olds
 - Hearing
 - Oral health
 - Vision
 - Anemia, lead, oral health, TB (Selective)
- 6 year olds
 - Hearing
 - Vision
 - Anemia, dyslipidemia, lead, oral health, TB (Selective)



Anticipatory Guidance

- Mental health
- School
- Oral health
- Nutrition
- Physical activity
- Safety

Physical Assessment (7 & 8 years)

- Complete physical examination
 - Height, weight, blood pressure
 - BMI
 - Skin
 - Breasts and genitalia
 - Spine



Screenings

- 7 year olds
 - No universal
 - Anemia, hearing, oral health, TB, vision (Selective)
- 8 year olds
 - Hearing
 - Vision
 - Anemia, dyslipidemia, oral health, TB (Selective)



Anticipatory Guidance

- Social Determinants
 - Neighborhood/family violence
 - Exposure to tobacco, E-cigarettes, alcohol, drugs
 - Internet safety
- Mental Health
- Safety

Physical Assessment (9 & 10 years)

- Complete physical examination
 - Height, weight, blood pressure
 - BMI
 - Skin
 - Breasts and genitalia
 - Spine



Screenings

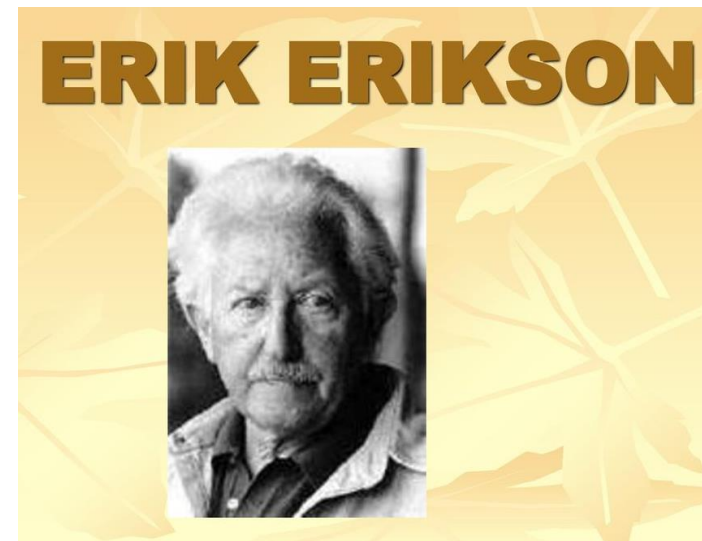
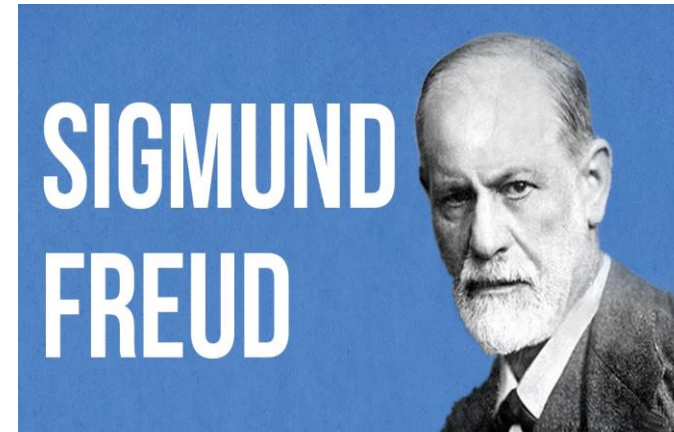
- 9 year olds
 - Dyslipidemia (once between 9-11 year visits)
 - Anemia, hearing, oral health, TB, vision **(Selective)**
- 10 year olds
 - Dyslipidemia (once between 9-11 year visits)
 - Hearing
 - Vision
 - Anemia, oral health, TB **(Selective)**

Anticipatory Guidance

- Development and Mental Health
- School
- Nutrition
 - Healthy weight, eating disorders, importance of breakfast
- Safety

Middle Childhood Developmental Stages

- Psychosexual Development
 - **Freud**
 - Phallic stage
 - Latency stage
- Psychosocial Development
 - **Erikson**
 - Initiative vs guilt
 - Industry vs inferiority



Middle Childhood Developmental Stages (continued)

- Cognitive Development
 - **Piaget**
 - Preoperational period
 - Early concrete operational
- Moral Development
 - **Kohlberg**
 - Preconventional (stage 1 & 2)
 - Conventional stage (stage 3 & 4)



Question 1

The parent of a 10-year-old boy tells the PNP that the child doesn't appear to have any interest in girls and spends most of his time with a couple of other boys. The parent is worried about the child's sexual identity. The PNP will tell the parent

- A. Children at this age have a tendency towards homosexuality
- B. In this stage the child's erogenous zone is in the genital region of the same gender
- C. Attachment to other same-gender children is how the child learns to interact with others
- D. Children at this age are experimenting with sexuality to later decide orientation

Question 1

The parent of a 10-year-old boy tells the PNP that the child doesn't appear to have any interest in girls and spends most of his time with a couple of other boys. The parent is worried about the child's sexual identity. The PNP will tell the parent

Answer: Attachment to other same-gender children is how the child learns to interact with others

Question 2

The following accurately reflects typical health supervision visits for all middle childhood except:

- A. Complete physical examination
- B. Measure and compare height, weight, blood pressure to norms
- C. Sexual maturity rating
- D. Calculated BMI

Question 2

The following accurately reflects typical health supervision visits for all middle childhood except:

Answer: Sexual maturity rating

Question 3

Cody, an 8 year old boy, is at an annual visit. During the visit his weight is recorded as 50 lbs. How much will Cody likely weigh in 2 years?

- A. 55 lbs.
- B. 70 lbs.
- C. 62 lbs.
- D. 72 lbs.

Question 3

Cody, an 8 year old boy, is at an annual visit. During the visit his weight is recorded as 50 lbs. How much will Cody likely weigh in 2 years?

Answer: 62 lbs.

Question 4

At the health supervision visit 6-year-old Megan's BMI is $> 85^{\text{th}}$ percentile. In addition to encouraging increased physical activity, the PNP recommends that Megan:

- A. Limit fruit juice to $\frac{1}{2}$ cup each day
- B. Drink no more than 2 cups of whole milk each day
- C. Drink only diet and caffeine free sodas
- D. Increase fruit and vegetables, and avoid snacks

Question 4

At the health supervision visit 6-year-old Megan's BMI is $> 85^{\text{th}}$ percentile. In addition to encouraging increased physical activity, the PNP recommends that Megan:

Answer: Limit fruit juice to $\frac{1}{2}$ cup each day

Question 5

A first priority for each middle childhood health supervision visit is:

- A. Provide anticipatory guidance
- B. Attend to parent concerns
- C. Administer screenings
- D. Address school attendance

Question 5

A first priority for each middle childhood health supervision visit is:

Answer: Attend to parent concerns

Question 6

Universal vision and hearing screening is typically included as a part of each middle childhood health supervision visit.

- A. True
- B. False

Question 6

Universal vision and hearing screening is typically included as a part of each middle childhood health supervision visit.

Answer: False

Developmental Assessment



Screening and Assessment Tools

Age Group	Concern	Instrument
3 to 16 years	Emotional symptoms, conduct problems, Hyperactivity/inattention, peer relationship problems, prosocial behavior problems	Strengths and Difficulties Questionnaire (SDQ)
7 to 16 years	Autism	Autism Spectrum Screening Questionnaire (ASSQ)
6 to 18 years	Emotional and behavior	Pediatric Symptom Checklist (PSC)
Birth to 7 years, 11 months	Language, motor, self-help, early academic skills, behavior, social-emotional/mental health	Parent's Evaluation of Developmental Status (PEDS)
Birth to 7 years, 11 months	Fine motor, gross motor, expressive language, receptive language, self-help, social-emotional For older children: Reading and math	Parents' Evaluation of Developmental Status - Developmental Milestones
4 to 18 years	Intellectual disability	Developmental Behaviour Checklist-Autism Screening Algorithm (DBC-ASA)
6 to 18 years	ADHD and mental health	Conners 3 – Parent and Teacher Rating Scale

Question 7

The parent of a 6-year-old child expresses concern that the child may have ADHD. Which screening tool will the PNP use to evaluate this possibility?

- A. Conner's 3 Parent and Teacher Rating Scale
- B. Pediatric Symptom Checklist
- C. Parents' Evaluation of Developmental Status - Developmental Milestones
- D. Behavior Assessment of Children

Question 7

The parent of a 6-year-old child expresses concern that the child may have ADHD. Which screening tool will the PNP use to evaluate this possibility?

Answer: Conner's 3 Parent and Teacher Rating Scale

Common Concerns During Middle Childhood

School Readiness

- **Key characteristics:**
 - Physical well-being and motor development
 - Social and emotional development
 - Child's approach to learning
 - Language development
 - Cognition and general knowledge



School Readiness (continued)

- Special health care needs:
 - 2 major transitions occur, entry into kindergarten and entry into middle school
 - Community services through early intervention programs should continue into school setting
 - Review the IEP, 504 plan



School Readiness (continued)

- AAP Recommendations:
 - Bright Futures health supervision guidelines
 - Establish a partnership with the family to:
 - Foster nurturing relationships through age appropriate anticipatory guidance
 - Address behavior concerns
 - Identify psychosocial risks
 - Help access community resources and access to mental health services
 - Share information on early brain development
 - Promote the 5 Rs of early childhood education
 - Identify children at risk using valid screening tests, behavioral observations, and attention to parent concerns
 - Connect to early education programs
 - Advocate for services and support
 - <https://pediatrics.aappublications.org/content/138/3/e20162293>

School Phobia/Refusal/Avoidance

- **Key Characteristics:**

- Most common in ages 5-7 and 11-14 years
- Severe difficulty attending/refusing to attend school
- Severe emotional upset when attending school
- Absence of antisocial disorders
- Staying at home with parents' knowledge

- **S/S:**

- Vague physical complaints (stomach aches, h/a, dizziness, tiredness) not present on weekends
- PE normal



School Phobia/Refusal/Avoidance (continued)

- **Evaluation:**

- In-depth history
- Symptom specific lab studies
- Depression and anxiety questionnaires
- ADHD evaluation tools

- **Management:**

- Support attendance at school
- Notify school personnel
- Assess home situation/refer if necessary
- Consider counseling for child/family

- **Key Point:**

- Anxiety causing school avoidance may communicate emotional struggles i.e., bullying, fear of failing, toileting in public bathroom

Learning Problems

- **Types**

- Dyslexia- difficulty reading
- Dysgraphia- difficulty writing
- Dyscalculia- difficulty performing mathematical calculations
- Auditory Memory and Processing Disabilities- difficulty understanding and remembering words or sounds
- ADHD
- ASD/PDD
- Intellectual Disability

- **Key Points:**

- Diagnosing ADHD, cannot usually be done successfully until a child is about age 6.
- Intellectual disability diagnosis based on IQ and 2 other standards:
 - Limitations in 2 or more essential skills of daily living (communication, self-care, reading, writing, etc.)
 - The condition must be present before 18 years old

- **Management**

- Complete physical examination
- Early diagnosis and identification
- ADHD treatment initiated by PCP
- Assess for co-existing conditions
- IEP/504 modifications

Growing Pains

- **Key Characteristics:**

- Aka benign nocturnal pains of childhood
- Recurrent, self-limited extremity pains with no explanation
- Usually in children (peak ages 4-12 years)

- **S/S:**

- Primarily bilateral LE, thigh or calf
- Paroxysmal pain, child cries
- Pain described as crampy, creeping sensation, or restless legs
- Primarily occurs in evening or nighttime hours, may interrupt sleep
- Pain relieved by massage, heat, first-order analgesics
- PE normal



Growing Pains

- **Evaluation:**

- Clinical diagnosis, no specific laboratory studies
- FH growing pains or rheumatic complaints is common

- **Management:**

- Usually responds to supportive measures (heat, analgesics, and massage)
- Stretching exercises may help

- **Red Flags**

- Fever, abnormal growth, ROM limitation, weakness
- Severe and persistent pain

Bullying

- **Definition:**

- Unwanted, aggressive behavior among school-aged children that involves a real or perceived power imbalance.

- **Characteristics:**

- Threats, spreading rumors, physical or verbal attacks, and intentional exclusion or marginalization.

Bullying

- **Verbal-** saying or writing mean thing
 - Teasing
 - Name-calling
 - Inappropriate sexual comments
 - Taunting
 - Threatening to cause harm
- **Social-** aka relational bullying, involves hurting someone's reputation or relationships
 - Leaving someone out on purpose
 - Telling other children not to be friends with someone
 - Spreading rumors
 - Embarrassing someone in public

Bullying

- **Physical-** involves hurting a person's body or possessions
 - Hitting/kicking/pinching
 - Spitting
 - Tripping/push
 - Taking or breaking someone's things
 - Making mean or rude hand gestures
- **Cyber Bullying-** takes place over digital devices i.e., cell phones, computers, and tablets.
 - Sending, posting or sharing negative content about someone
 - sharing personal or private information about someone causing embarrassment or humiliation

Bullying

- **Risk:**

- perceived as different from their peers
- perceived as weak or unable to defend themselves
- depressed, anxious, or have low self esteem
- less popular than others and have few friends

- **Management:**

- AAP Position
 - Health supervision and screening (ask questions)
 - Refer for appropriate interventions
 - Advocate for bullying awareness by teachers, educators, parents, children

Question 8

Which of the following would be a concern of basic 1st grade school readiness:

- A. Dresses and undress with little help, separates easily from parent
- B. Copies shapes, prints some letters
- C. Counts to 10, names 4 colors
- D. Hops using both feet, balances on 1 foot for 3-5 seconds

Question 8

Which of the following would be a concern of basic 1st grade school readiness:

Answer: Hops using both feet, balances on 1 foot for 3-5 seconds

Question 9

The PNP is examining 7-year-old Kari who complains of frequent stomach pain and headaches. Dad reports that the child misses several days of school each month. The child has a normal exam. Before proceeding with further diagnostic tests, what will the PNP initially ask the parent?

- A. About timing of the symptoms each day and during the week
- B. If there is a family history of mental illness
- C. Whether the child has had recent vision and hearing screening
- D. Is the child involved in extracurricular activities

Question 9

The PNP is examining 7 year old Kari who complains of frequent stomach pain and headaches. Dad reports that the child misses several days of school each month. The child has a normal exam. Before proceeding with further diagnostic tests, what will the PNP initially ask the parent?

Answer: About timing of the symptoms each day and during the week

Question 10

The PNP is examining an 8-year-old girl at her annual health supervision visit and notes the patient has breast buds. What information will the PNP include in the anticipatory guidance for this patient.

- A. Discuss sexually transmitted diseases
- B. Discuss sexual attractions and relationships
- C. Discuss pregnancy prevention
- D. Discuss sexual maturing and menstrual periods

Question 10

The PNP is examining an 8-year-old girl at her annual health supervision visit and notes the patient has breast buds. What information will the PNP include in the anticipatory guidance for this patient.

Answer: Discuss sexual maturing and menstrual periods

Question 11

Which of the following health supervision visit activities is NOT essential to do at each well-child visit from birth through school-age?

- A. Immunization review.
- B. Vision and hearing screening, either through gross assessment and parent report or with the use of a vision chart and an audiometer.
- C. Laboratory tests.
- D. Height and weight measurements, with use of growth chart to track growth over time.

Question 11

Which of the following health supervision visit activities is NOT essential to do at each well-child visit from birth through school-age?

Answer: Laboratory tests.

Question 12

During the clinic visit Pedro tells the PNP that while at his locker at school 2 boys come up behind him and grabs his rear end and laughs before walking away. This is a form of:

- A. Cyberbullying
- B. Social bullying
- C. Physical bullying
- D. Verbal bullying

Question 12

During the clinic visit Pedro tells the PNP that while at his locker at school 2 boys come up behind him and grabs his rear end and laughs before walking away. This is a form of:

Answer: Physical bullying

Question 13

In middle childhood, growing pains is a benign self-limiting disorder that may occur intermittently and are usually more noticeable in the evening or night.

1. True
2. False

Question 13

In middle childhood, growing pains is a benign self-limiting disorder that may occur intermittently and are usually more noticeable in the evening or night.

Answer: True

Question 14

One of the most important roles of the PNP who provides care for a child with special health care needs who sees several specialists and receives community and school-based services is:

- A. Ordering medications and durable equipment
- B. Assuring the parents adhere to the treatment plan
- C. Assess the parents ability to perform home care tasks
- D. Coordinate services to ensure continuity of care

Question 14

One of the most important roles of the PNP who provides care for a child with special health care needs who sees several specialists and receives community and school-based services is:

Answer: Coordinate services to ensure continuity of care