

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

Sharon Stevenson DNP, APRN, PPCNP-BC



# Disclosures

Sharon B. Stevenson DNP, APRN, PPCNP-BC

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

# 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 85<sup>th</sup> percentile and below the 95<sup>th</sup> percentile for same age/sex. Obesity: BMI at or above the 95<sup>th</sup> 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**

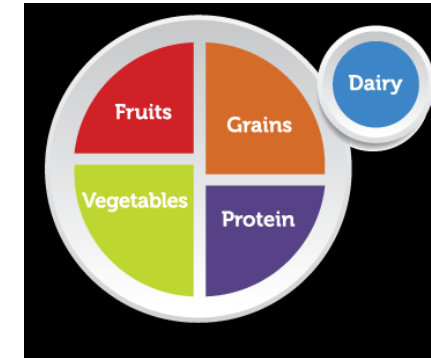
# Middle Childhood

- 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**

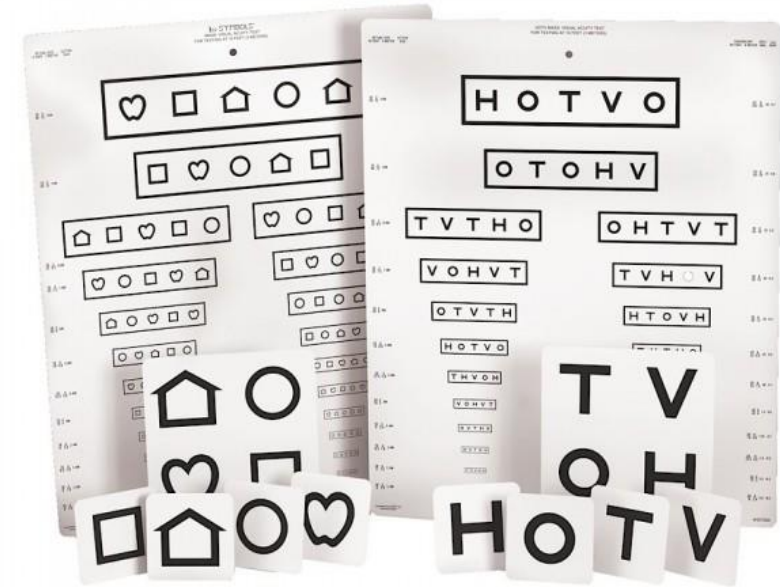
# Physical Assessment (5 & 6 years)

- 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

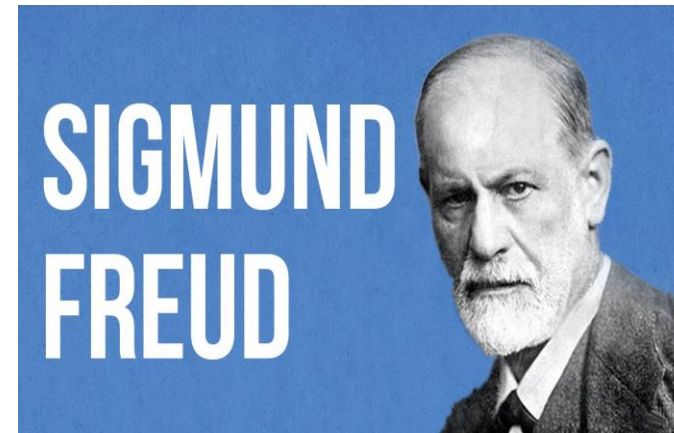
- 9 year olds
  - Dyslipidemia (once between 9-11 year visits)
  - Anemia, hearing, oral health, TB, vision (**Selective**)
- 10 year olds
  - Dyslipidemia (once between 9-11 year visits)
  - Hearing
  - Vision
  - Anemia, oral health, TB (**Selective**)

# 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<sup>th</sup> percentile. In addition to encouraging increased physical activity, the PNP recommends that Megan:

- A. Limit fruit juice to ½ 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<sup>th</sup> percentile. In addition to encouraging increased physical activity, the PNP recommends that Megan:

**Answer: Limit fruit juice to ½ 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 1<sup>st</sup> 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 1<sup>st</sup> 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 grab 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**