

The Distracted Student

Attention Deficit

Hyperactivity Disorder

Pedicases

Objectives

- State the differential diagnosis for inattention in a school-aged child.
- Identify the signs and symptoms of Attention Deficit Hyperactivity Disorder (ADHD)
- Discuss the management of ADHD
- Describe how medication can be used to manage ADHD

Part I: Introduction

Emily is a 10-year-old fourth grade girl who is brought to your medical clinic by her mother, Mrs. Bishop, who has concerns that Emily is not doing well in fourth grade.

Current History:

Emily has always struggled a little in school but this year she seems to be doing worse. She takes a long time to complete her independent work at school. She has a hard time following her teacher's directions and often seems to daydream in class.

Part I: Introduction

In the home setting, Emily has a hard time getting her homework completed. When she does remember to bring home the correct homework sheets, she often protests completing her homework. She does not pay attention to the homework instructions and thus often loses some credit, even if she does remember to complete it and turn it in the next day.

Emily also has a hard time with completing multiple step directions at home. Her parents find that they need to provide her with simple, one step directions, or else she will get distracted and not complete the necessary steps.

Part I: Introduction

Getting dressed in the morning is quite a challenge as Emily requires multiple prompts to get dressed and downstairs in time for the school bus.

Mrs. Bishop questions why Emily is struggling so much. She believes that Emily is a smart and sweet girl who wants to please, and she would like more information about how to help Emily.

Review of systems is negative for recent illnesses, headaches, significant weight changes, heat or cold intolerance, seizures, vision or hearing problems.

Part I: Introduction

Past Medical History:

Emily has received routine well child care with no significant medical illnesses. She has never been hospitalized nor had any surgeries. Emily does not regularly take any medications.

Family and Psychosocial History:

Emily's maternal uncle had attention difficulties all throughout school. No family history of relatives with cardiac defects, arrhythmias, or sudden death under the age of 50 years old.

Emily lives with her mother, who currently stays at home to care for the children, her father, who works in sales, and her 6 year old brother, who is healthy.

Part II: Next Steps

Additional History Obtained:

Emily's mother did not use any substances during pregnancy and Emily was born after a full-term, uncomplicated pregnancy. She met all early developmental milestones on time. She has always been an easily distractible child with poor focus but when she was younger her mother attributed these characteristics to her being a young child.

Emily's mood has been mostly happy although she has started to make some self-deprecating comments, such as "I must be stupid because the teacher always has to tell me to do things many times". Emily is socially related and loves being with other children but often seems to miss subtle social cues.

Part II: Next Steps

Mrs. Bishop describes her daughter as a bright girl who easily learned her numbers, letters, and letter sounds. She questions why Emily can't seem to perform to her full potential in the classroom.

Emily was evaluated by school psychologist and her mother has provided you with a copy of this report. All examiners were concerned about Emily's ability to pay attention and she made many careless mistakes throughout the testing. The psychologist's report states that Emily's IQ scores were in the average range, with low average scores on tests of processing speed. Achievement testing indicates that she has average range reading and math skills.

Part II: Next Steps

Physical Exam:

Emily's height and weight are at the 60th percentile for her age. Her heart rate is 90 beats per minute and blood pressure 92/65. Emily's hearing and vision are checked yearly at school and results have always been normal.

Emily presents as a well-appearing, healthy girl. Skin examination reveals no abnormalities. Cardiac exam reveals regular rate and rhythm with no murmurs and normal pulses. Lungs are clear. Neurological examination is unremarkable.

Rating Scales:

Emily's mother and teacher completed behavioral rating scales that you review at the visit.

Rating Scales

NICHQ Vanderbilt Assessment Scale—PARENT Informant

Today's Date: 3/20/2012 Child's Name: Emily Bishop Date of Birth: 01/05/2000
 Parent's Name: Susan Bishop Parent's Phone Number: _____

Directions: Each rating should be considered in the context of what is appropriate for the age of your child.
 When completing this form, please think about your child's behaviors in the past 6 months.

Is this evaluation based on a time when the child was on medication was not on medication not sure?

| Symptoms | Never | Occasionally | Often | Very Often |
|---|-------|--------------|-------|------------|
| 1. Does not pay attention to details or makes careless mistakes with, for example, homework | 0 | 1 | 2 | 3 |
| 2. Has difficulty keeping attention to what needs to be done | 0 | 1 | 2 | 3 |
| 3. Does not seem to listen when spoken to directly | 0 | 1 | 2 | 3 |
| 4. Does not follow through when given directions and fails to finish activities (not due to refusal or failure to understand) | 0 | 1 | 2 | 3 |
| 5. Has difficulty organizing tasks and activities | 0 | 1 | 2 | 3 |
| 6. Avoids, dislikes, or does not want to start tasks that require ongoing mental effort | 0 | 1 | 2 | 3 |
| 7. Loses things necessary for tasks or activities (toys, assignments, pencils, or books) | 0 | 1 | 2 | 3 |
| 8. Is easily distracted by noises or other stimuli | 0 | 1 | 2 | 3 |
| 9. Is forgetful in daily activities | 0 | 1 | 2 | 3 |
| 10. Fidgets with hands or feet or squirms in seat | 0 | 1 | 2 | 3 |
| 11. Leaves seat when remaining seated is expected | 0 | 1 | 2 | 3 |
| 12. Runs about or climbs too much when remaining seated is expected | 0 | 1 | 2 | 3 |
| 13. Has difficulty playing or beginning quiet play activities | 0 | 1 | 2 | 3 |
| 14. Is "on the go" or often acts as if "driven by a motor" | 0 | 1 | 2 | 3 |
| 15. Talks too much | 0 | 1 | 2 | 3 |
| 16. Blurts out answers before questions have been completed | 0 | 1 | 2 | 3 |
| 17. Has difficulty waiting his or her turn | 0 | 1 | 2 | 3 |
| 18. Interrupts or intrudes in on others' conversations and/or activities | 0 | 1 | 2 | 3 |
| 19. Argues with adults | 0 | 1 | 2 | 3 |
| 20. Loses temper | 0 | 1 | 2 | 3 |
| 21. Actively defies or refuses to go along with adults' requests or rules | 0 | 1 | 2 | 3 |
| 22. Deliberately annoys people | 0 | 1 | 2 | 3 |
| 23. Blames others for his or her mistakes or misbehaviors | 0 | 1 | 2 | 3 |
| 24. Is touchy or easily annoyed by others | 0 | 1 | 2 | 3 |
| 25. Is angry or resentful | 0 | 1 | 2 | 3 |
| 26. Is spiteful and wants to get even | 0 | 1 | 2 | 3 |
| 27. Bullies, threatens, or intimidates others | 0 | 1 | 2 | 3 |
| 28. Starts physical fights | 0 | 1 | 2 | 3 |
| 29. Lies to get out of trouble or to avoid obligations (ie, "cons" others) | 0 | 1 | 2 | 3 |
| 30. Is truant from school (skips school) without permission | 0 | 1 | 2 | 3 |
| 31. Is physically cruel to people | 0 | 1 | 2 | 3 |
| 32. Has stolen things that have value | 0 | 1 | 2 | 3 |

NICHQ Vanderbilt Assessment Scale—PARENT Informant

Today's Date: 3/20/2012 Child's Name: Emily Bishop Date of Birth: 01/05/2002
 Parent's Name: Susan Bishop Parent's Phone Number: _____

| Symptoms (continued) | Never | Occasionally | Often | Very Often |
|--|-------|--------------|-------|------------|
| 33. Deliberately destroys others' property | 0 | 1 | 2 | 3 |
| 34. Has used a weapon that can cause serious harm (bat, knife, brick, gun) | 0 | 1 | 2 | 3 |
| 35. Is physically cruel to animals | 0 | 1 | 2 | 3 |
| 36. Has deliberately set fires to cause damage | 0 | 1 | 2 | 3 |
| 37. Has broken into someone else's home, business, or car | 0 | 1 | 2 | 3 |
| 38. Has stayed out at night without permission | 0 | 1 | 2 | 3 |
| 39. Has run away from home overnight | 0 | 1 | 2 | 3 |
| 40. Has forced someone into sexual activity | 0 | 1 | 2 | 3 |
| 41. Is fearful, anxious, or worried | 0 | 1 | 2 | 3 |
| 42. Is afraid to try new things for fear of making mistakes | 0 | 1 | 2 | 3 |
| 43. Feels worthless or inferior | 0 | 1 | 2 | 3 |
| 44. Blames self for problems, feels guilty | 0 | 1 | 2 | 3 |
| 45. Feels lonely, unwanted, or unloved; complains that "no one loves him or her" | 0 | 1 | 2 | 3 |
| 46. Is sad, unhappy, or depressed | 0 | 1 | 2 | 3 |
| 47. Is self-conscious or easily embarrassed | 0 | 1 | 2 | 3 |

| Performance | Excellent | Above Average | Average | Somewhat | |
|---|-----------|---------------|---------|--------------|-------------|
| | | | | of a Problem | Problematic |
| 48. Overall school performance | 1 | 2 | 3 | 4 | 5 |
| 49. Reading | 1 | 2 | 3 | 4 | 5 |
| 50. Writing | 1 | 2 | 3 | 4 | 5 |
| 51. Mathematics | 1 | 2 | 3 | 4 | 5 |
| 52. Relationship with parents | 1 | 2 | 3 | 4 | 5 |
| 53. Relationship with siblings | 1 | 2 | 3 | 4 | 5 |
| 54. Relationship with peers | 1 | 2 | 3 | 4 | 5 |
| 55. Participation in organized activities (eg, teams) | 1 | 2 | 3 | 4 | 5 |

Teacher's Name: Linda Potts Class Time: all day Class Name/Period: _____
 Today's Date: 3/29/2018 Child's Name: Emily Bishop Grade Level: 4th grade

Directions: Each rating should be considered in the context of what is appropriate for the age of the child you are rating and should reflect that child's behavior since the beginning of the school year. Please indicate the number of weeks or months you have been able to evaluate the behaviors: 7 months

Is this evaluation based on a time when the child was on medication was not on medication not sure?

| Symptoms | Never | Occasionally | Often | Very Often |
|---|-------|--------------|-------|------------|
| 1. Fails to give attention to details or makes careless mistakes in schoolwork | 0 | 1 | 2 | 3 |
| 2. Has difficulty sustaining attention to tasks or activities | 0 | 1 | 2 | 3 |
| 3. Does not seem to listen when spoken to directly | 0 | 1 | 2 | 3 |
| 4. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand) | 0 | 1 | 2 | 3 |
| 5. Has difficulty organizing tasks and activities | 0 | 1 | 2 | 3 |
| 6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort | 0 | 1 | 2 | 3 |
| 7. Loses things necessary for tasks or activities (school assignments, pencils, or books) | 0 | 1 | 2 | 3 |
| 8. Is easily distracted by extraneous stimuli | 0 | 1 | 2 | 3 |
| 9. Is forgetful in daily activities | 0 | 1 | 2 | 3 |
| 10. Fidgets with hands or feet or squirms in seat | 0 | 1 | 2 | 3 |
| 11. Leaves seat in classroom or in other situations in which remaining seated is expected | 0 | 1 | 2 | 3 |
| 12. Runs about or climbs excessively in situations in which remaining seated is expected | 0 | 1 | 2 | 3 |
| 13. Has difficulty playing or engaging in leisure activities quietly | 0 | 1 | 2 | 3 |
| 14. Is "on the go" or often acts as if "driven by a motor" | 0 | 1 | 2 | 3 |
| 15. Talks excessively | 0 | 1 | 2 | 3 |
| 16. Blurts out answers before questions have been completed | 0 | 1 | 2 | 3 |
| 17. Has difficulty waiting in line | 0 | 1 | 2 | 3 |
| 18. Interrupts or intrudes on others (eg, butts into conversations/games) | 0 | 1 | 2 | 3 |
| 19. Loses temper | 0 | 1 | 2 | 3 |
| 20. Actively defies or refuses to comply with adult's requests or rules | 0 | 1 | 2 | 3 |
| 21. Is angry or resentful | 0 | 1 | 2 | 3 |
| 22. Is spiteful and vindictive | 0 | 1 | 2 | 3 |
| 23. Bullies, threatens, or intimidates others | 0 | 1 | 2 | 3 |
| 24. Initiates physical fights | 0 | 1 | 2 | 3 |
| 25. Lies to obtain goods for favors or to avoid obligations (eg, "cons" others) | 0 | 1 | 2 | 3 |
| 26. Is physically cruel to people | 0 | 1 | 2 | 3 |
| 27. Has stolen items of nontrivial value | 0 | 1 | 2 | 3 |
| 28. Deliberately destroys others' property | 0 | 1 | 2 | 3 |
| 29. Is fearful, anxious, or worried | 0 | 1 | 2 | 3 |
| 30. Is self-conscious or easily embarrassed | 0 | 1 | 2 | 3 |
| 31. Is afraid to try new things for fear of making mistakes | 0 | 1 | 2 | 3 |

Teacher's Name: Linda Potts Class Time: all day Class Name/Period: _____
 Today's Date: 3/29/2012 Child's Name: Emily Bishop Grade Level: 4th grade

| Symptoms (continued) | Never | Occasionally | Often | Very Often |
|--|-------|--------------|-------|------------|
| 32. Feels worthless or inferior | (0) | 1 | 2 | 3 |
| 33. Blames self for problems; feels guilty | (0) | 1 | 2 | 3 |
| 34. Feels lonely, unwanted, or unloved; complains that "no one loves him or her" | (0) | 1 | 2 | 3 |
| 35. Is sad, unhappy, or depressed | (0) | 1 | 2 | 3 |

| Performance | Somewhat | | | | |
|-----------------------------|-----------|---------------|---------|--------------|-------------|
| | Excellent | Above Average | Average | of a Problem | Problematic |
| Academic Performance | | | | | |
| 36. Reading | 1 | 2 | 3 | (4) | 5 |
| 37. Mathematics | 1 | 2 | 3 | (4) | 5 |
| 38. Written expression | 1 | 2 | 3 | (4) | 5 |

| Classroom Behavioral Performance | Somewhat | | | | |
|----------------------------------|-----------|---------------|---------|--------------|-------------|
| | Excellent | Above Average | Average | of a Problem | Problematic |
| 39. Relationship with peers | 1 | 2 | (3) | 4 | 5 |
| 40. Following directions | 1 | 2 | 3 | 4 | (5) |
| 41. Disrupting class | 1 | 2 | (3) | 4 | 5 |
| 42. Assignment completion | 1 | 2 | 3 | 4 | (5) |
| 43. Organizational skills | 1 | 2 | 3 | 4 | (5) |

Part III: Epilogue

You educate Emily and her mother about ADHD and inform them that you will continue working with them to help control the symptoms of ADHD. Emily's teachers make some accommodations for Emily in the classroom to minimize distractions and frequently check in with her. Emily's mother is interested in learning as much as she can about ADHD and is working with a behavioral therapist in the community to learn more about how to help Emily with her inattention by providing more support in the home setting.

Part III: Epilogue

Emily begins taking long acting methylphenidate 10 mg by mouth each morning. She takes this medication for 2 weeks and then her mother calls you to report that there is no improvement in her ADHD symptoms but she is also not having any side effects.

Parent and teacher rating scales confirm her reports; on Vanderbilt rating scales Emily's mother continues to report 8/9 concerns for inattention and 2/9 concerns for hyperactivity/impulsivity and Emily's teacher continues to report 8/9 concerns for inattention and 1/9 concerns for hyperactivity/impulsivity.

Part III: Epilogue

You increase the dose to long acting methylphenidate 20 mg by mouth each morning. After 2 weeks you see Emily in clinic for follow up and both Emily and her mother are happy to report that the medication is really helping. Emily is more focused and attentive. She is better able to follow instructions.

Review of rating scales completed by Emily's mother and teacher also show fewer ADHD symptoms. Emily's appetite is decreased slightly during the day but returns in the evening; in fact she often has a large bedtime snack.

Part III: Epilogue

You pay particular attention to Emily's weight and height, which are unchanged in the past month, and her blood pressure and heart rate, which are both within normal limits. She does not report any other side effects.

You decide to continue Emily on long acting methylphenidate 20 mg daily for now. You will have her follow up in clinic in 3 months to monitor her functioning and screen for side effects or other concerns.