University of Michigan Health System
Guidelines for Clinical Care

Attention-Deficit Hyperactivity Disorder

APPENDICES

Appendix A1. Behavioral Rating Scales

Tool	Psychometrics	Company	Cost	Comments
		Scales for Children and Adolescents		
Conners – 3 **Conners-EC (Early Childhood)**	Good Sensitivity and specificity	Multi-Health Systems, Inc. http://www.mhs.com	Kit $118-193 Forms $27-29/25	On-line (-3 and –EC) or paper forms available (all). Normed by year of age and gender, for 2- -18 years. Available in English, Spanish, French (Canadian). On all scales, behavior is rated from 0 to 3 based on strength of endorsement for a particular behavior. Separate tests are given for parents, teachers, or self report (12-18).
ACTers (ADD-H) Comprehensive Teacher's Rating Scale Parent Teacher Self-report	Good	Hawthorne Educational Systems, Inc. www.hes-inc.com/	Kits $47-51 Forms $32/50	Standardized K-8 grade. Not age normed.
Child Behavior Checklist (CBCL) Parent Report (6-18 years) Teacher Report Form (6-18 years) Preschool Form (1 - 5 years) Youth Self Report (YSR; 11-18 years)	Good Demonstrated reliability and validity. Non-Specific to ADHD, but allows assessment of co-morbid problems. Widely used.	Achenbach System of Empirically Based Assessment 1 South Prospect St. Burlington, VT 05401-3456 www.aseba.org **Phone:** 802-656-2602 **E-mail:** mail@aseba.org	Available in many forms so costs vary; however, will cost ≥ $50.	112 items. Behavior is rated from 0 to 3 based on strength of endorsement for a particular behavior. Available in Spanish. Can be scored with hand- scored profiles and templates or with computer programs. Eight behavioral domains: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. Normative data from large, representative US sample (N=1,753, 6-18 years, 40 states, all race & income). Normed by gender and age (4-11 and 12-18 years).
Vanderbilt Assessment Scale Parent Informant Teacher Informant	Good sensitivity and specificity	Bright Futures – http://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/adhd.pdf	Free	Scales are part of an ADHD Tool Kit developed by the AAP for primary care providers for children. Separate forms for evaluation and follow-up. Not age or gender normed.
ADDES-2 (Attention Deficit Disorders Evaluation Scale Parent (#46) Teacher (#60)	Good sensitivity and specificity	Hawthorne Educational Systems, Inc. www.hes-inc.com/	Kits $220 Forms $33/50	ADDES-2: 4.5-18 y ADDES-S: 11.5-18 y Normed age and gender.
ADDES-S Secondary Age Student Parent (#46) Teacher (#60)	Good sensitivity and specificity	Hawthorne Educational Systems, Inc. www.hes-inc.com/	Kits $220 Forms $33/50	Good for evaluation. Administration 15 minutes. Requires manual to score.

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Appendix A1. Behavioral Rating Scales (continued)

Tool	Psychometrics	Company	Cost	Comments
		Scales for Adults		
ASRS (Adult ADHD Self-Report Scale)	Good specificy Moderate sensitivity	http://webdoc.nyumc.org/nyumc/files/psych/attachments/psych_adhd_checklist.pdf	free	Official instrument of World health Organization 18-item questionnaire for patients "at risk" for ADHD Quick 6-item version also available. Available in multiple languages.
Brown Adult ADD Scale	Good sensitivity Low specificity	http://psychcorp.pearsonassessments.com/HAIWEB/Cultures/en-us/Productdetail.htm?Pid=015-8029-240	$70-$400	Asks about clinical history, early schooling, family history, sleep, health, substance use. Requests data from an observer/ significant other. Contains 40 items. Primarily concerned with inattention
Conners Adult ADHD Rating Scales (AARS)	Good sensitivity and specificity	Multi-Health Systems, Inc. http://www.mhs.com	Kit $118-193 Forms $27-29/25	Adult scales for either self-report or observer ratings. Various versions available. Asks about childhood and adult histories. DSM IV criteria plus items about emotional lability.
Wender Utah Rating Scale	Good sensitivity and specificity	www.neurotransmitter.net/Wender_Utah.doc	Free	Measures severity of symptoms in adults with ADHD using Utah criteria. Useful to assess mood lability symptoms.

Note: Standardized rating scales provide useful information and behavioral descriptions but are not diagnostic. Comparison of parent and teacher report using rating scales can reveal discrepancies which may have clinical importance. For example, if a child has more difficulties in a particular caretaker, situation, or environment, this may suggest intervention strategies or may lead to concerns regarding co-morbidity.

Appendix A2. Tips for Individuals with ADHD

General Tips for Parents of Children

- Become educated about ADHD. Resources include your child's doctor and evidence-based websites including:
  - Children and Adults with ADHD (CHADD);
  - American Academy of Pediatrics (AAP);
  - American Academy of Child and Adolescent Psychiatry (AACAP);
  - National Institutes of Mental Health (NIMH).
- Help your child become educated about ADHD at a level appropriate to age and developmental stage in order to promote adherence to treatment recommendations.
- Remember, parents are the best teachers; schedule one-on-one time with your child every day.
- Keep schedules and routines stable day to day; including eating and sleeping.
- Be a model of calm and respectful interactions.
- Ask your child's doctor to summarize the care plan for your child including targeted academic and behavioral goals.
- Discuss behavioral targets with other family members to improve uniform approaches.
  - Use frequent positive reinforcement for appropriate behaviors.
  - Selectively ignore minor negative behaviors.
  - Provide immediate, constructive feedback for the targeted inappropriate behaviors.
  - Monitor frequency of targeted behaviors at baseline and in response to intervention.
- If behavioral areas remain a struggle, seek out parent behavioral training resources.

Younger Children

- Routines are very important
- Balance higher energy and quieter activities through the day.
- Choose your battles – ignore minor misbehaviors
- Give choices but limit the number
- Avoid high-risk situations and times of day. Review the "rules" (hands to self, inside voices) immediately before venturing into a community setting.
- Consider taking "practice trips" that will allow you to implement a consequence (leaving if the rules are not followed) without disturbing your planned and needed shopping trip.

School-age Child at Home

- Invite peers one at a time to reduce stimulation, encourage friendship and allow you to provide feedback. Include homework time as a part of the family routine.
- Organize a non-distracting place for homework.
- Check your child's backpack everyday and help her organize the homework into doable chunks.
- Suggest brief breaks between the 'chunks' of homework.
- Use the activities your child enjoys as incentives for getting work done (homework and chores).
- Help your child use a system (e.g. labeled folders for each subject) to get the homework back to school.
- Many children benefit from work with a tutor or educational coach.
- Be aware of those long-term assignments and discuss a timeline.
- Communicate regularly with your child's teacher about homework, grades, and behavior.
- If your child is struggling, consider requesting evaluation for Section 504 or IDEA, especially if there is concern about possible learning disability.

Child and Adolescent at School

- An orderly and predictable classroom setting.
- Consistent rules and expectations.
- Regular breaks
- Quiet work areas
- Seating near where the teacher does the teaching
- Include a curriculum about time management and study skills
- Teach self-monitoring and self-reinforcement skills
- Establish a system of daily communication

Older Adolescent and Young Adult

- Work on organization, time management and self-motivation strategies.
- Maximize supportive assistive technologies.
- Further self education on ADHD to assist in self-advocacy for accommodations in college and on the job
- Consider CBT and other counseling

Appendix A3. ADHD and Educational Rights

Section 504
Section 504 of the National Rehabilitation Act of 1973, is a civil rights law with the intent to protect the rights of individuals with disabilities. Section 504 is not within Special Education designation but generally provides "reasonable" accommodations and services such as reduced assignments, adjusting testing conditions, and meeting transportation needs.

IDEA
The Individuals with Disabilities Education Act (IDEA) (originally Public Law 94-142 amended in 1997 – Public Law 105-17 and reauthorized in 2004), provides children age 3 to 21 with disabilities (including significant ADHD) legal safeguards. In most cases, the assistance provided and the legal safeguards from IDEA are greater than Section 504.

- The parent must submit a written request for the evaluation.
- The evaluation is multidisciplinary in nature.
- Children with ADHD may be eligible for Special Education categorization under the Otherwise Health Impaired (OHI) At this time, the parent, (the child if older), school psychologist, teacher and other evaluators determine the child's eligibility for special education categorization, document the child's specific needs, target specific outcomes and determine the needed interventions.
- The results of the psychoeducational evaluation are shared with the parent at an Individualized Education Plan Committee (IEPC) meeting.
- If a learning disability is determined the child may be eligible for services for both the ADHD and LD.

Individualized Education Plan (IEP)
An IEP is a written agreement between the parents and the school about what the child needs and what will be done to address those needs. An IEP is a legal document under IDEA that must be drawn up by the educational team for the exceptional child and must be signed by the student's parents before implementation.

REED and RTI
Many school districts around the country are adopting a review and intervention approach before entering into an evaluation under an IEP. School teams will conduct a Review of Existing Educational Data, termed REED and provide targeted support over a period. A Response to Intervention, termed RTI, will then determine if the need has been addressed or if further evaluation for special education services is needed.

Appendix A4. Special Education and Evaluation Terms

Special Education Terms

IEP	Individualized Education Plan
IEPC	Individualized Education Plan Committee
BIP	Behavioral Intervention Plan
SST	Student Study Team
OHI	Otherwise Health Impaired
SLD	Specific Learning Disability
EI	Emotionally Impaired
Section 504	National Rehabilitation Act (1973)
IDEA	Individuals with Disabilities Act (1997)
REED	Review Existing Education Data
RTI	Response to Intervention

Intelligence Tests

WISC	Wechsler Intelligence Scale for Children
K-ABC	Kaufman Assessment Battery for Children
SB-4	Stanford-Binet Fourth Edition
WJ-R	Woodcock Johnson Psychoeducational Battery, Tests of Cognitive Ability

Achievement Tests

WJ-R	Woodcock Johnson Psychoeducational Battery, Tests of Achievement
PIAT-R	Peabody Individual Achievement Test
WRAT-R	Wide Range Achievement Test
WIAT	Weschsler Individual Achievement Test

Appendix B1. Definitions of Selected Psychiatric Disorders: DSM-IV-TR Diagnostic Criteria

Anxiety Disorders

Generalized Anxiety Disorder (GAD) (300.02)

A. Excessive anxiety and worry, occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
B. The person finds it difficult to control the worry.
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). Note: Only one item is required in children.
   (1) restlessness or feeling keyed up or on edge
   (2) being easily fatigued
   (3) difficulty concentrating or mind going blank
   (4) irritability
   (5) muscle tension
   (6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)
D. Anxiety cannot be explained by a Mood Disorder, Pervasive Developmental Disorder, Psychotic Disorder, or another Anxiety Disorder (e.g., PTSD).
E. Symptoms cause clinically significant distress or impairment in functioning.
F. Not due to the direct physiological effects of a substance of abuse, prescribed medication, or general medical condition.

Panic Attacks

A. Discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:
   (1) palpitations, pounding heart, or accelerated heart rate
   (2) sweating
   (3) trembling or shaking
   (4) sensations of shortness of breath or smothering
   (5) feeling of choking
   (6) chest pain or discomfort
   (7) nausea or abdominal distress
   (8) feeling dizzy, unsteady, lightheaded, or faint
   (9) derealization (feelings of unreality) or depersonalization (being detached from oneself)
   (10) fear of losing control or going crazy
   (11) fear of dying
   (12) paresthesias (numbness or tingling sensations)
   (13) chills or hot flushes

Obsessive-Compulsive Disorder (300.3)

A. Either obsessions or compulsions:
Obsessions as defined by (1), (2), (3), and (4):
   (1) recurrent and persistent thoughts, impulses, or images that are intrusive and cause marked anxiety or distress
   (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
   (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action
   (4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind
Compulsions as defined by (1) and (2):
   (1) repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigidly
   (2) the behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation; however, these behaviors or mental acts either are not connected in a realistic way with what they are designed to neutralize or prevent or are clearly excessive
B. At some point during the course of the disorder, the person has recognized that the obsessions or compulsions are excessive or unreasonable. Note: This does not apply to children.
C. Symptoms cause marked distress, are time consuming (>1 hour per day), or interfere with functioning.
D. Not restricted to Eating Disorder, Trichotillomania, Body Dysmorphic Disorder, or Substance Use Disorder.
E. Not due to the direct physiological effects of a substance of abuse, a prescribed medication, or a general medical condition.

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Appendix B1. Definitions of Selected Psychiatric Disorders: DSM IV Diagnostic Criteria (Continued)

Separation Anxiety Disorder (309.21)

A. Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:
   (1) recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated
   (2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figures
   (3) persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped)
   (4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation
   (5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings
   (6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home
   (7) repeated nightmares involving the theme of separation
   (8) repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated

B. Duration of at least 4 weeks.

C. Onset before 18 years.

D. Causes distress or impairment in functioning.

E. Not due to Pervasive Developmental Disorder or a Psychotic Disorder.

Anxiety Disorder Not Otherwise Specified (300.00)

This category includes disorders with prominent anxiety or phobic avoidance that do not meet criteria for any specific Anxiety Disorder, Adjustment Disorder With Anxiety, or Adjustment Disorder With Mixed Anxiety and Depressed Mood.

Bipolar Disorders

Bipolar Disorders

There are six separate criteria sets for Bipolar I Disorder: Single Manic Episode, Most Recent Episode Hypomanic, Most Recent Episode Manic, Most Recent Episode Mixed, Most Recent Episode Depressed, and Most Recent Episode Unspecified. Bipolar I Disorder, Single Manic Episode, is used to describe individuals who are having a first episode of mania. The remaining criteria sets are used to specify the nature of the current (or most recent) episode in individuals who have had recurrent mood episodes.

Manic Episode

A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week (or any duration if hospitalization is necessary).

B. Persistence of three (or more) of:
   (1) inflated self-esteem or grandiosity
   (2) decreased need for sleep
   (3) more talkative than usual or pressure to keep talking
   (4) flight of ideas or feeling that thoughts are racing
   (5) distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli)
   (6) increase in goal-directed activity or psychomotor agitation
   (7) Involvement in activities with adverse consequences (e.g., over spending, sexual indiscretion)

C. Cause impairment in functioning.

D. Not due to substance of abuse, prescribed medication, or general medical condition.

E. Mania caused by antidepressant treatment should not count toward diagnosis of Bipolar I Disorder.

Hypomanic Episode

A. A distinct period of elevated, expansive, or irritable mood, lasting at least 4 days.

B. Three (or more) of symptoms of mania (see above).

C. Change in functioning that is uncharacteristic of the person and observable by others.

E. Not severe enough to cause marked impairment in social or occupational functioning, or to necessitate hospitalization, and there are no psychotic features.

F. Not due to substance of abuse, prescribed medication, or a general medical condition.

Mixed Episode

A. The criteria are met both for a Manic Episode (see above) and for a Major Depressive Episode (see above) nearly every day during at least a 1-week period.

B. Marked impairment in functioning. Needs hospitalization or has psychotic features.

C. Not due to substance of abuse, prescribed medication, or general medical condition.

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Appendix B1. Definitions of Selected Psychiatric Disorders: DSM IV Diagnostic Criteria (Continued)

Bipolar I Disorder, Single Manic Episode (296.0x)
A. Presence of only one Manic Episode (see above) and no past Major Depressive Episodes.
B. The Manic Episode is not better accounted for by a Psychotic Disorder.

Major Depressive Disorder

Major Depressive Disorder, Single Episode (296.2x)
A. Presence of a single Major Depressive Episode (see below).
B. Not better accounted for by a Psychotic Disorder.
C. There has never been a Manic Episode (see below).

Major Depressive Episode
A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure:
(1) depressed mood most of the day, nearly every day, as indicated by either subjective or objective report. In children and adolescents, can be irritable mood.
(2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (by subjective or objective report).
(3) significant weight loss when not dieting or weight gain. In children, failure to make expected weight gains.
(4) insomnia or hypersomnia nearly every day.
(5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
(6) fatigue or loss of energy nearly every day
(7) feelings of worthlessness or excessive/inappropriate guilt.
(8) diminished ability to think or concentrate, or indecisiveness, nearly every day (subjective/objective).
(9) recurrent thoughts of death, recurrent suicidal ideation, suicide attempt, or plan for committing suicide.
B. Symptoms cause distress or impairment in functioning.
C. Not due to a substance of abuse, prescribed medication, or a general medical condition.
E. Not better accounted for by Bereavement.

Fetal Alcohol Syndrome (FAS)/Alcohol-Related Neurobehavioral Disorder (ARND)

The teratogenic effects of alcohol produce a range of outcomes extending from full FAS to a milder appearing disorder in which there are no characteristic facial features, but there are clinically significant learning and behavioral problems. Individuals with full FAS have a distinct pattern of facial abnormalities, growth deficiency and evidence of central nervous system dysfunction. In addition to intellectual disability, individuals with FAS may have other neurological deficits such as poor motor skills and hand-eye coordination. They may also have a complex pattern of behavioral and learning problems, including difficulties with memory, attention and judgment. Individuals without full facial features of FAS, but who have clinically significant learning and behavioral problems are diagnosed with Alcohol-Related Neurobehavioral Disorder (ARND). ARND also referred to as Fetal Alcohol Effects (FAE) or partial FAS.

Fragile X Syndrome

Fragile X syndrome is the second most common 'chromosomal' cause of mental impairment after trisomy 21. It is characterized by moderate to severe intellectual disability, macroorchidism, large ears, prominent jaw, and high-pitched jocular speech. Patients typically have flat feet and finger joint hypermobility. Mitral valve prolapse may be present. Many males have relative macrocephaly. Patients may also have tactile defensiveness. This condition accounts for about one-half of X-linked intellectual disability. Frequency estimates vary from 0.5 per 1000 to 2.4:10,000 males.

Cognitive and behavioral profile: Hyperkinetic behavior and a problem with concentration are present in most affected males; therefore this condition can be easily confused with ADHD. Longitudinal observations indicate a deterioration of IQ with age; intellectual disability may, for example, be moderate at age 12 and severe at age 25. Patients frequently may have autistic-like behavior and apparent speech and language deficits, making it easily confused with Autistic Disorder. Psychiatric comorbidity is high, with increased risk of ADHD, oppositional defiant disorder, enuresis, and encopresis. Fragile X syndrome may also be difficult to distinguish from Prader-Willi Syndrome; except patients with Fragile X Syndrome lack the neonatal hypotonia and infantile feeding problems followed by hyperphagia during toddlerhood seen in Prader-Willi.

Inheritance: Fragile X Syndrome is associated with mutations in the FMR1 gene. All mothers of males with the fragile X have been found to be carriers; the mutation must occur either at a low rate or only in males. Twenty percent of males who carry a fragile X chromosome are phenotypically normal; their daughters, to whom they transmit the fragile X chromosome, are likewise normal, but their grandsons are often affected. The brothers of the clinically normal, transmitting males have a low risk, while

grandsons and great-grandsons have much higher risks.

Diagnosis: is made by immunofluorescence studies and is quite reliable. The most efficient and cost effective methodology for diagnosis is cytogenetic analysis, followed by molecular studies only when the fra(X) is seen or suspected.

Learning Disorders (LD)

Learning Disorder/Disability (LD) is a broad term that covers a pool of possible causes, symptoms, treatments, and outcomes. Learning Disabilities can be divided up into three broad categories:

- (1) Developmental speech and language disorders
- (2) Academic skills disorders
- (3) "Other" disorders- includes certain coordination disorders and learning handicaps not covered by the other terms.

Specific Learning Disability

A disorder occurring in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This term does not include children who have learning problems which are primarily the result of visual, hearing, or motor disabilities, of intellectual disability, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

Dyslexia

Dyslexia includes a very broad range of learning disabilities which involve language processing deficits relating to: 1) attention, 2) language, 3) spatial orientation, poor reading and spelling skills, 4) memory, 5) fine motor control issues, and 6) sequencing or difficulty organizing information and instructions into an appropriate order.

Reading Disorder (315.00)

A. Reading achievement, as measured by individually administered standardized tests of reading accuracy or comprehension, is substantially below that expected given the person's chronological age, measured intelligence, and age-appropriate education.
B. Significantly interferes with academic achievement or activities of daily living that require reading skills.
C. If a sensory deficit is present, the reading difficulties are in excess of those usually associated with it.

Mathematics Disorder (315.1)

A. Mathematical ability, as measured by individually administered standardized tests, is substantially below that expected given the person's chronological age, measured intelligence, and age-appropriate education.
B. Significantly interferes with academic achievement or activities of daily living that require mathematical ability.
C. If a sensory deficit is present, the math difficulties are in excess of those usually associated with it.

Disorder of Written Expression (315.2)

A. Writing skills, as measured by individually administered standardized tests (or functional assessments of writing skills), are substantially below those expected given the person's chronological age, measured intelligence, and age-appropriate education.
B. Significantly interferes with academic achievement or activities of daily living that require the composition of written texts.
C. If a sensory deficit is present, the difficulties in writing skills are in excess of those usually associated with it.

Learning Disorder Not Otherwise Specified (315.9)

This category is for disorders in learning that do not meet criteria for any specific Learning Disorder. This category might include problems in all three areas (reading, mathematics, written expression) that together significantly interfere with academic achievement even though performance on tests measuring each individual skill is not substantially below that expected given the person's chronological age, measured intelligence, and age-appropriate education

Appendix B1. Definitions of Selected Psychiatric Disorders: DSM IV Diagnostic Criteria (Continued)

Oppositional Defiant Disorder (313.81)

A. Pattern of negativistic, hostile, and defiant behavior lasting at least 6 months, during which four (or more) of the following are present:
   (1) often loses temper
   (2) often argues with adults
   (3) often actively defies or refuses to comply with adults' requests or rules
   (4) often deliberately annoys people
   (5) often blames others for his or her mistakes or misbehavior
   (6) is often touchy or easily annoyed by others
   (7) is often angry and resentful
   (8) is often spiteful or vindictive

B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.

C. The behaviors do not occur exclusively during the course of a Psychotic or Mood Disorder.

D. Criteria are not met for Conduct Disorder, and, if the individual is age 18 years or older, criteria are not met for Antisocial Personality Disorder.

*Behavior must occur more frequently than is typically observed in individuals of comparable age and developmental level.

Post Traumatic Stress Disorder (PTSD; 309.81)

A. The person has been exposed to a traumatic event in which both of the following were present:
   (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
   (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior

B. The traumatic event is persistently reexperienced in one (or more) of the following ways:
   (1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
   (2) recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content.
   (3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific reenactment may occur.
   (4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
   (5) physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
   (1) efforts to avoid thoughts, feelings, or conversations associated with the trauma
   (2) efforts to avoid activities, places, or people that arouse recollections of the trauma
   (3) inability to recall an important aspect of the trauma
   (4) markedly diminished interest or participation in significant activities
   (5) feeling of detachment or estrangement from others
   (6) restricted range of affect (e.g., unable to have loving feelings)
   (7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
   (1) difficulty falling or staying asleep
   (2) irritability or outbursts of anger
   (3) difficulty concentrating
   (4) hypervigilance
   (5) exaggerated startle response

E. Duration of the symptoms is more than 1 month.

F. Causes distress or impairment in functioning.

Appendix B1. Definitions of Selected Psychiatric Disorders: DSM IV Diagnostic Criteria (Continued)

Reactive Attachment Disorder of Infancy or Early Childhood (313.89)

A. Markedly disturbed and developmentally inappropriate social relatedness in most contexts, beginning before age 5 years, as evidenced by either (1) or (2):
   (1) persistent failure to initiate or respond in a developmentally appropriate fashion to most social interactions, as manifest by excessively inhibited, hypervigilant, or highly ambivalent and contradictory responses (e.g., the child may respond to caregivers with a mixture of approach, avoidance, and resistance to comforting, or may exhibit frozen watchfulness)
   (2) diffuse attachments as manifest by indiscriminate sociability with marked inability to exhibit appropriate selective attachments (e.g., excessive familiarity with relative strangers or lack of selectivity in choice of attachment figures)

B. The disturbance in Criterion A is not accounted for solely by developmental delay and does not meet criteria for a Pervasive Developmental Disorder

C. Pathogenic care as evidenced by at least one of the following:
   (1) persistent disregard of the child's basic emotional needs for comfort, stimulation, and affection
   (2) persistent disregard of the child's basic physical needs
   (3) repeated changes of primary caregiver that prevent formation of stable attachments (e.g., frequent changes in foster care)

Appendix B2. Conditions That May Be Confused with ADHD

Note: For confused or comorbid conditions, referral to specialist in these disorders is recommended. See Appendix B for DSM IV diagnostic criteria for conditions.

	Anxiety Disorders
Prevalence	26% (CI: 18%, 35%)
Overlapping Symptoms	• Poor concentration • Appear fidgety and/or agitated • Difficulty settling to sleep +/- Insomnia • Jumps from task to task • Both may have poor appetite
Distinguishing Symptoms of This Disorder	• School avoidance • Excessive performance or test-taking anxiety • Reluctance to participate in age-appropriate activities (sleep-overs, outings) • Excessive worry (e.g., school work, illness) • Over-concern about "adult matters" (e.g., finances, parental relationships, parental welfare) • Catastrophic thoughts (e.g., car accidents, kidnapping, break-ins) • Compulsive behaviors (e.g., hoarding, counting, ordering) • Nightmares, excessive worries/fears at bedtime • Physiological symptoms: racing heart beat, difficulty breathing, chest pain • Patient becomes "anxious" or has visual hallucinations in response to stimulants
Distinguishing Symptoms of ADHD	• Should not see significant symptoms of anxiety in uncomplicated ADHD.
	Bipolar Disorder
Prevalence	Diagnosis of Bipolar Disorder in children and adolescents is highly controversial; therefore, rates are unreliable. Lewinsohn et al. (1995) reported a lifetime prevalence of 1% for Bipolar Disorders in a large community sample of older adolescents.
Overlapping Symptoms	• Inattention, easily distracted • Motor activity • Sleep disturbance • Accident prone • Disruptive behavior • Hypertalkativeness
Distinguishing Symptoms of This Disorder	Highly controversial diagnosis in children. Always refer to child psychiatrist if suspected. • Mood swings; behavior is cyclical or erratic • Being kicked out of multiple daycare programs is a red flag. • Parents report the child has "no control" over behavior • Grandiosity (Exaggerated ideas of ability and importance). For example, the child may think they can teach the class better than the teacher" despite failing in school. • Severe aggression (especially toward adults); "rage attacks" • Hypersexuality- sexual jokes or language, inappropriately touching adults • Hallucinations • Severe insomnia • Extreme changes in energy levels and behavior • Rage attacks • Irrational ideas • Tangential speech, rapid/pressured speech • Extremely impulsive +/- self-endangering behavior • Extreme hyperactivity- esp. if climbs excessively or seems to be "fearless" • Intrusive behavior • Suicidal behavior in children under 13 is concerning and warrants urgent psychiatric evaluation

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Appendix B2. Conditions That May Be Confused with ADHD (Continued)

	Bipolar Disorder (continued)
Distinguishing Symptoms of ADHD	• ADHD symptoms should be present since childhood, whereas, Bipolar Disorder typically occurs later (most commonly around puberty) • Problems are chronic and more consistent in ADHD rather than cyclical in Bipolar disorder • Aggression, if it occurs, is usually not severe in uncomplicated ADHD & generally related to frustration • Grandiosity, hypersexuality, and psychosis are NOT typical in ADHD • Sleep problems are generally not severe and rarely are cyclical in ADHD • In samples of prepubertal patients with Bipolar Disorder, almost 100% have co-morbid ADHD. In adolescent Bipolar sample, rates of co-morbid ADHD and Bipolar Disorder are 30-50%
	Fetal Alcohol Syndrome(FAS)/ Alcohol-Related Neurobehavioral Disorder (ARND) [**Note:** ARND is also called Fetal Alcohol Effects (FAE) or partial FAS]
Prevalence	**FAS:** 0.33 cases per 1,000 live births **ARND:** Several times the magnitude of FAS cases.
Overlapping Symptoms	• Poor academic performance • Inattention • Hyperactivity • Poor growth (not on stimulants) • Disruptive behavior
Distinguishing Symptoms of This Disorder	• Must have proven or strong suspicion of exposure to alcohol in utero • +/- Growth deficiencies • +/- Skeletal deformities (especially microcephaly) • +/- Facial abnormalities (short palpebral fissures, long/flat philtrum, thin upper lip; flat midface, pstosis; nearsightedness; strabismus; short upturned nose; cleft palate; micrognathia; low-set or poorly formed ears • +/- Organ deformities (heart, genitourinary • CNS: intellectual disability; learning disabilities; short attention span- look for "soft" neurological signs • May preferentially respond to Dexedrine or Adderall versus Ritalin. May require high stimulant dose and/or multiple psychotropic medication (including antipsychotics or mood stabilizer) at high doses to control symptoms • Often needs special education services.
Distinguishing Symptoms of ADHD	• Characteristic facial features of FAS are not present in ADHD or ARND • Aggression, if it occurs, usually is not severe in uncomplicated ADHD; however, may be more severe in some patients with FAS/ARND • Most patients have average (or higher) IQ; whereas, many patients with FAS have MR • Appetite and growth problems are less severe • Most children with uncomplicated ADHD are otherwise healthy; whereas, children with severe FAS often have many medical problems and often appear unhealthy
	Learning disorders: Reading, Mathematics, Language, Articulation disorders, Written +/-Receptive
Prevalence	Not known; however, the CDC (1987) estimated 5%-10%
Overlapping Symptoms	• Both have a higher prevalence in males: 3-5:1 • Both can have very poor handwriting and poor reading comprehension • Poor school performance, may not be evident immediately • Often dislike and/or avoid school
Distinguishing Symptoms of This Disorder	• Look for specific areas of academic difficulty • Definitive diagnosis made by psychoeducational testing (neuropsychological testing may be beneficial)
Distinguishing Symptoms of ADHD	• Although children with either condition may have variable performance ability, children with ADHD more obviously perform better at tasks they enjoy.

Appendix B2. Conditions That May Be Confused with ADHD (Continued)

	Major Depressive Disorder
Prevalence	Preadolescence: 1-5%, Adolescence: 5-10% Prior to puberty the gender ratio for depressive disorders is 1:1. After puberty the ratio is 2:1 ratio for females to males, which continues into adulthood.
Overlapping Symptoms	• Poor concentration • Difficulty settling to sleep +/- insomnia • Poor self-esteem • Indecision • May appear fidgety and/or agitated • +/- Poor appetite
Distinguishing Symptoms of This Disorder	• Frequent/excessive sadness +/- tearfulness • Irritability, agitation, hostility, anger, moodiness • Lack of enthusiasm, poor motivation, constant boredom • Extreme sensitivity to rejection, poor self esteem • Suicidal ideation or self-injurious behavior • Sad themes in play/drawings • Feelings of hopelessness, worthlessness, or excessive guilt • Change in school performance or behavior: decreased grades, change in pattern of socialization, withdrawal from activities • Neurovegitative changes: (1) sleep (2) appetite (3) energy • +/- life stressors: relationship break-up, parental divorce, bereavement, chronic illness, etc. • Frequent physical complaints, e.g., headaches, stomachaches • Suicidal behavior in children under 13 (a concerning symptom that warrants psychiatric evaluation)
Distinguishing Symptoms of ADHD	• ADHD symptoms should be present since childhood before onset of depression. • Symptoms of ADHD are consistent and chronic; although there may be a gradual increase in symptoms with increasing expectations at school/work • There may be poor self-esteem in children with untreated ADHD. However, if sadness and tearfulness are daily or if there is self-injurious behavior or suicidal ideation think about depression. • Depression may be co-morbid with ADHD • Sleep difficulty is generally characterized by trouble settling to sleep and early awakening rather than severe initial insomnia or middle awakening • Poor PO intake can be related to inattention and hyperactivity at meals
	Oppositional Defiant Disorder
Prevalence	35% (CI: 27%, 44%)
Overlapping Symptoms	• Fail to follow directions • May appear to ignore others • Disruptive behavior
Distinguishing Symptoms of This Disorder	• Pattern of negativistic, hostile, and defiant behavior: angry, argumentative • Refuses to comply with adults' requests • Blames others, vindictive • Especially has difficulty interacting with parents and authority figures • Family and social history are very important, e.g., depression, abuse
Distinguishing Symptoms of ADHD	• ADHD symptoms should be present since childhood. • Children with ADHD often do not follow directions well; however, this is due to forgetfulness, distractibility, rather than refusal. • Over time, children with untreated or residual ADHD symptoms may dislike and/or avoid school or tasks/situations that require sustained attention or sustained sitting.

Appendix B2. Conditions That May Be Confused with ADHD (Continued)

	Post Traumatic Stress Disorder (PTSD)
Prevalence	15%– 40% of children have experienced at least one traumatic event in their lifetime. Of these, 5-10% have PTSD.
Overlapping Symptoms	• Hyperactivity or agitation • Memory and attentional difficulties • Difficulty settling to sleep +/- Insomnia
Distinguishing Symptoms of This Disorder	• Must have history of trauma • Hypervigilance • Nightmares • Flashbacks • Feeling detached or estranged • Reenactment of trauma in play, drawings, or verbalizations. • May see speech disturbances, poor sleep, poor appetite and other physiologic symptoms
Distinguishing Symptoms of ADHD	• ADHD symptoms should be present since early childhood. • Note that children with ADHD often have parents with ADHD who may have had difficult lives (unwanted pregnancy, substance abuse, MVA) because of untreated ADHD. Think about the possibility of primary PTSD or co-morbid ADHD + PTSD.
	Reactive Attachment Disorder (RAD)
Prevalence	Experts in RAD estimate that this disorder has been misdiagnosed as Bipolar Disorder or Attention Deficit Disorder in 40 to 70 percent of cases.
Overlapping Symptoms	• Both may be "overly sociable" and/or hypertalkative • Difficulty sleeping • Poor growth • Disruptive behavior • Poor social skills
Distinguishing Symptoms of This Disorder	• History of neglect, abuse, separation from parents, early severe chronic illness, multiple caretakers • Either: Indiscriminate friendliness with strangers, e.g., hugs strangers • Or: Withdrawal/aloofness with others with extreme mistrust of nearly everyone. • "Hoarding" food or belongings is a red flag
Distinguishing Symptoms of ADHD	• May see night-time wandering +/-night-time binge eating • May have a wasted/pale appearance- "waif-like" • Often are emotionally detached and may have restricted or superficial expression of emotions • These children may be quite "needy" of attention and tend to tire-out caretakers • • Persons with untreated or poorly treated ADHD are at increased risk for difficult and chaotic lives (unwanted pregnancy, substance abuse, MVA). Therefore, children with RAD are also at increased risk of ADHD by heredity. RAD may look like ADHD, but there may also be co-morbid ADHD + RAD.

Appendix B3. Special Patient Populations

Preschool age (3-5 year olds)	Diagnosis • May be difficult to determine whether hyperactivity, impulsivity, and inattention are due to normal developmental variation. Treatment/referral • Some patients with severe symptoms may require medication. • Parent education and training is important • Referral to practitioners with expertise in developmental pediatrics and/or child psychiatric disorders is recommended for diagnosis and treatment.
Closed head injury	Diagnosis • Patients with head injury (and static encephalopathy from other etiologies) are at increased risk for impulsivity and inattention. • There are reported cases of young children that developed (permanent) symptoms consistent with ADHD after severe head injury, encephalitis, or brain tumor. Co-morbidity • Watch for co-morbid seizures. • Watch for aggression, personality changes, mood and anxiety symptoms. Treatment/referral • Patients may respond to stimulant treatment only or may require other medications, e.g., antipsychotic medication (risperidone) or mood stabilizers (carbamazepine, valproic acid). • Referral to practitioners with expertise in developmental pediatrics, child psychiatric disorders, and/or neurologic disorders is recommended for assistance with diagnosis and treatment. • Encourage special education services and IEP development
Intellectually disabled patients	Diagnosis • Data are limited regarding the diagnosis and treatment of ADHD in MR patients- relatively more information exists for autistic disorders. • Diagnosis must take into account the maturity and developmental challenges of the patient. • ADHD can co-occur with mild-moderate MR. • ADHD is difficult to diagnose with severe to profound MR. • ADHD (especially inattentive type) is difficult to diagnose with low average or borderline IQ. Co-Morbidity • Watch for co-morbid seizures. • Watch for personality changes, mood and anxiety symptoms. • Watch for aggression, irritability, hypomania, and hallucinations, especially if using stimulants. Treatment/Referral • MR patients with ADHD may respond well to stimulant treatment, however, some patients may become irritable with stimulant treatment. • Clonidine (Catapres®) and guanfacine (Tenex®) may be more helpful than stimulants for some patients with MR as the main problems are often hyperactivity and impulsivity. • All MR patients should have an IEP to facilitate appropriate educational curriculum and services. • Referral to practitioners with expertise in developmental pediatrics and/or child psychiatric disorders is recommended.
Fetal Alcohol Syndrome (FAS) and Alcohol-Related Neurobehavioral Disorder (ARND) **[Note: ARND is also called Fetal Alcohol Effects (FAE) or partial FAS]**	Diagnosis • A genetics referral may be helpful in diagnosis. • Some centers have multidisciplinary clinics for diagnosis where treatment may also be provided. • Many (get %) patients with FAS have symptoms consistent with ADHD. (call Sheila Gahagan/Keiran O'Malley). Co-Morbidity • Patients with FAS have a higher incidence of cardiac and renal problems (take care when prescribing psychotropic medications). • Mood symptoms are common. Treatment/Referral FAS/ARND patients with ADHD may respond to stimulant treatment but they may require higher doses than typical ADHD patients or may require other medications, e.g., antipsychotic medication (risperidone) or mood stabilizers (carbamazepine, valproic acid).

Appendix B3. Special Patient Populations (continued)

FAS and ARND (continued)	• There is emerging evidence that FAS/ARND patients may respond preferentially to amphetamine versus methylphenidate (cite O'Malley) • Patients often require psychoeducational testing and an IEP. They may require special education services due to math and/or language learning disorders or MR. • FAS is a *static* encephalopathy- cognitive deficits usually do *not* substantially improve with time. • Referral to a practitioner with expertise in genetics, developmental pediatrics, neurology, and/or child psychiatric disorders is recommended for assistance with diagnosis and treatment.
13 years – Adult	<u>Diagnosis</u> • ADHD is a chronic condition that extends across developmental phases and may persist into adulthood. • Murphy & Barkley (1996) estimated that 2-4% of adults have ADHD. • Data are emerging regarding diagnosis and treatment of affected adults. <u>Co-Morbidity</u> • Diagnosis is adulthood is often confounded by co-morbid diagnoses, e.g., mood disorders, substance abuse disorders. <u>Treatment/Referral</u> • No specific guidelines are available regarding medication discontinuation, however, most persons with ADHD benefit from continuing medication throughout high school. Approximately 1/3 of affected individuals benefits from medication treatment into adulthood. • More difficult to diagnose ADHD retrospectively in adults for whom the illness was previously undiagnosed. • No data are available on drug therapy in pregnancy.
Substance Abusing Patients	<u>Treatment</u> • Medication treatment for ADHD has been demonstrated to reduce the risk of subsequent substance use disorders. • Medication treatment of co-morbid ADHD and substance use disorders is possible but patients require careful monitoring. Non-controlled substances may be useful (e.g., bupropion, atomoxetine). • Stimulant medications are commonly abused, therefore, most are schedule II medications. True physiological dependence is rare and usually does not occur unless very high doses are used. • Talk about substances of abuse and caffeine.

Appendix B4. Overview of Complementary and Alternative Medicine Associated with ADHD

Therapy	Use	Dose	Side Effects	Evidence
General				
Expressive (sensory integration, occupational therapy, music, dance, art)	ADHD and neurodevelop-mental disorders		None	Anecdotal
Diet restriction (Feingold, red dye, sugars)	ADHD			Most controlled studies show no benefits or limited benefits only for small groups of children
Megavitamins				
Neurofeedback (EEG biofeedback)	ADHD, Tics, Seizures	20-40 sessions	None	Small studies suggest some benefit
Opometric vision training	ADHD		None	No systematic data
Supplements: ADHD				
Ginkgo biloba	Antioxidant Improves blood flow. Small benefit to adult cognitive function.	120-240 mg/d (Adult)	Headache, dizziness, arrhythmias, hypotension, GI upset (nausea, vomiting, diarrhea), restlessness, cutaneous hyper-sensitivity. Avoid in bleeding disorders.	One open label study in 36 children who received combination herbal given BID x 4 weeks ▪ Improvement in Conners' ADHD index at 4 weeks ▪ 14% of subjects reported adverse effects related to study medication
Fish oil (omega-3, EPA, DHA)	hyperlipidemia, hypertriglyceridemia, hypertension	500-1000 mg/d (Adult)	Flatus, halitosis, heartburn, (high doses): nausea, loose stools, (doses > 3gm/d): Avoid in bleeding disorders, (long-term) weight gain	One blinded RCT in 63 children who received DHA (345 mg/d) x 4 months showed no statistically significant improvement in any objective or subjective measure of ADHD symptoms
Evening primrose oil (linolenic, gamma linoenic acid)		500mg 3-6x/d (Adult)	High dose or chronic use: Nausea, diarrhea, headache	Two blinded placebo control crossover studies suggest some behavioral improvement
Supplements: Sleep disorder				
Melatonin (N-acetyl-5-meth-oxytryptamine)	Sleep disorders	Melatonin 6-12Y: 3-6 mg PO at bedtime (scheduled, not PRN) Melatonin > 12Y: 6-9 mg PO at bedtime	Sleepiness, fatigue, headache. Possible proconvulsant with multiple neurologic disabilities. May suppress puberty.	One RCT in 25 children with ADHD and chronic insomnia (5 mg melatonin) ▪ Decreased sleep latency and increased total sleep time. One open label study in 24 children with ADHD who received 3 mg melatonin ▪ Statistically significant decrease in time to falling asleep reported after short- and long-term use