Attention-Deficit/Hyperactivity Disorder

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Clinical Presentation

- Motor restlessness (always on the go)
- Aggressive (hits others)
- Spills things
- Insatiable curiosity
- “Dangerously daring”
- Vigorous and often destructive play (breakage of toys and household objects; accidental injuries common)
- Demanding, argumentative
- Noisy, interrupts
- Excessive temper tantrums (more severe and frequent)
- Low levels of compliance

Clinical Presentation

- Easily distracted
- Homework poorly organized, contains careless errors, often not completed
- Blurts out answers before question completed (often disruptive in class)
- Often interrupts or intrudes on others and displays aggression (difficulties in peer relationships)
- Fails to wait turn in games
- Often out of seat
- Perception of “immaturity” (unwilling or unable to complete chores at home)

ADHD Evolving Concepts

- Defect of moral control (Still, 1902)
- Epidemic encephalitis (Ebaugh, 1923)
- Organic behavior syndrome (Bradley, 1937)
- Minimal Brain Dysfunction (Strauss & Kephart, 1955)
- Hyperkinetic impulse Disorder (Laufer, Denhoff, & Solomons, 1957)
- Minimal Brain Disorder (Clements, 1966)
- Hyperkinetic reaction of childhood (DSM-II, 1968)
- Attention-deficit disorder (DSM-III, 1980)
- Attention Deficit & Hyperactivity Disorder (DSM IV, 1994; DSM 5, 2013)

ADHD Fact vs. Fiction

- Hyperactivity is NOT necessary for a diagnosis
- ADHD may present with only inattentive symptoms, only hyperactive/impulsive symptoms, or a combination of these symptoms
- ADHD does NOT only affect boys
  - Although boys do have higher rates of ADHD than girls (with ratio approximately 2:1)
  - Females are more likely to be diagnosed with inattentive presentation
- ADHD does NOT only affect children
  - Depending on study, ADHD occurs in about 2.5%-4.4% of adults
  - Still more common in men than in women; however, smaller ratio of 1.6:1

DSM-5 Symptoms of Inattention

- Fails to give close attention to details/ careless mistakes
- Difficulty sustaining attention
- Seems not to be listening
- Does not follow through on instructions/fails to complete tasks
- Disorganization
- Avoids/dislikes tasks requiring sustained attention
- Loses belongings
- Easily sidetracked/ distracted
- Forgetful in daily activities

DSM-5 Symptoms of Hyperactivity/ Impulsivity

Hyperactivity

- Fidgets with hands & feet/ squirms in seat
- Difficulty remaining seated
- Runs/climbs about when inappropriate
- Unable to play or engage in leisure activities quietly
- “On the go” or “driven by a motor”
- Talks excessively

Impulsivity

- Blurts out answers before questions are completed
- Difficulty waiting turn
- Interrupts or intrudes on others

Domains of Impairment

- Peer relationships
- Family relationships
- Adult relationships
- School functioning
- Occupational functioning
- Leisure activities

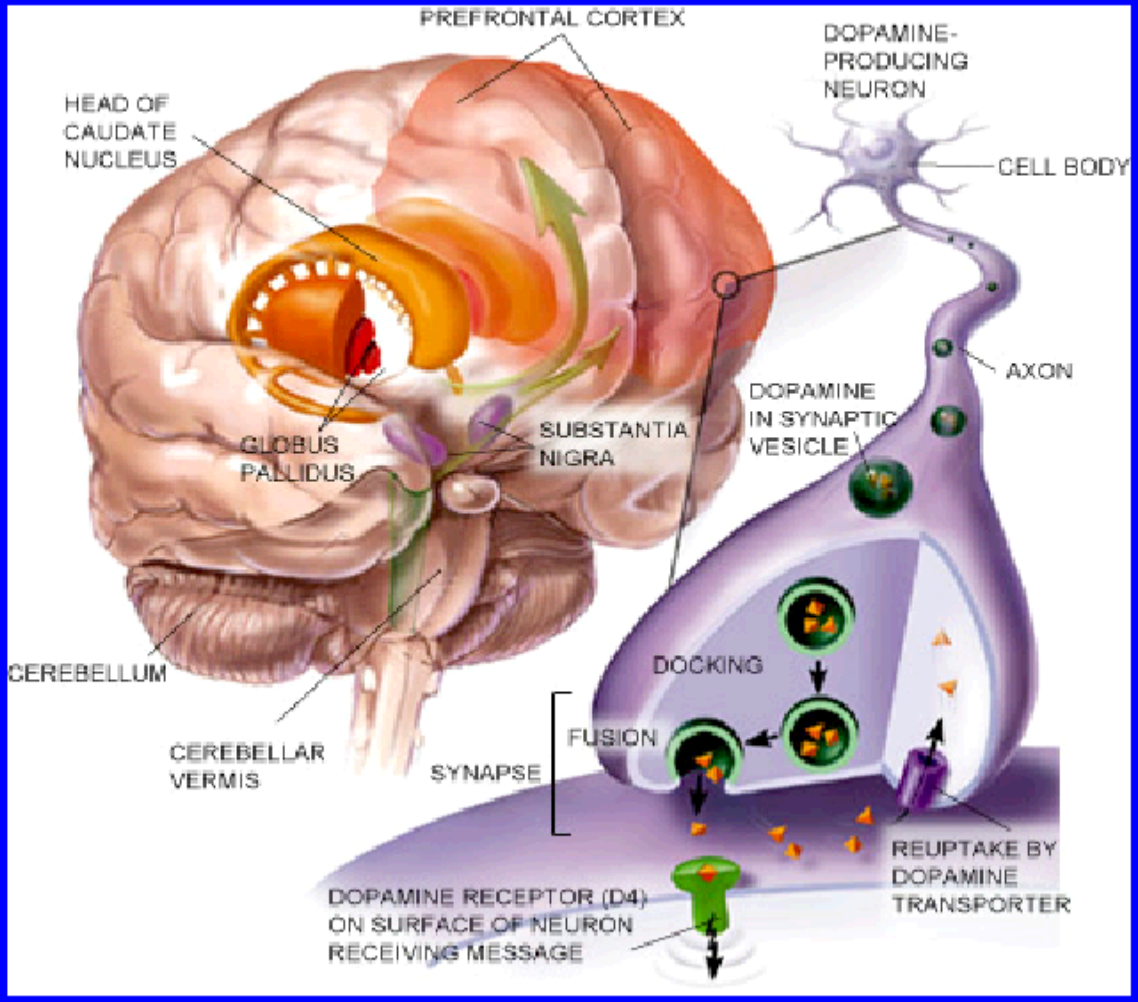
Etiology of ADHD

- While the actual etiology of ADHD remains unclear, an abundance of literature documents the the strong role of neurobiologic, and genetic factors
- Severe environmental factors can also play a role in syndromal expression
- Likely multi-factorial combining biological/genetic factors with other risk sociological/environmental risk factors (Biederman, 2005; (Goodman and Poillion, 1992; Milberger et al. 1997; Rowland, 2002)
- Researchers are continuing to investigate the "causes" of ADHD

Etiology of ADHD

- Neurobiologic/Genetic Factors:
  - Genetic theory (Biederman & Spencer, 1999; Valera & Seidman, 2006)
    - Genetics influence is estimated at 76%
    - If one identical twin has ADHD, the other twin has a 70%-80% chance of having ADHD
  - Subcortical pathways & imbalances in the dopaminergic and noradrenergic systems, especially the prefrontal cortex (Biederman & Spencer, 1999; Jiang et al., 2001)

Neuroanatomy of ADHD



Scientific American, September 1998.

THERE IS NO SINGLE TEST FOR DETERMINIG ADHD

- No brain imaging or scanning can identify, diagnose, confirm, or rule-out ADHD
- Assessment involves presence & duration of key symptoms, level of impairment, age of onset, and differential diagnosis
- ADHD is a behavioral syndrome that can be diagnosed and treated
  - Not merely a result of unreasonable expectations and a fast-paced society
- Diagnosis is made on historical and both subjective & objective evidence

DSM-5 Diagnostic Criteria

- Presence of ADHD symptoms is not enough to warrant a diagnosis
- The symptoms must…
    1. Be more frequent and severe than is typical of the individual's level of development (at least 6 of 9 in one or both categories; 5 of 9 for adults),
    2. Be present prior to age 12 years,
    3. Create significant impairment in social, academic, or occupational functioning,
    4. Be present in two or more settings (i.e., school, home, extracurricular activities, work), and
    5. Not be better accounted for by another disorder

THE *HUNTER* VS. THE *FARMER*

Hunter

- Immediate consequences
- Exciting, different
- Ever changing landscape
- Shifting attention
- Limited organization and short-term planning necessary
- *Fascination*

Farmer

- Delayed gratification
- Tedious, monotonous
- Same environment
- Sustained attention
- Strict organization and long-term planning necessary
- *Directed attention*

ADHD Fact vs. Fiction

- Medications (especially the psychostimulants) are effective 80% of the time in controlled studies & 90% of the time in clinical practice
- Three approaches have been supported by empirical data and research:
  - Behavior modification
  - Medication (mainly central nervous stimulants)
  - The combination of both
- Each of these three interventions has shown effectiveness in the short term

General Behavioral Management

- **A-B-Cs of Behaviorism**
  - **Four-Term Contingency**
    1. **Antecedent**
    2. **Behavior**
    3. **Consequence**
    4. **Setting Events**
- **Helps identify what is maintaining or exacerbating the behavior**
- **Sets the stage for change**
- **Adults manage the A or the C**
- **Help parents/teachers learn to focus on behavioral observations, not general impressions**

General Behavioral Management

- **Effective vs. Ineffective Commands**
  (Perfect example of Antecedent management)

  - **Effective**
    - **Direct**
    - **Simple**
    - **Clear**
    - **Maintain eye contact**

General Behavioral Management

- **Effective vs. Ineffective Commands**
  - **Ineffective**
    - **Indirect (*"I need you to… "*)**
    - **Multiple**
    - **Confusing/complicated**
    - **Question form ("*Why don't you…?"*)**
  - **Always evaluate compliance**

General Behavioral Management

- Positive Reinforcement
  - Verbal praise
  - Reward appropriate behavior
  - Attention
    - *All too often, kids with ADHD receive overwhelmingly negative feedback*
      - *"Stop tapping your pencil!"*
      - *"You're not paying attention!"*
      - *"You didn't follow the instructions."*
    - More effective to place attention on positive attributes, competencies, strengths, abilities

General Behavioral Management

What makes positive reinforcement effective?

- **Immediacy of feedback**
- **Valued or meaningful**
- **Labeled**
- **Developmentally appropriate**

Additional Things That Work

Physical Design

- Minimize transitions
- Avoid chronic changes in schedules
- Use a structured, well-organized schedule; post the daily schedule
- What just happened? What happens next?
- Schedule academic subjects during morning hours
- Allow breaks in work

Communication Design

- Use direct commands, avoid unimportant detail
- Subtle, non-verbal redirection
- Repeat and redirect
- Keep your word; do what you say and say what you do
- Be enthusiastic, active
- Have child repeat instructions

Additional Things That Work

- Do not rule out the opportunity for students to talk or move when they must wait
- Develop a clear hierarchy of consequences and consistently use them contingent to specific behavior
- Use preferred activities rather than only concrete rewards in your reinforcement hierarchy
- Parents organize a study space at home; schedule routines with set times to study
- Parents review completed work (but not do it) and assist with organizing the child's schedule and materials

School/Home Based Interventions

- Manage the child's environment, not the child him/herself
  - Child may see it as, "There's something wrong with me."
  - Instead, focus the parent/teacher and child on managing personal style
- Distinguish issues of NONCOMPLIANCE from issues of COMPETENCE
- Clear expectations and contingencies increase a child's internal awareness and aid in self-regulation... **executive function**
- Teach or reinforce use of self-monitoring techniques/skills (S.T.A.R. Method)

School/Home Based Interventions

- Behavior Contracts, Star/Sticker Charts & Contingencies

  (Perfect example of Consequence management)

  - Parents or teachers are in charge of the consequences and the child is in charge of the behavior
  - NOT about *bribing* a child to "do something"
  - NOT about *motivation*

Daily Report Cards (DRCs)

- Identify, monitor, and change problematic behavior
- Provide regular, consistent communication between parent and teacher(s)
- Provide children with clear expectations and consequences
  - Applies to all of us (e.g., job expectations)
  - Removes any uncertainty or ambiguity

Daily Report Cards (DRCs)

- **Effective rewards or privileges are:**
  - Hierarchical
  - Contingent
  - Valued/meaningful
  - Flexible
  - Reasonable

Daily Report Cards (DRCs)

What do parents and teachers need to know?

- Change takes time (i.e., may actually get worse before it gets better)
- DRCs require continual monitoring & adjusting
  - Don't simply put it in place and leave "as is"
  - Don't abandon if not working initially
- Consistency is crucial
  - Children need to know you're going to follow through
  - "Do what you say and say what you do"

School/Home Based Interventions

- **Time-Out:**
  - **Use for only a few behaviors (e.g., aggression, destruction of property)**
  - **Time out of from positive reinforcement**
  - **Avoid use as a threat ("If you don't ___, then ____!")**
  - **Area (low stimulus); Length (1 minute/year of age); Consistency**
- **Premack Principle: "If, then" / "When, then" / "Once, then"**
- **Parent Training Groups (Psychoeducational & Supportive)**
  - **Switching philosophy…create new possibility or new relationship**
  - **Change question from "Why can't s/he?" to "How can s/he?"**
- **ADHD Coaching**
  - **Helpful with preteen/adolescents**
  - **Teach organizational skills (e.g., assign deadlines, planners/PDAs)**
  - **Practice test-taking skills (e.g., budget time, main points with essays)**

Additional Resources

- Organizations:
  - Children & Adults with ADHD (CHADD): www.chadd.org
  - Attention Deficit Disorder Association (ADDA): www.add.org
  - National Institute of Mental Health (NIMH): www.nimh.nih.gov
  - ADDitude Magazine: www.additudemag.com
- Setting up a DRC:
  - SUNY at Buffalo, Center for Children & Families www.wings.buffalo.edu/psychology/adhd/
- Finding reading material & other resources:
  - ADD Warehouse: www.addwarehouse.com