

ATTENTION DEFICIT DISORDERS



**No greater blessing in the life
of a child with ADHD than
adults who understand ADHD.**

What is ADHD?



What is ADHD/ADD?

- *Common* disorder (3-6%) Crosscultural
- Neurobiological, not “psychological”
- *Extensively* researched with broad agreement on fundamentals
- Treatable, but potentially serious chronic disorder
- As a rule, without treatment, ADHD contributes to lots of problems, extending into adulthood

What is ADHD/ADD?

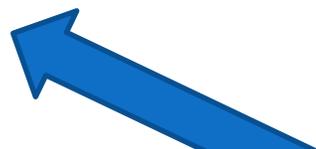
Problems with

- Focus & attention
- Impulse control / hyperactivity (in most cases)
- Emotional regulation
- Other associated problems

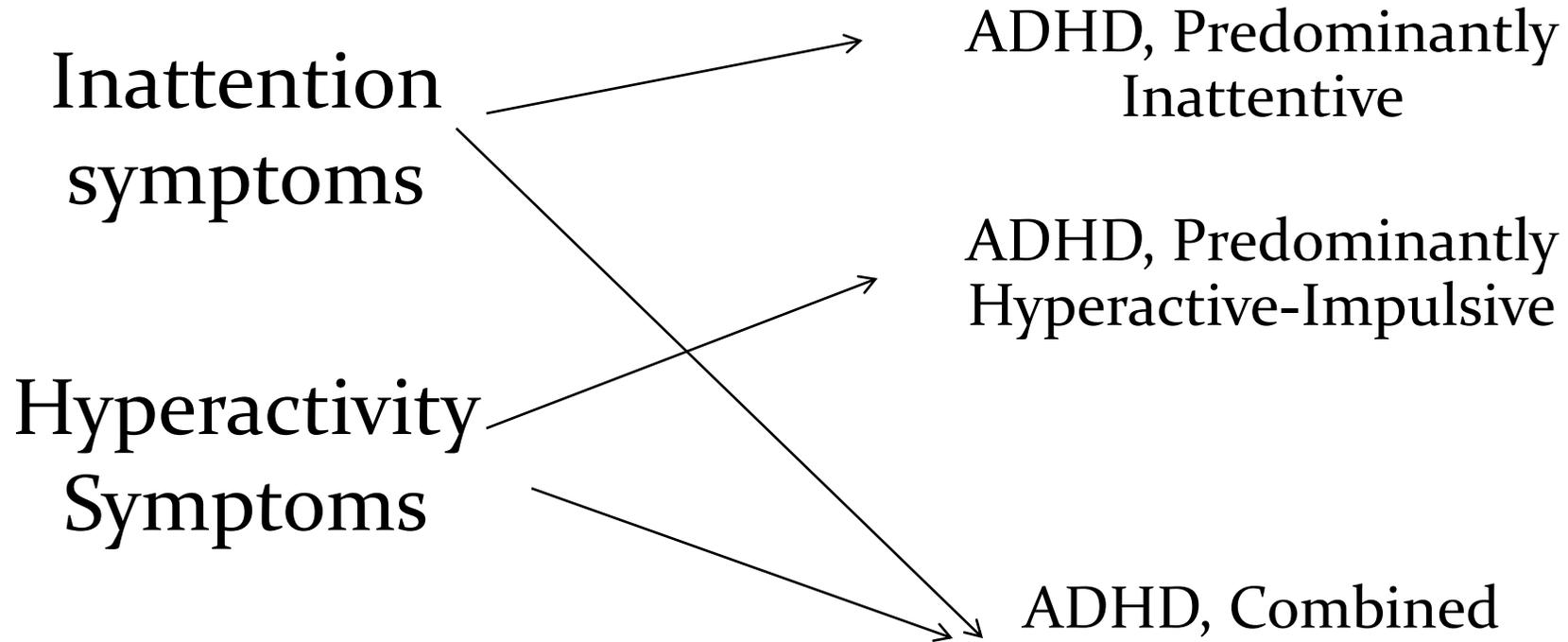
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Three types (DSM)



ADHD, Combined Type

Has both sets (Inattention AND Hyperactivity/Impulsivity).

Probably the most common type and certainly the most commonly diagnosed.

ADHD/ADD: Developmental

Diagnosis: Always have to
compare child to peers.

Starts in early childhood.
Most do NOT “grow out of it.”

Persists into adulthood but can become
less disabling, especially with treatment.

ADHD/ADD: Developmental

In general, ADHD youth lag behind developmentally. Think 2-3 years.

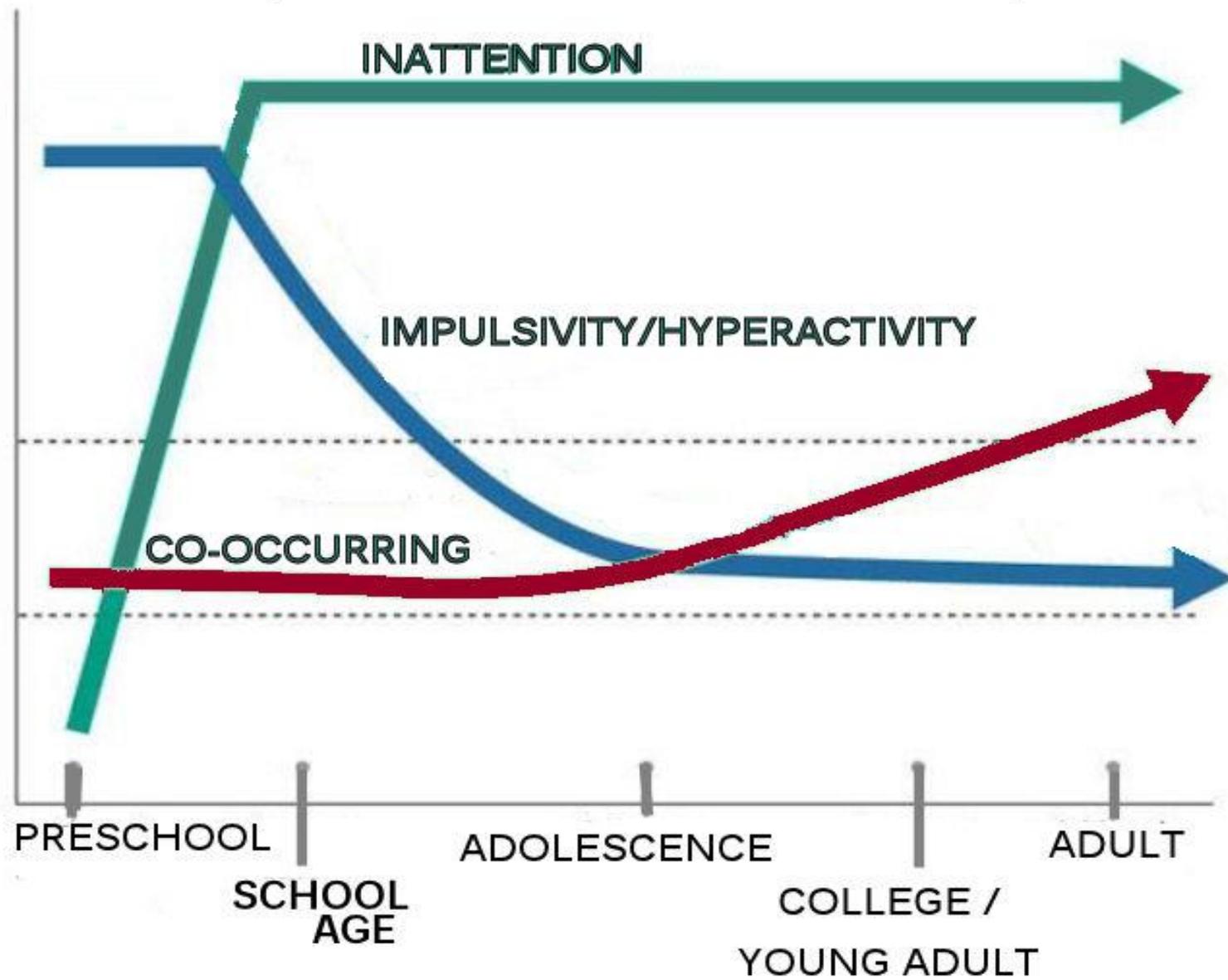
“Growing out” of ADHD

- New analysis of data (Roy, et al. *J. of American Acad. of Child & Adolescent Psychiatry*, Nov 2016, Vol 55, # 11)
- 450 subjects, average age 25, diagnosed with ADHD as children.
- About 50% no longer had significant impairment. 50% did.

“Growing out” of ADHD

- Group that DID have significant impairment in their 20's.
 - More severe symptoms when diagnosed
 - More co-occurring disorders
 - More mental health problems in their parents
- Problem with the data: We don't know what kind of treatment they got (or didn't get.)

Impact of ADHD across lifespan



ADHD: The Core Deficits

- ATTENTION
- BEHAVIORAL INHIBITION
(IMPULSIVITY /
HYPERACTIVITY)

Disorder of age-inappropriate behavior in two (or three) neuro-behavioral areas:

Inattention

- Poor *persistence* toward goals or tasks
- Distractible
- Trouble re-engaging after distraction
- Impaired working memory

What is ADHD?

(notes about paying attention)

- Attention span is often *fine* in activities child finds interesting & fun.
- Q: Can child pay attention to *not-so-interesting & fun stuff*?
- Good days/bad days.



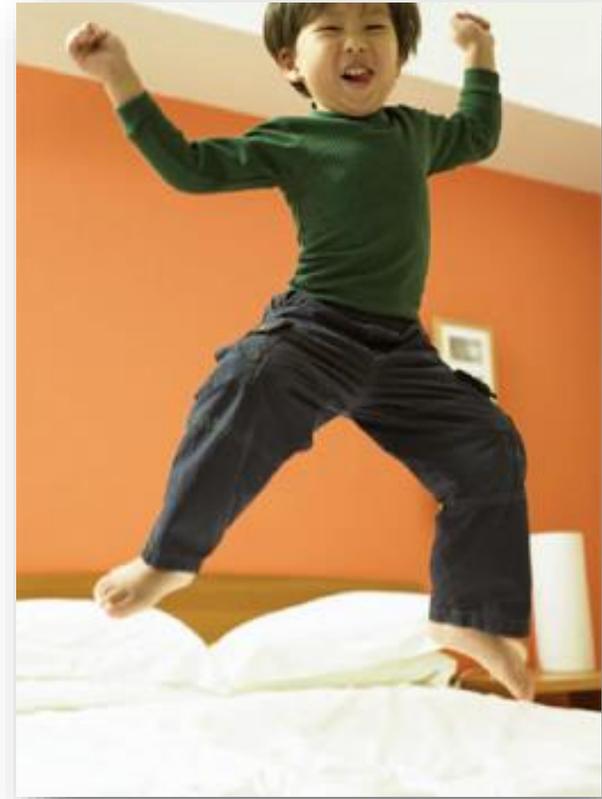
Civilization requires that most people, most of the time, inhibit their impulses.

No one can function without this ability.

That ability is (often) *RELATIVELY* lacking in ADHD.

Hyperactivity-Impulsivity (Inhibition)

- Impaired verbal & motor inhibition
- Impulsive: cannot wait or defer gratification
- Decreased valuing of future consequences over immediate ones
- Excessive task-irrelevant movement/verbal behavior
- Fidgeting, squirming, running, climbing





**“ADD WITHOUT
HYPERACTIVITY”
ADHD, Predominately
Inattentive Type**

“ADD WITHOUT HYPERACTIVITY”

- ADHD but without the H.?– Probably not
- ADHD & “ADD” may be too dissimilar to be same disorder
- Not nearly as well researched or understood
- Confused terminology: “ADD,” “Just ADD,” “ADHD WITHOUT HYPERACTIVITY,” “ADHD, PRIMARILY INATTENTIVE TYPE

“Sluggish Cognitive Tempo”

- Described in the literature since 1980s.
- “Concentration Deficit Disorder.”

SCT

- “Characterized by ... daydreaming, sleepy, staring, “spaciness,” mental fogginess/confusion and slow movement, hypoactivity, lethargy, passivity.” —Russell Barkley
- It is a topic of research, not an official diagnosis.

“ADD”

- Associated with significant impairment, social & academic, and for adults, occupational problems.
- Risk for anxiety & depression
- Cause: Genetics, fetal alcohol exposure, treatment of acute lymphoblastic leukemia
- Treatment: Little research. Stimulant use common.

- Shy, reticent, withdrawn
- Daydreamy, sluggish
- No impulsivity (motor or verbal) or behavior problems
- Poorly organized
- Passive in school

ADD

- Rarely aggressive or ODD/CD
- More prone to anxiety & depression
- Parents generally less stressed (so may be less motivated to treat)
- Parents more concerned about academics
- Symptoms may actually increase slightly with age
- Later age of diagnosis typical
- Gender: ADHD, COMBINED Boys>Girls (2+:1); ADHD, PIT: Boys only slightly more than girls, if that.

ADD

Treatment implications

- Less likely to respond *as robustly* to stimulant medications (but still treatment of choice.)
- Better response to social skills training than in classic ADHD cases
- Treatment of anxiety or related OCD often needed.

Back now to ADHD in general...

ADHD: More common features

- 2-3 year delay in overall maturity common.
- Prone to other conditions (2 out of 3):
Depression, anxiety, and especially learning disabilities.
- Problems with sense of time.
- Academic problems common.
- Impulsivity a major source of problems & complications.

Causes?

- Neurobiological basis
 - Precise nature unknown
 - (FDA has allowed marketing of a diagnostic system based on EEG. Calculates ratio of brain wave frequencies.)
- Strong genetic connection
 - *Genetic contribution to ADHD is almost as strong as the genetic contribution to height.*
- Sometimes related to nervous system damage
 - Birth, accidents, severe illnesses

Adult Complications of untreated ADHD

- School underachievement/failure
- Depression, self-harm, suicide
- Poor relationships, including marriages (divorces)
- Substance abuse
- Job problems

Adult Complications of untreated ADHD

- Financial problems (Lower SES, underemployment & financial mismanagement)
- Incarcerations
- Unplanned pregnancies
- *ACCIDENTS (driving, head injury)*



Impulsivity: A critical factor

- 3 types?
 - Motor
 - Drives hyperactivity; accident risk; social difficulties; high-risk behavior
 - Verbal
 - Social difficulties, problems in classroom.
 - Emotional

ADHD (NOT the medication) creates added risk of substance abuse

- 2011 analysis of 30 studies.
- Children with ADHD at risk for developing
 - Alcohol use disorder by early adulthood (but not a HUGE added risk)
 - Tobacco use by middle adolescence (considerably higher risk)
 - Risk for other substance abuse problems not as clear

ADHD and Executive Functioning

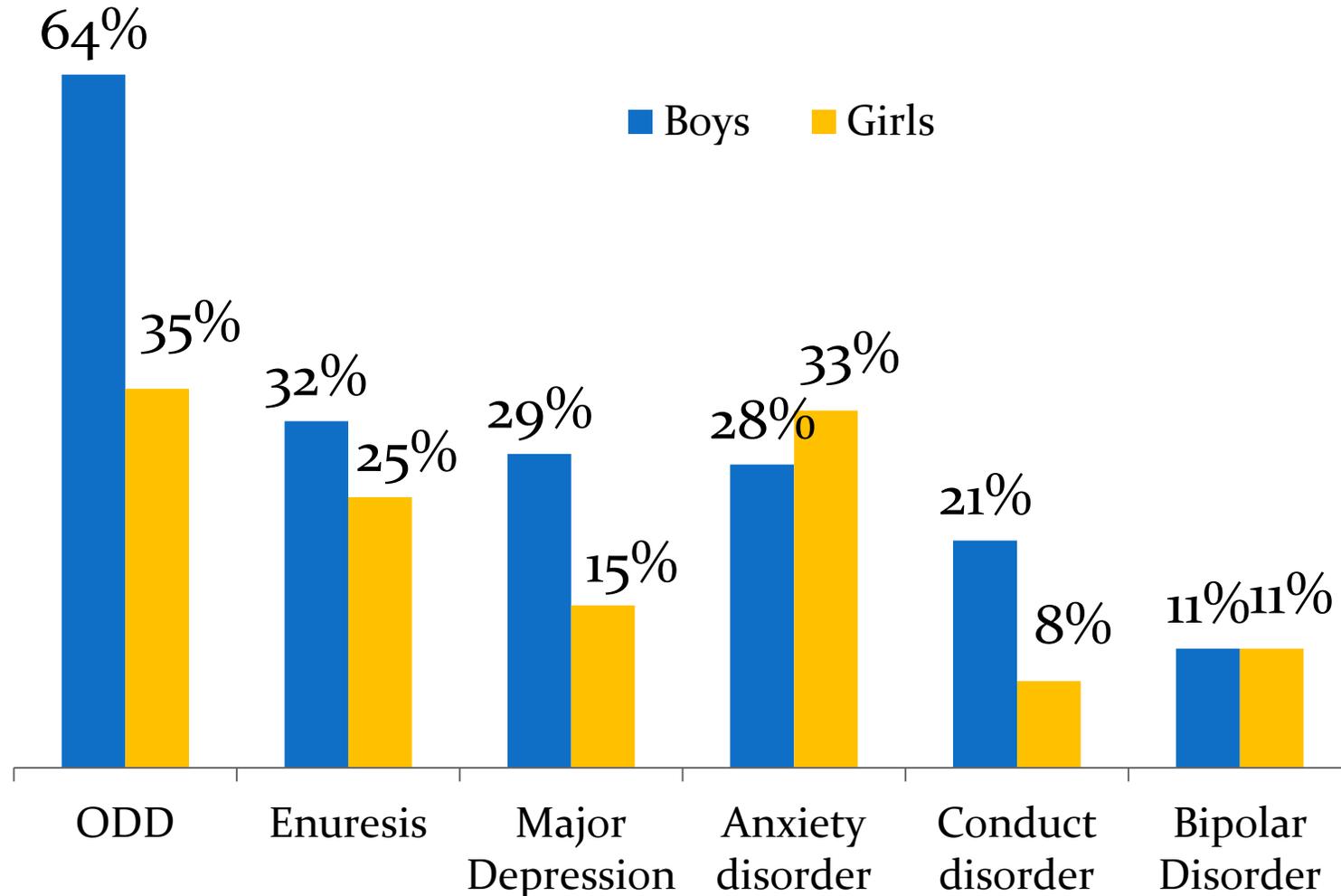
- Working memory
- Time management
- Regulation of emotions
- Planning
- Forethought
- Learning from consequences
- Organization

Common co-occurring disorders

Perhaps as many as 70% of people with ADHD will qualify for another diagnosis at some point.

Lifetime Prevalence in Pediatric Population with ADHD

(Biederman, 2004)



ADHD & Girls: New Study (UCLA, PEDIATRICS, Oct 2016)

2000 girls between 8-13

| Co-occurring disorders | ADHD GIRLS | Non-ADHD GIRLS |
|------------------------|------------|----------------|
| Anxiety Disorder | 38% | 14% |
| Depression | 10% | 3% |
| Oppositional/Defiant | 42% | 5% |
| Conduct Disorder | 13% | <1% |

Girls with attention deficit hyperactivity disorder are at higher risk than girls without ADHD for multiple mental disorders that often lead to cascading problems such as abusive relationships, teenage pregnancies, poor grades and drug abuse.

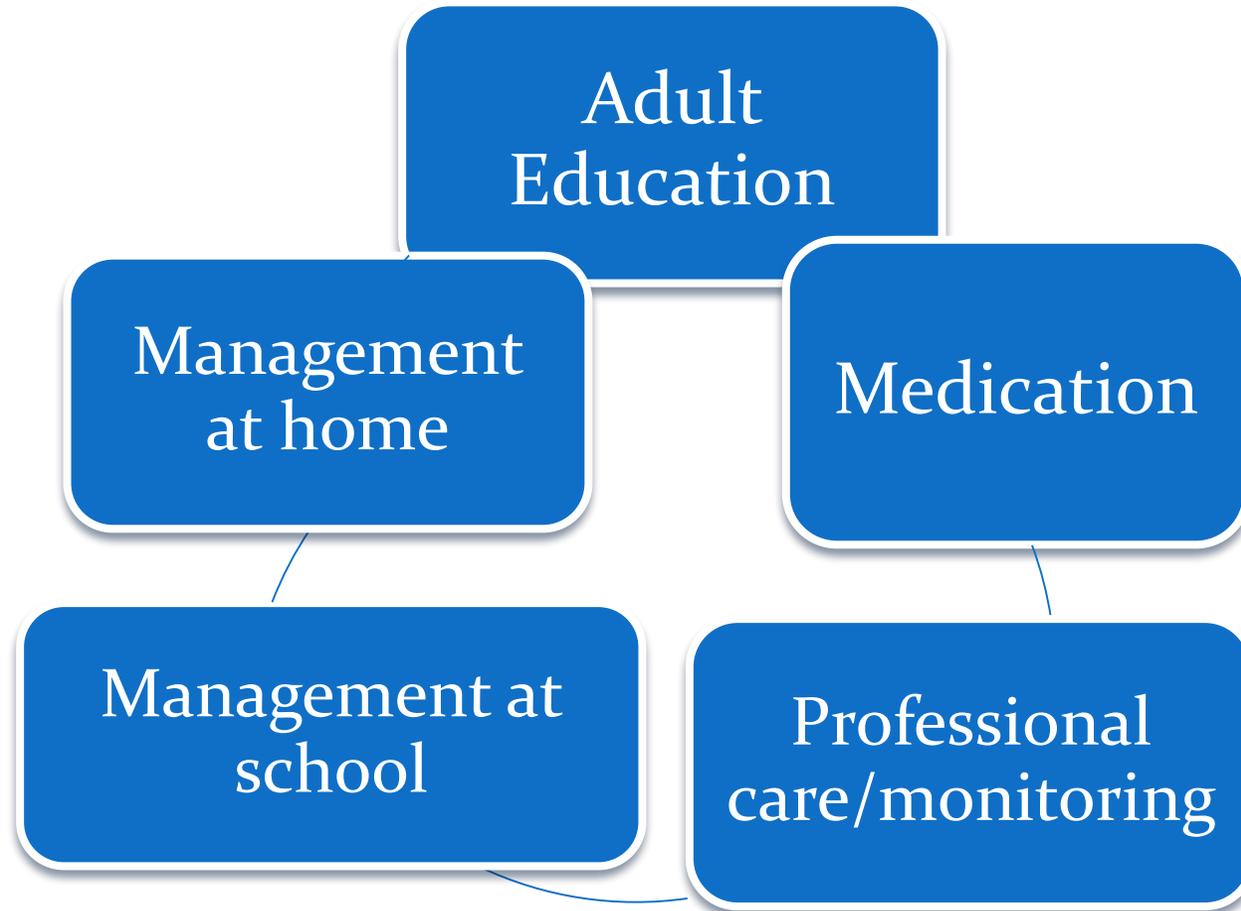
ADHD is NOT merely a person who has trouble paying attention, who may or may not be hyperactive.



Life of the child with ADHD in 2019

- Often inadequate medication treatment.
 - Low doses
 - Try 2, then quit
 - Poor persistence of treatment, even when it works
- Behavioral treatments helpful, but require large “doses” and so rarely done adequately.
- Most adults in child’s life don’t understand the disorder. Myths and misunderstandings abound.

Treatment



Medications

ADHD: Medication categories

- **Stimulants (short-acting/long-acting)**
- **Non-Stimulants specifically for ADHD (Strattera)**
- **Non-Stimulants, devised and used for other disorders, but also used for ADHD**

Complete, updated listings

<http://www.adhdmedicationguide.com/>

Stimulants

- Most common
- Short acting vs. Long acting
- Could say short, medium, long
- In and out
- Side effects
- Addiction?



Stimulant controversies

Does stimulant treatment of ADHD lead to substance abuse?

- No. Accumulating evidence *ADHD* puts people at risk for substance abuse.
- Metastudy published in 2003 suggested stimulant Rx *reduced* subsequent risk of substance abuse.
- More recent and larger metastudy (2013) found no link between stimulant treatment & subsequent risk of substance abuse.

Strattera (atomoxetine HCl)

- Non-stimulant
- 2-4 weeks to get going & stays in system
- Some (low) risks of allergic reaction, heart problems, liver disease.
- When it works, it works.

Alternative Therapies

Uncle Dale's rule of Some:

- *Some* studies show *some* ADHD people may get *some* better on *some* alternative treatments.
- No alternative treatments work as well as medication.
- Rarely will an alternative treatment be adequate alone (without medication).
- Look for *research basis*, not success stories.
- Never sign a contract.
- The more that is promised, the more you should beware.
- Consider the cost/benefit.

Alternative treatments with inadequate or no scientific support

- Diet supplements*
- Herbal supplements
- Multivitamins
- Restricted (elimination) diets (some modest success with extremely strict & limited diets)
- Homeopathy
- Chiropractic treatment
- EEG biofeedback (neurofeedback)
- Visual exercises
- Psychotherapy to get at the “root of the problem”

Alternative treatments with best evidence of helpfulness

EXERCISE/MOVEMENT

(strong evidence)

Increased OMEGA FATTY ACIDS

(moderate evidence)

Alternative treatments with best evidence of helpfulness

EXERCISE/MOVEMENT

(strong evidence)

Doesn't matter what kind of exercise.

Being outside ("Green Therapy")

Martial Arts often a good choice.

Diet

- *Some* studies suggest *some* patients do *some* better on **very strict** elimination diets
- Three European studies indicates good results from a “strictly supervised” “few-foods” elimination diet.
 - Typical diet:
 - **Rice, turkey, lamb, vegetables, fruits, margarine, vegetable oil, tea, pear juice.**
 - **No red meat, fish, dairy, pasta, bread, sugar, artificial additives, etc.**

Diet

- A minority of individual children *may* respond to smaller and more specific dietary changes.
- There is some support for reducing artificial dyes and sodium benzoate.
- Science and I say you can't fix ADHD with diet.

Diet

- We would ALL do well to eat a wholesome, organic diet. Just not clear how much more ADHD patients would benefit from benefit we would ALL get.
- Look for signs of reactions to food additives. Try reducing those. Balance the benefit against the stress it causes you and your child.

Omega-3 Fatty Acids

Bloch and Qawasmi (2011) reviewed the literature & performed meta-analysis of studies to date.

- 699 subjects in various studies, all children & youth.

Results

- “Small, but significant” overall effect.
- Higher doses of particular Omega-3, eicosapentaenoic acid (EPA) most effective.
- Authors recommended against substituting these for ADHD meds.
- Supplement?
- Don't use without consulting doctor.

Some possible promising things to watch (not ready for prime time?)

- Tests that genetically predict which medication to try first.
- Transcranial magnetic stimulation (TMS)

ADHD Medications

... are relatively safe
and relatively effective.

... there are no absolutely safe and
absolutely effective medications.

THIRD EDITION Over 300,000 in print!

"This is not just another book. This is a great book....Although aimed at parents, [it] has something for everyone involved with ADHD kids: teachers, psychologists, doctors, and family."

—*Pediatric News*

Taking Charge *of* ADHD

The Complete,
Authoritative Guide
for Parents



RUSSELL A. BARKLEY, PhD

The ADHD family

- ADHD, among other things, is about trouble with focus & attention, impulsivity and hyperactivity, and poor regulation of emotions.
- ADHD is very often hereditary, meaning an excellent chance at least one parent may have it, maybe a sibling or two.

| ADHD FEATURE | Family impact |
|---------------------------|--|
| Inattention/Focus | Pay attention! How many times have I told you? You never mind me! You're so smart, what's with these grades?! |
| Hyperactivity/Impulsivity | How could you have done that?! What were you thinking?! |
| Emotional Dysregulation | Calm down! (No, YOU calm down!) <i>Lots of frustration, conflict, shouting, fussing-at.</i> |
| Hereditary nature | <i>Parent with ADHD has trouble following through and being consistent, and has trouble controlling emotional reactions to child's behavior.</i> |

Parenting

- There are no shortcuts or easy answers.
- It can be **hard**.
- Keeping the disability perspective.

Russell Barkley's Principles (modified)

- Give child more feedback & consequences, more frequently.
- Use larger and more powerful consequences.
- Use incentives before punishment.
- Help with keeping up with time.

Russell Barkley's Principles (modified)

- Strive for consistency.
- Act, don't yak.
- Plan ahead for problem situations.
- Don't personalize your child's problems.
- Practice forgiveness.
- Take care of yourselves.
- Use a solid discipline program

Best discipline program

- Appropriate use of time-out (up through puberty)
- Shifting balance of positive and negative interactions
- Acknowledging good behavior
- Avoid corporal punishment
- Parental control of parental anger



A solid discipline program

- Breaking out of the “*how many times have a I told you...*” trap.
- Basic strategy:
 - Give a clear command.
 - Give one warning for noncompliance.
 - Apply a consequence, like time-out.