

**SIOUX FALLS**  
**PSYCHOLOGICAL SERVICES**

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# **What School Counselors need to know about ADHD**

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# First...

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A note about Collaborative Problem Solving (CPS)...

Now **Collaborative & Proactive Solutions** (still CPS)

- Same model
- [www.livesinthebalance.org](http://www.livesinthebalance.org)

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# ADHD

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## Current Clinical View

A disorder of age-inappropriate behavior in two domains of neuropsychological development:

### **Hyperactivity-Impulsivity**

- Impaired verbal and motor inhibition
- Impulsive decision making
- Greater disregard of future (delayed) consequences
- Excessive task-irrelevant movement and verbal behavior
- Emotionally impulsive; poor emotional self-regulation

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# ADHD

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## Inattention

- ▶ 6 types of attention – ADHD only impairs ***persistent*** attention
  - ▶ (5 others are: arousal, alertness, selective, divided & span of apprehension)
  - ▶ Poor persistence toward goals/tasks
  - ▶ Impaired resistance to responding to distractions
  - ▶ Deficient task re-engagement following disruptions
  - ▶ Impaired working memory

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# DSM-5 ADHD Criteria

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## Inattentive Symptoms

- ❑ fails to give close attention to details
- ❑ difficulty sustaining attention
- ❑ does not seem to listen
- ❑ does not follow through on instructions
- ❑ difficulty organizing tasks or activities
- ❑ avoids tasks requiring sustained mental effort
- ❑ loses things necessary for tasks
- ❑ easily distracted
- ❑ forgetful in daily activities

Symptoms must occur “Often” or more frequently

# DSM-5 ADHD Criteria

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## Hyperactive-Impulsive Symptoms

- ❑ fidgets with hands or feet or squirms in seat
- ❑ leaves seat in classroom inappropriately
- ❑ runs about or climbs excessively
- ❑ has difficulty playing quietly
- ❑ is “on the go” or “driven by a motor”
- ❑ talks excessively
- ❑ blurts out answers before questions are completed
- ❑ has difficulty awaiting turn
- ❑ interrupts or intrudes on others

Symptoms must occur “Often” or more frequently

# DSM-5 ADHD Criteria

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- Manifests 6+ symptoms of either inattention or hyperactive-impulsive behavior (**adults 5+ symptoms**)
- Symptoms are developmentally inappropriate
- Have existed for at least 6 months
- Occur across settings (2 or more)
- Result in impairment in major life activities
- Developed by age **12 years**
- Are not best explained by another disorder, e.g. Severe ID, Psychosis, DMDD (**CAN be co-morbid with ASD**)
- 3 Types: Inattentive, Hyperactive, or Combined
- **Severity: Mild, Moderate, Severe**

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# Causes

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ADHD is a **neuro-genetic** disorder of reduced performance in 5 brain areas (pre-frontal cortex, basal ganglia, anterior cingulate, cerebellum, and corpus callosum).

- **65% genetic**
  - If parent has ADHD, 40-54% of children will have ADHD
  - If child has ADHD, 50% chance at least one parent will have ADHD
  - If child has ADHD, 20-35% chance of siblings and 78-92% of identical twins
- **35% biohazards**
  - 95% during pregnancy (smoking, second-hand smoke, alcohol use.)
  - 5% caused after birth: trauma (e.g. leukemia treatment) or infections (e.g. strep)

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# Causes

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## NOT Caused by

- Food Additives
- Sugar
- TV
- Video games
- Excessive Caffeine
- Poor Parenting
- Chaotic Home Life
- Increased Cultural Tempo

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# Prevalence

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- 7-8% of children in U.S. (approx. 3-4 million)
- 4-5% of adults in U.S. (approx. 12 million)
- Variations
  - Somewhat more common in middle to lower-middle classes
  - More common in certain occupations
    - Trade workers, military, door-to-door sales
  - No evidence for ethnic differences

# ADHD Impairment

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Individuals with ADHD have an approximately **30% delay** in self-regulation in:

- Inhibition
- Planning according to Time
- Organizing/Problem Solving
- Motivating
- Regulating Emotions

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# Executive Functions

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Fast, Automatic

Stimulus → Response

Slower, Deliberative

Stimulus → Delay → Response

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# Getting Ready for the Future

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- You must stop and think - BEFORE you act !
- Use your hindsight (looking backward)
- To get your foresight (see what's next)
- To anticipate the likely future
- So you can prepare for that future
- So you can be more effective in **managing yourself across time**
- And do so by engaging in reciprocal and cooperative social interactions
- That allow you to attend to your long-term welfare

**This is Executive Functioning**

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# EF Defined

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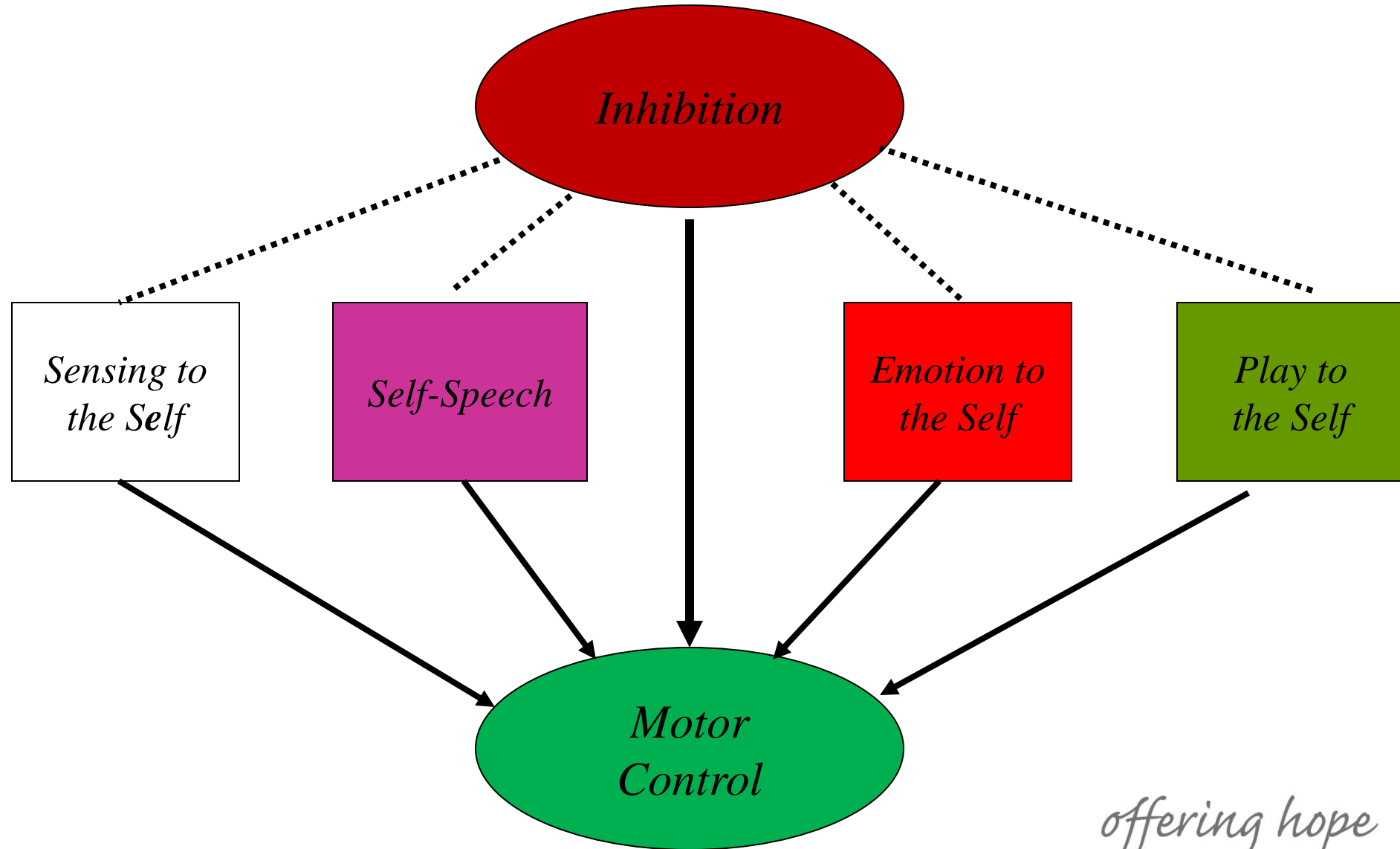
*“EF is the use of self-directed actions (**self-regulation**) to choose goals, and to select, enact, and sustain actions across time toward those goals, usually in the context of others and often relying on social and cultural means. This is done for the maximization of one’s longer-term welfare as the person defines that to be.”*

*(Barkley, 2012)*

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# Self-Awareness

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# EF Development

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# Executive Functions

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## Executive Functions

- (1) Self-directed **Attention**
- (2) Self-directed **Inhibition**
- (3) Self-directed **Imagery**
- (4) Self-directed **Speech**
- (5) Self-directed **Emotions**
- (6) Self-directed **Motivation**
- (7) Self-directed **Mental Play**

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# How Does ADHD Fit Into EF?

EF Comprises 2 Broadband Domains

## Inhibition:

Motor,  
Verbal,  
Cognitive &  
Emotional

Hyperactivity-  
Impulsivity

## Meta-Cognition:

Nonverbal WM  
Verbal WM  
Planning/Problem-solving  
Emotional self-regulation  
Self-awareness

Inattention

Where does  
ADHD fit into  
them?



# Untreated ADHD

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- ▶ Academic
  - ▶ Academic Under-performance (90%+)
  - ▶ Retention in grade (25-50%)
  - ▶ Required Special Education (35-60%)
  - ▶ Failure to graduate high school (30-40%)
  - ▶ Less likely to attend college (20%)
  - ▶ Less likely to graduate college (5%)
- ▶ Employment
  - ▶ More episodes of unemployment
  - ▶ More frequently fired
  - ▶ Change jobs more often
  - ▶ Lower work performance
- ▶ Driving
  - ▶ 3x more likely to have suspended licenses
  - ▶ More accidents, worse accidents, more fatal accidents
- ▶ Managing money
  - ▶ Problems with debt, credit cards, and paying bills



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# Untreated ADHD

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- ▶ Social
  - ▶ More difficulty in dating & married relationships
  - ▶ Higher divorce rate
- ▶ Sexuality
  - ▶ 4x more likely to have STDs
  - ▶ 10x higher rate of teen pregnancy
  - ▶ Intercourse a year earlier
  - ▶ More partners
  - ▶ ADHD is best predictor of teen pregnancy
    - 32% of boys fathered a child by age 19
    - 68% of girls were pregnant by age 19



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# Untreated ADHD

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- ▶ Other Risky Behaviors
  - ▶ Substance dependence/abuse (10-20%)
  - ▶ Stealing non-trivial items (43%)
  - ▶ Staying out past curfew (39%)
  - ▶ Lying to avoid obligations (35%)
  - ▶ Truant from school (32%)
- ▶ Co-Occurring Disorders
  - ▶ 80% will have one additional disorder
  - ▶ 50% will have two or more
  - ▶ >33% will have three or more
- ▶ Long term impact
  - ▶ Worldwide, 40-70% of prison inmates have ADHD
  - ▶ >42% of youth in detention have ADHD



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# **ADHD Treatment**

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**Performance Disorder**

Vs.

**Knowledge Disorder**

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# Treatment

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- Teaching skills is inadequate
- The key is to design prosthetic environments around the individual to compensate for their EF deficits
- Effective treatments are always at the “point-of-performance”
- The EF deficits are neuro-genetic in origin
- Therefore, medications may be essential for most (but not all) cases – meds are neuro-genetic therapies
- But some evidence suggests some EFs may also be partly responsive to direct training
- While ADHD creates a diminished capacity: Does this excuse accountability?
- (No! The problem is with time and timing, not with consequences)

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# Medication

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*Dr. Thomas Brown*

Taking stimulants is not like taking doses of an antibiotic to wipe out an infections; it is more like wearing eyeglasses that correct one's vision while the glasses are being worn, but do nothing to fix one's impaired eyes.



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# Medications

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- Stimulants increase the availability of dopamine and norepinephrine
- Stimulants help the parts of the brain that:
  - ▶ inhibit behavior
  - ▶ maintain effort and attention
  - ▶ and assist self-regulation
- Stimulants work for 70-90% of children (based on over 500 studies), so they are usually the first choice for medication
- Stimulants have been in use for 50-70 years, and there do not seem to be any long-term effects of their use

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# Medications

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## Stimulants

- Adderall, Adderall XR (d- and l-amphetamine)
- Vyvanse and Dexedrine (d-amphetamine)
- Ritalin LA, Metadate CD, Concerta, Focalin XR, Daytrana (methylphenidate)

## Non-Stimulants:

- Strattera stops the re-uptake of norepinephrine (& a little for dopamine)
- Intuniv/Tenex seems to improve the electrical signals in the neurons.
  - Originally used to treat high blood pressure and Tourettes
  - Approved in 2009 for ADHD.
- Sometimes Wellbutrin and Clonidine are used (off-label) to lessen ADHD symptoms

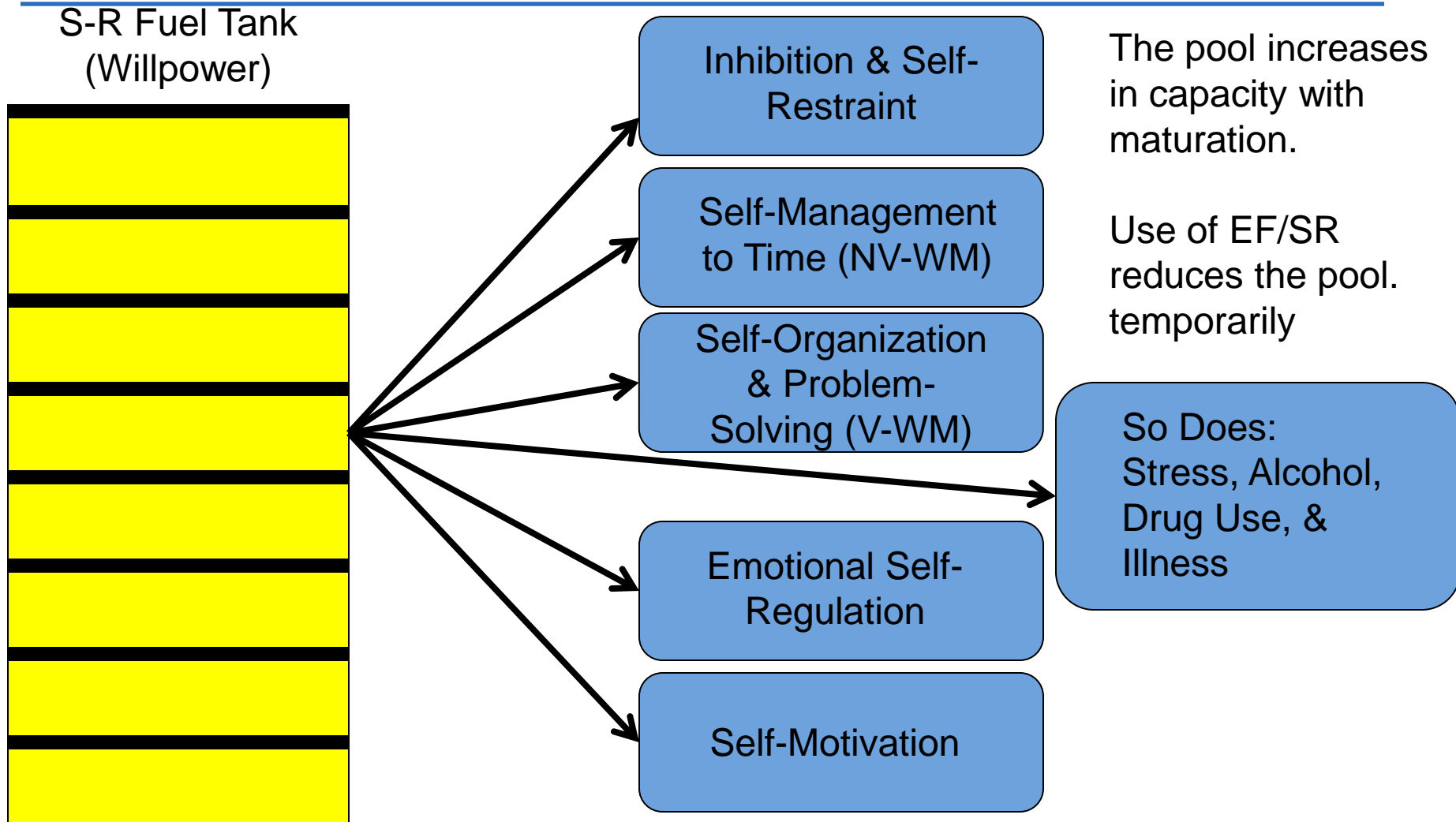
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# EF Aids

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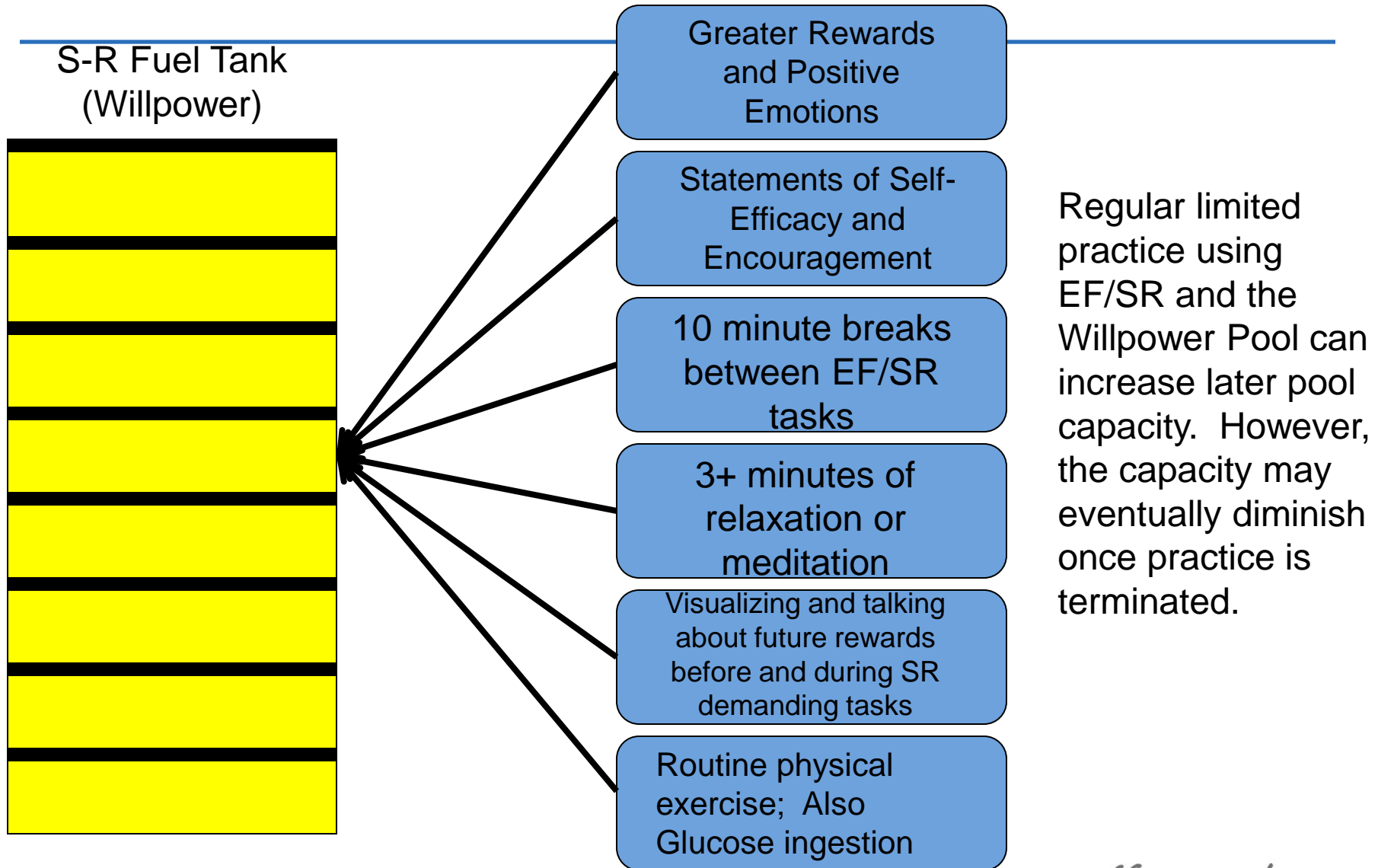
- ▶ Make mental information physical (visual)
  - ▶ Signs
  - ▶ Charts
  - ▶ To-do Lists
- ▶ Make time physical
  - ▶ Clocks/timers (e.g. kitchen timers, MotivAider)
  - ▶ Break down large projects (e.g. book reports) into little steps
- ▶ Make motivation external
  - ▶ Consequences at point of performance
  - ▶ Video games vs. homework
- ▶ Make problem solving manual
  - ▶ e.g. Math – use number lines, calculators
- ▶ Replenish the Self-Regulation fuel tank

# Self-Regulatory Strength is a Limited Resource Pool



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# Replenishing the EF/SR Resource Pool



Adapted from Bauer, I. M. & Baumeister, R. F. (2011). Self-regulatory strength. In K. Vohs & R. Baumeister (Eds.), *Handbook of Self-Regulation* (2<sup>nd</sup> ed.) (pp. 64-82). New York: Guilford Press

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# Treatment – 5 Things to do NOW

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## #1 - Externalize

Child cannot stop and hold things in mind, so don't make them. Use external forms of information (sticky notes, charts, posters, lists, cues). They need to have external substitute (in the visual field) for working memory.



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# Treatment – 5 Things to do NOW

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## #2 – Make Time Physical

Child has no internal clock – so needs something external to indicate passage of time – if longer than ½ hour, they will need a calendar. They need to become timer and calendar dependent because they cannot see the future coming at them.



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# Treatment – 5 Things to do NOW

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## #3 – Shorten Time Span

Break projects (the future tasks) into daily tasks and rewards (now). Remember, this is a time management disorder. ERO (Events coming at you -- Responses you prepare -- Outcomes/consequences) keep EROs together by making baby steps.



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# Treatment – 5 Things to do NOW

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## #4 - Motivate

All motivation is external. There has to be something in it for the child in order to persist. Other children have internal motivation. ADHD children don't. You are not spoiling or ruining an ADHD child. Think “win-win” – a win for them, not just a win for you.



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# Treatment – 5 Things to do NOW

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## #5 – Manual Problem Solving

Mental play is the ability to manipulate the contents of your mind creatively to invent multiple possibilities. ADHD kids have trouble with mental math, digit span backwards, trouble with the musical game Simon. This is source of problems with planning and problem-solving.



Externalize. Make problem-solving manual and visual. Have them do math with their hands (marbles, abacus, calculator), don't ask them to do it in their heads. If it's verbal or written task, use index cards and dump each thought on a card and then re-organize them into paragraphs (can do on computer). This is how ideas become external.

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# Notes on Behavior Modification

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- ▶ This is not teaching
  - ▶ You are building environmental scaffolding (e.g., wheelchair ramp)
  - ▶ Prosthesis, not a 30-day program
- ▶ Be in it for the long haul
- ▶ Keep 3:1 positive to negative ratio
- ▶ Praise the good behavior
  - ▶ Praise genuinely and specifically
- ▶ Involve the child/adolescent whenever possible
- ▶ Act, don't yak!
  - ▶ EF deficits are performance based, not knowledge based
- ▶ Keep b-mod program focused
- ▶ Manage your counter-aggression

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# Resources & References

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- ▶ *Executive Skills in Children and Adolescents 2<sup>nd</sup> Edition* (Peg Dawson & Richard Guare, 2010)
- ▶ *Smart but Scattered* (Peg Dawson & Richard Guare, 2009)
- ▶ *Smart but Scattered Teens* (Richard Guare, Peg Dawson & Colin Guare, 2012)
- ▶ *Coaching Students with Executive Skills Deficits* (Peg Dawson & Richard Guare, 2012)
- ▶ *Executive Functions* (Russell Barkley, 2012)
- ▶ *The Barkley Deficits in Executive Functions Scale – Children & Adolescents* (Russell Barkley, 2012)
- ▶ *Taking Charge of ADHD 3<sup>rd</sup> Edition* (Russell Barkley, 2013)

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# Resources & References

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- ▶ “Essential Ideas for Parents” (Russell Barkley, video, 2012)  
<http://www.youtube.com/watch?v=SCAGc-rklfo>
- ▶ “How Stimulants Affect the Brain and Behavior” in *Treatment for Stimulant Use Disorders* (SAMHSA, 2009)  
<http://www.ncbi.nlm.nih.gov/books/NBK64328>
- ▶ "State-based and Demographic Variation in Parent-reported ADHD Medication Rates, 2007-2008" in *Preventing Chronic Disease* 10: 20073 (Visser, S. N., S. J. Blumberg, et al., 2013)
- ▶ Centers for Disease Control and Prevention  
<http://www.cdc.gov/ncbddd/adhd>
- ▶ “Bring Out the Best in Patients with ADHD” in *Dimensions of Dental Hygiene*, February 2012 (H. Barry Waldman, Allen Wong, Paula Borg, and Steven P. Perlman)

# Resources & References

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- ▶ “Classroom Accommodations for Children with ADHD” in *The ADHD Report* (Russell Barkley, Guilford Press, 2008)
- ▶ “Great Classroom Accommodations for Children or Teens” in *Attention-Deficit Hyperactivity Disorder: A Clinical Workbook*, 3rd ed. (Russell Barkley and Kevin Murphy, Guilford Press, 2006)
- ▶ “18 Great Ideas for Managing Children or Teens with ADHD” in *Attention-Deficit Hyperactivity Disorder: A Clinical Workbook*, 3rd ed. (Russell Barkley and Kevin Murphy, Guilford Press, 2006)
- ▶ *Teaching Teens with ADD, ADHD, and Executive Function Deficits* (Chris Zeigler Dendy, Woodbine House, 2011)

# Resources & References

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- ▶ The National Resource Center on ADHD, a program of Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) – a CDC supported Public Health Practice and Resource Center: [www.help4adhd.org](http://www.help4adhd.org)
- ▶ National Institutes of Health, National Library of Medicine: [www.nlm.nih.gov](http://www.nlm.nih.gov)
- ▶ American Academy of Pediatrics: [www.aap.org](http://www.aap.org)
- ▶ American Academy of Child & Adolescent Psychiatry: [www.aacap.org](http://www.aacap.org)
- ▶ Thomas E. Brown, Ph.D., Associate Director of Yale Clinic for Attention & Related Disorders: <http://www.drthomasebrown.com/blog>

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# Contact Information

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