Impulsiveness

- Swift action without forethought or conscious judgment
- Related to risk taking, lack of planning, and making up one’s mind quickly
- Not focusing on the task at hand and acting on the spur of the moment
- Decreased sensitivity to negative or long-term consequences
ADHD

BOYS... TOO MUCH TV CAUSES ATTENTION PROBLEMS.

WHAT WAS THAT ALL ABOUT?

I DON'T REMEMBER.

D'OH!
Easy to start...not so good at stopping

As part of the impulsivity of ADHD, kids have normal ability to say “GO” at the neurological level, but their ability to say “NO” or “STOP” comes just a fraction of a second slower. As a result, they react before thinking and without much self-control
The Post-It Notes of the brain: Working Memory

- WM is the “mental workspace for storing & manipulating information – learning potential
- Related to literacy & math (and academic failure in these)
- Difficulty in problem solving
- Difficulty in cause-effect thinking, seeing potential consequences
- “Goes in one ear and out the other”
The “Oops” Center—
anterior cingulate gyrus

- The cingulate is responsible for helping focus attention
- Links cingulate and emotional hippocampus for integrating reason & emotion to guide decisions
- Undergoes high myelination (doubles) during adolescence
- “Oops center” anticipates risk, detects and keeps us from making errors
- May involve ability to empathize—may not be able to recognize and appreciate other’s feelings until mid to late teens
ADHD: Severe Adverse, Social, Emotional, and Cognitive Consequences

Sample ADHD Dynamics & Conduct

ADHD
Hyperactivity
Out of seat, bother others
Impulsive: act before thinking
Make mistakes
Get in trouble
Discipline
Feel it's unfair
Act out

Inattention, poor concentration
Misread social cues
Unpredictable relating
Peer avoidance rejection
Resentment
Default to delinquent peers
Defiance

Poor working memory, slow processing
Difficulty learning, get behind
Repeated failure
Embarrassment, frustration, discouragement
Withdrawal
Non-attendance
Developmental Trajectory of ADHD Impairment

Adapted from: Kewley GD. Attention Deficit Hyperactivity Disorder (ADHD): Recognition, Reality and Resolution. 2002.
Making Bad Choices…Another continuum?

What are the requisites for choice:
• Awareness of the situation
• Ability to see cause-effect sequences
• Anticipation of consequences (access memory)
• Acceptance of personal responsibility
• Aware of alternatives
• Estimating & comparing possible outcomes
• Acknowledgement of unsatisfactory outcomes
• Decisiveness (making a choice)
• Persistence of effort in executing behavior
• Open to feedback for revising behavior

<table>
<thead>
<tr>
<th>Impulsive</th>
<th>Compulsive</th>
<th>Deliberate</th>
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<tr>
<td>Unconscious, spontaneous,</td>
<td>Automatic, repetitive,</td>
<td>Intentional, manipulative,</td>
</tr>
<tr>
<td>reactive</td>
<td>addictive</td>
<td>deliberate</td>
</tr>
</tbody>
</table>

Unconscious, spontaneous, reactive
Automatic, repetitive, addictive
Intentional, manipulative, deliberate
Deconstructing Choice

1. **Memory**
   - Self efficacy & previous experience

2. **Awareness of need for choice**
   - Available criteria for selecting options
   - Willing to make decision

3. **Awareness of the situation**
   - Acknowledge one’s role as participant
   - Ability & willingness to reflect on outcomes

4. **Able to see consequences of (not)choosing**

5. **Outcomes**

---

Sustained attention & freedom from distraction
Logical/sequential thinking
Cognitive complexity
Working memory
Reflective ability
Verbal fluency
<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Effect on choice</th>
<th>Treatment</th>
</tr>
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<tbody>
<tr>
<td>Impaired (working) memory</td>
<td>Disruption of information input, storage and retrieval</td>
<td>Memory techniques</td>
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<td>Attention span/distractibility</td>
<td></td>
<td>Smaller chunking</td>
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<td>Mood lability</td>
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<td>Medication</td>
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<tr>
<td>Rapid reaction</td>
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<tr>
<td>Mood lability</td>
<td>Emotional reaction</td>
<td>Interruption methods</td>
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<tr>
<td>Poor primary processing</td>
<td>Act before thinking</td>
<td>Behavioral rehearsal</td>
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<td></td>
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<td>Time out</td>
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<tr>
<td></td>
<td></td>
<td>Medication</td>
</tr>
<tr>
<td>Lack of empathy</td>
<td>Disregard for/ignoring impact on others</td>
<td>Cinema therapy</td>
</tr>
<tr>
<td>Theory of mind</td>
<td></td>
<td>Role Playing &amp; reversal</td>
</tr>
<tr>
<td>Narcissism</td>
<td></td>
<td>Identification with others</td>
</tr>
<tr>
<td>Deny personal responsibility</td>
<td>No reason to change behavior</td>
<td>Cause-effect chains/ladders</td>
</tr>
<tr>
<td>Poor time perception</td>
<td>Unaware of patterns</td>
<td>Positive &amp; negative role</td>
</tr>
<tr>
<td>Poor cause-effect thinking</td>
<td>Disconnect behavior &amp; consequences, no anticipation</td>
<td>RBT’s ABCs</td>
</tr>
<tr>
<td>Identification with others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Interruption methods**
- **Behavioral rehearsal**
- **Time out**
- **Medication**
- **Cinema therapy**
- **Role Playing & reversal**
- **Identification with others**
- **Cause-effect chains/ladders**
- **Positive & negative role**
- **RBT's ABCs**
- **Time-line drawing**
- **Picture Arrangement**
- **Story Telling**
- **Cause-Effect chains/ladders**
Key Points

- Some bad behavior is not due to bad *choices* but to impulsiveness & compulsiveness
- Some behavior is not for the *motive* of getting attention, but it can get attention
- Some conduct disorders are related to delayed brain development and subsequent brain function
- Choice is a complex series of cognitive and affective events that may not all be present
- The mechanisms of choice can be promoted within limits of brain development and integrity
- Many simple techniques can be used to build the mechanisms and self regulation skills