

## ADHD: What You Need to Know

### SAMPLE SLIDESHET

by Vatsal Thakkar, M.D.  
(70 slides; 1 hour duration)

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M.D.

## Everything You Need to Know about Adult ADHD

by Vatsal Thakkar, M.D.  
Clinical Assistant Professor of Psychiatry,  
NYU School of Medicine

## What is ADHD?

- short for: Attention-Deficit Hyperactivity Disorder (as is currently defined)
- Primarily is a disorder of
  - **inattention**
  - **hyperactivity**
  - **and impulsivity**

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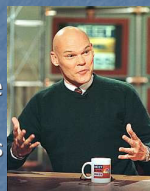
## What is ADHD continued...

- It is useful to think of the disorder as "*attention inconsistency*" rather than purely "*attention-deficit*"
- Individuals can pay "too much attention" to certain tasks and activities, and not enough attention to others.
- It should not always be considered a "disorder"...

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## Examples of Adult ADHD

- James Carville, political consultant
- David Neeleman, founder of JetBlue Airways
- Scott Eyre, pitcher for Chicago Cubs



\* CNN  
\*\* Additude Magazine  
\*\*\*CBS News

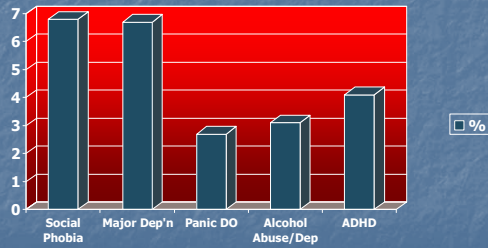
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## Quote from George F. Still, Kings College Hospital for Sick Children March 4, 1902

"For some years past I have been collecting observations with a view to investigating the occurrence of **defective moral control** as a morbid condition in children, a subject which I cannot but think calls urgently for scientific investigation..."

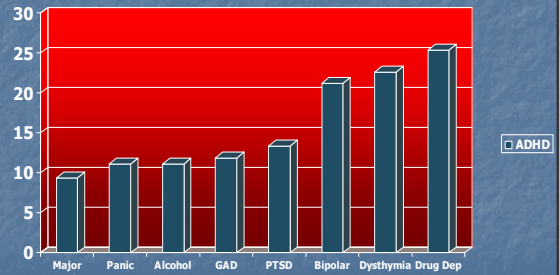
Still, GF. *Some Abnormal Psychological Conditions in Children.* J Atten Disord, 2006 Nov; 10 (2): 126-136.  
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## 12-month Prevalence of Psychiatric Disorders



Kessler RC, et al. *Arch Gen Psychiatry* 2005; 62(6):593-602.

## Prevalence of ADHD among those w/ other psychiatric disorders



Kessler RC, et al. *Arch Gen Psychiatry* 2006; 163:716-723.

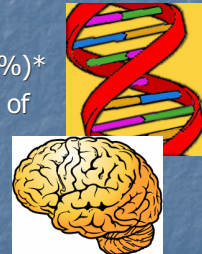
## In Utero Exposure

- Retrospective study of 280 ADHD cases vs. 242 controls
- ADHD cases were 2.1x more likely to have been exposed to cigarettes in utero than controls
- ADHD cases were 2.5x more likely to have been exposed to alcohol in utero than controls

Mick E, et al. *J Am Acad Child Adolesc Psychiatry* 2002; 41(4):378-385.

## Genetics of ADHD

- all research shows HIGH heritability for ADHD (~80%)\*
- Prevalence rate in children of ADHD adults is 57%\*\*



Biederman J and Faraone SV. *J Atten Disord* 2002; 6 Suppl 1: S7-16  
 Biederman J, et al. *Am J Psychiatry* 1995; 152: 1652-1658

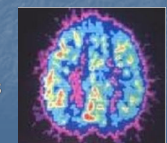
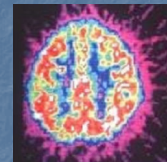
## Molecular Genetics

- D4 receptor gene (DRD4)
  - responsible for a blunted response to the neurotransmitter dopamine
- Also potentially implicated:
  - dopamine transporter gene
  - D2 receptor gene

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## Neuroimaging: PET

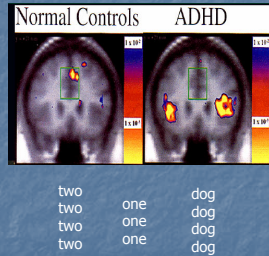
- PET scans performed on adults while performing an auditory attention task
- Normal control subject shows global brain activity (top)
- ADHD adults reveal lower global glucose metabolism during the same task
- 30 of 60 regions showed statistically significant reductions in glucose metabolism w/ biggest differences in premotor & superior prefrontal cortices



Zametkin AJ, et al. *N Engl J Med* 1993; 329:977-981.

## Neuroimaging: fMRI

- The anterior cingulate is involved in attentional procession
- The ADHD group failed to activate the anterior cingulate on the Counting Stroop test



Bush G, et al. *J Clin Psychiatry* 1999; 45:1542-1552.  
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## Smoking & ADHD

- ADHD men: 42% are smokers vs. 28% of controls
- ADHD women: 38% are smokers vs. 24% of controls
- Four year follow up study of ADHD adolescents showed that they smoked more than controls and started earlier

Pomerleau OF, et al. *Journal of Subs Abuse* 1995; 7:373-378.  
Milberger S. *J Am Acad Child Adolesc Psychiatry* 1997;36(1):37-44.  
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## Driving & ADHD II

- Highway accidents:  
ADHD: 35%  
Controls: 9%
- Rear-ended:  
ADHD: 50%  
Controls: 17%



Fried R, et al. *J Clin Psychiatry* 2006;67:567-574  
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## Employment Outcomes: ADHD vs. Controls

- 3 times more likely to be fired from job
- lower work performance ratings
- higher rates of job change over 10 year period
- by their 30s, adults w/ ADHD have a self-employment rate of 35% (higher than peers)

Barkley RA, et al. *J Clin Psychiatry* 2002;63 suppl 12: 10-15  
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## Relationships: ADHD vs. Controls

- duration of relationships is shorter
- start having sex earlier
- use contraception less
- 4x higher rate of STDs
- have significantly more children by age 20

Barkley RA, et al. *J Clin Psychiatry* 2002;63 suppl 12: 10-15

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304 Park Avenue South • 11th Floor • New York, NY 10010  
(Inclusive of 300 square ft. of 20th Street)

Vatsal Thakkar, M.D.  
Tel: 1-877-SOLSTICE • (1-877-657-8423)  
vatsal.thakkar@SolsticeNYC.com

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