

Adolescent Health Outcomes: *Mental Health*

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Mood & Anxiety Disorders Program



NIMH
National Institute
of Mental Health

What is Known and Not Known?

- **We know...**

- *Common problem behaviors are best viewed on a continuum*
- *Most problem behaviors start early*
- *Many early problems are transient*
- *Many problems are associated with distinct neural circuitry perturbations*
- *How to acutely reduce most early-appearing problems*

- **We don't know...**

- *Where and how to separate “normal” from “abnormal” behavior variation*
- *Exactly how early problems really start*
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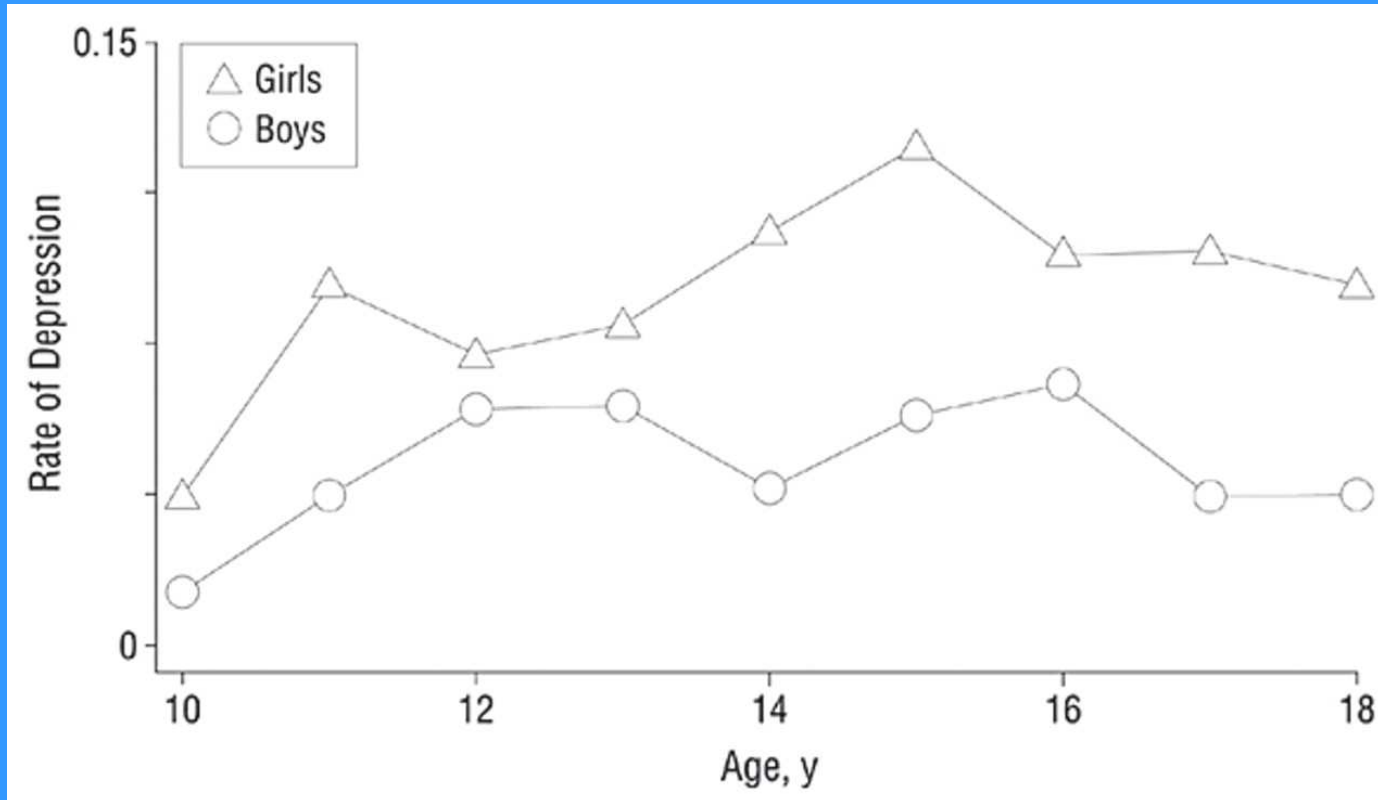
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 - *problems are common, age-related, & dimensional*
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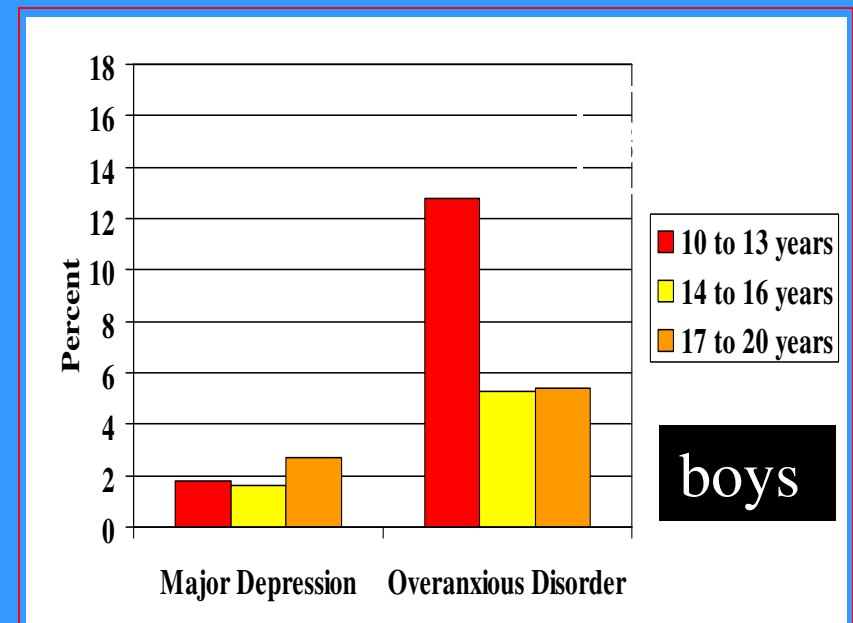
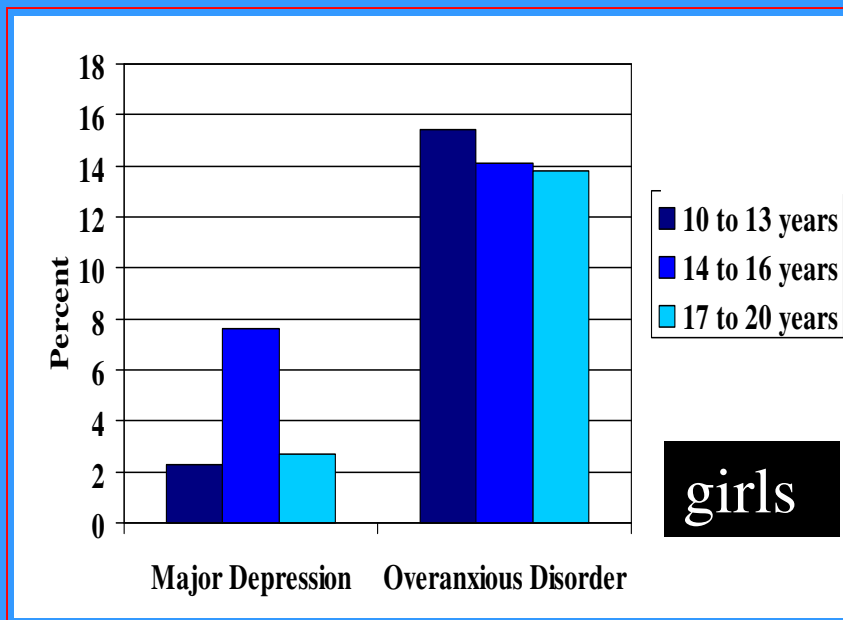
Adolescent Age & Rates of Depression



Glied, S. et al. Arch Pediatr Adolesc Med 2002;156:1009-1014.

Age-Related Changes in Prevalence

Current prevalence of clinical disorders:



Cohen et al. (1993). *J Child Psychol Psychiat*, 34, 851-867.

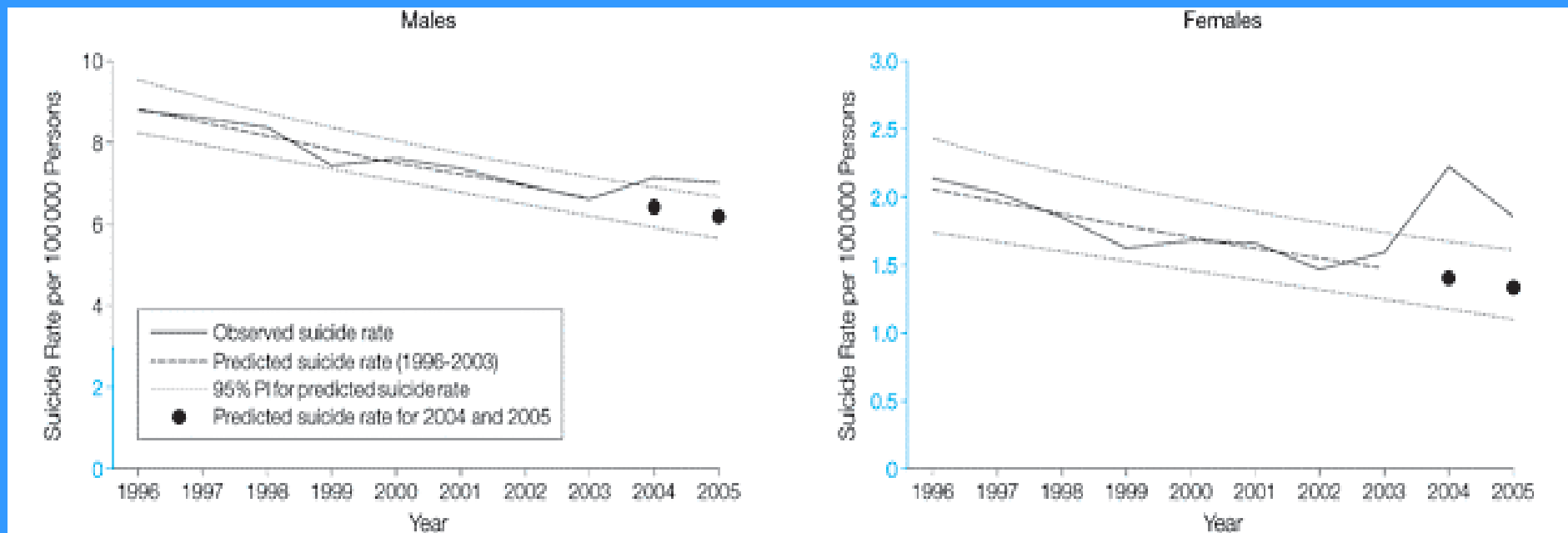
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Mental Health & Risk-Taking

- Predictive relationships...
 - *Conduct problems predicts...*
 - *Smoking & substance use*
 - *Accidents and related impulsive behaviors*
 - *Risky sexual behavior*
 - *Major depression predicts...*
 - *Suicide and suicide attempts*
 - *Substance abuse?*
- Treatment effects on risk...
 - *Conduct problems*
 - *Early treatment is key...*
 - *Major depression*
 - *Complex associations with suicide...*

United States Secular Trends Suicide, Age 10-to-19 Years, 1996 Through 2005



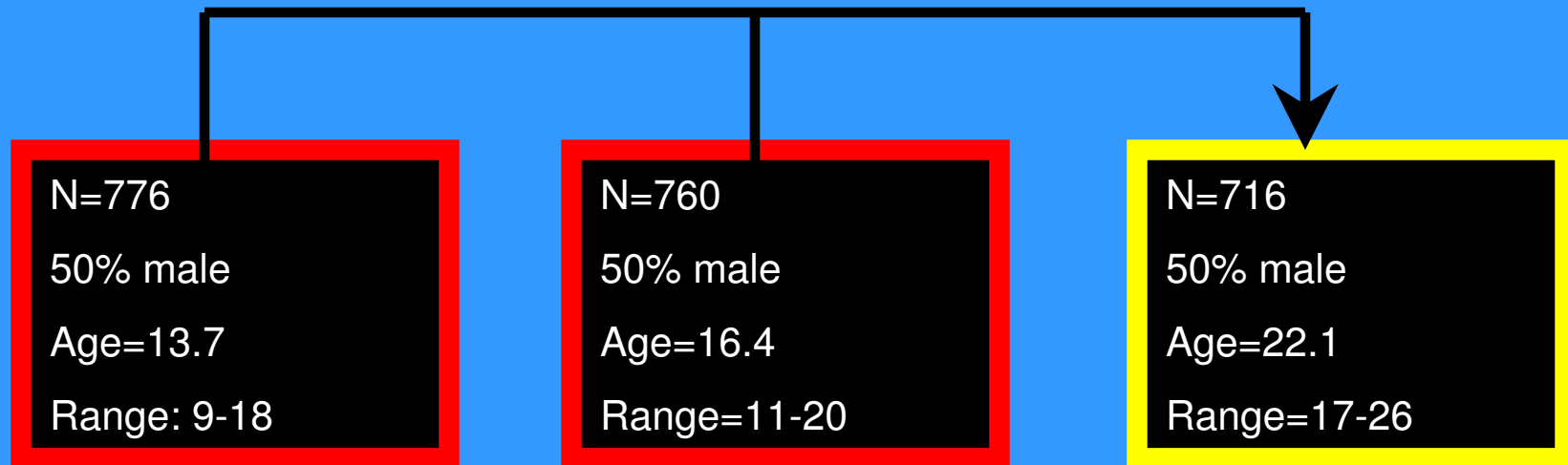
Bridge, J.A. et al. JAMA 2008; 300: 1025-1026

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Children in the Community Study

P. Cohen, J. Brook



Randomly selected ($\approx 80\%$ participation)

Assessed with parent/child DISC

Any Adolescent Anxiety Disorder & Any Adult Mood/Anxiety Disorder

	Disorder as Adults?		
Disorder as Adolescents?	No	Yes	
No	390	36	426
Yes	191	62	253
	581	98	679

Pine et al. 1998, 2001, 2002

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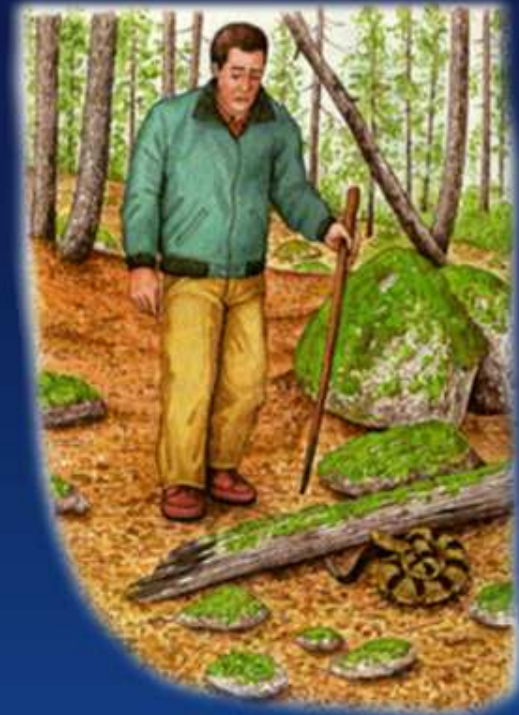
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VISUAL
CORTEX

VISUAL THALAMUS

AMYGDALA



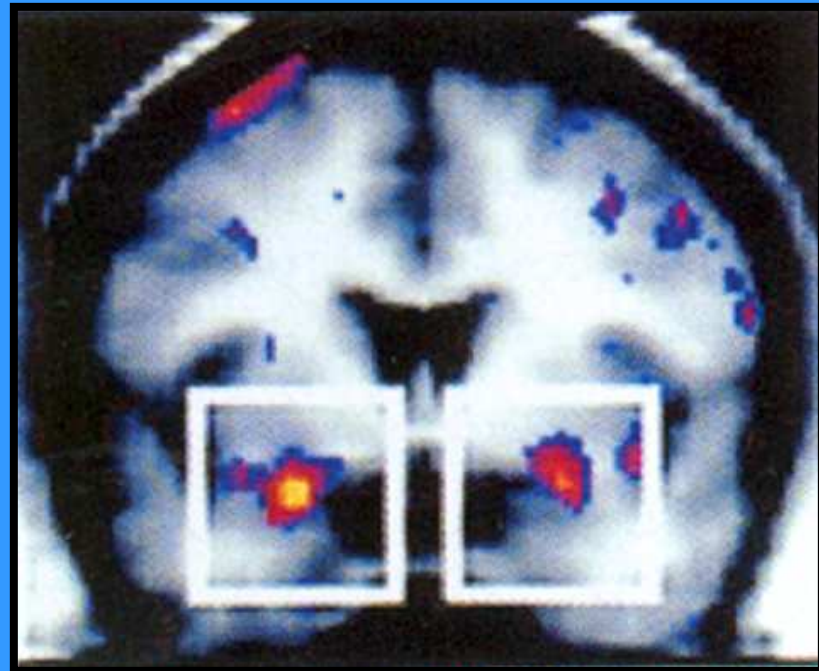
LeDoux. *Sci Am.* 1994;270:50.

Amygdalar Activation

Exposure to Fearful Face



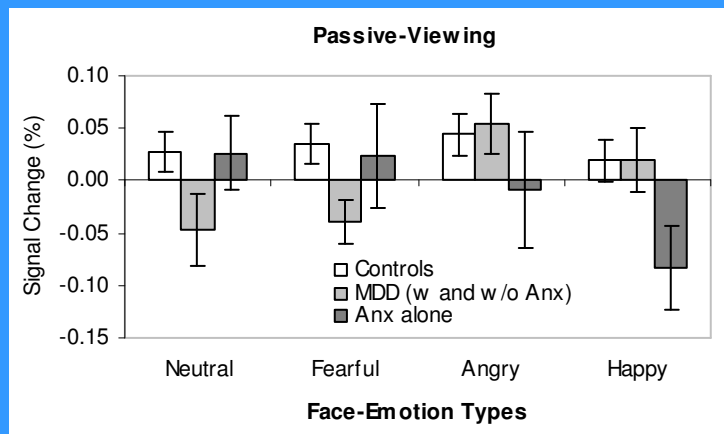
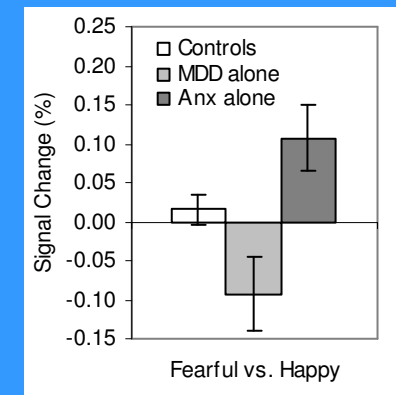
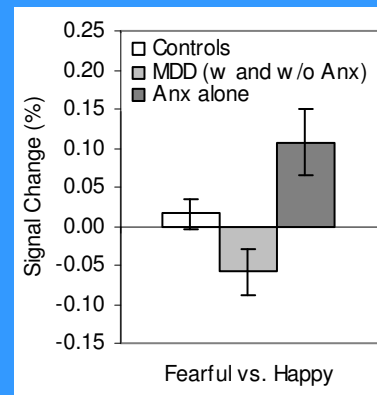
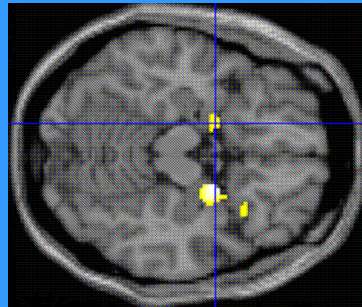
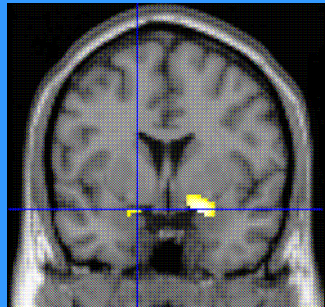
VS.



Bilateral Amygdala Activation

Breiter et al. 1996; Whalen et al. 1998

Amygdala Response to Fear Faces in Adolescent Anxiety and MDD During Passive Viewing



Controls: n=47
Anxiety: n=17
MDD: n=27 (15 with anxiety)

Beesdo et al. in press

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