

Developmental Perspective on Youth Gambling
and Drug Abuse

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#1 Conclusion

Adolescence is a developmental period of high susceptibility to many health-related problems, including problem gambling and drug abuse.

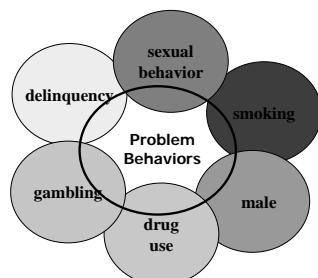
#2 Conclusion

The emerging science of brain development suggests that health problems faced by youth may be mediated by a maturing brain that does not give rise to optimal assessment of risk and careful decision making.

1. Gambling and drug abuse



Youth Problem Gambling as a
Component of Problem Behaviors



Intersection

- Youth health surveys reliably show a strong association between extent of gambling and drug involvement.
- One example
 - MN longitudinal youth study: if weekly/daily drug user, twice as likely to be a problem gambler

Youth Access to Gambling

- First generation of youth exposed to ready access and varied gambling venues.
- Minimum legal age to place a bet varies across states, but many opportunities for 18-year-olds in the United States.

Minimum Legal Age

Gambling and the Law, Nelson Rose, Whittier Law School

- **39 states with a lottery**
 - 37 states with 18 as legal age
 - 3 states may switch to 21
- **31 states with casinos/slots**
 - 20 states with 18 as legal age
 - 4 states may switch to 21

If you are 16 and want to bet legally, live in...

- | | |
|-----------|----------------|
| Alabama | Mississippi |
| Delaware | Montana |
| Georgia | New Mexico |
| Idaho | New York |
| Iowa | North Carolina |
| Kentucky | North Dakota |
| Maine | Pennsylvania |
| Maryland | Texas |
| Virginia | Washington |
| Wisconsin | |

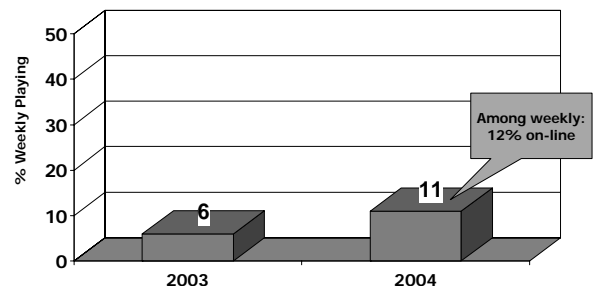
Internet Gambling in America: Another "Wave" of Gambling Expansion

University journalism student Mike Schneider won top prize - \$1 million - in the Limit Hold'em PartyPoker.com Million V tournament.



Photo by Charlie Knutson, from The Minnesota Daily, March 22, 2006

Weekly Card Playing for Money by Teenage Boys (Romer, 2005)



The Second Best Gambling Venue in America?



Estimates of Problem Gambling-Lifetime

(National Research Council, 1999)

Group	Percentage	
	Range	Median
Adult	<1 - 3%	1.5%
College	3 - 11%	5%
Adolescent	1 - 7%	2.9%

Estimates based on meta-analysis of surveys conducted 1988-1997 (National Research Council, 1999). Problem gambling defined in most studies by the SOGS/SOGS-RA.

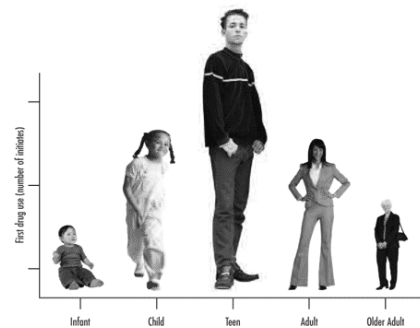
Estimates of Problem Gambling-Past Year

(National Research Council, 1999)

Group	Percentage	
	Range	Median
Adult	<1 - 2%	0.9%
Adolescent	1 - 9%	6%
Adolescent-Drug Tx	9 - 13%	11%

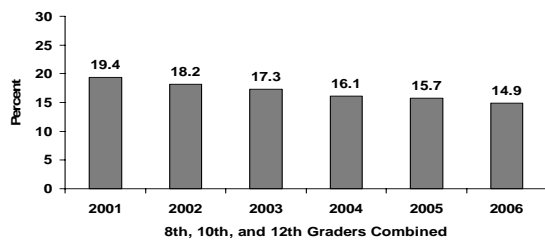
Estimates based on meta-analysis of surveys conducted 1988-1997 (National Research Council, 1999). Problem gambling defined in most studies by the SOGS/SOGS-RA.

Drug abuse starts early and peaks in teen years



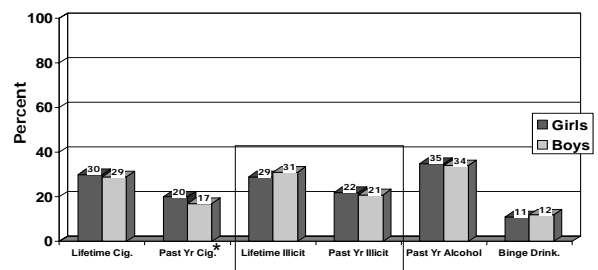
STUDENTS REPORTING PAST MONTH USE OF ANY ILLICIT DRUG

(Monitoring the Future Data)

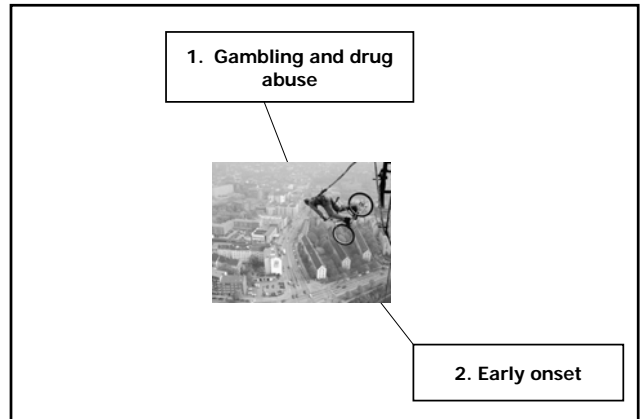
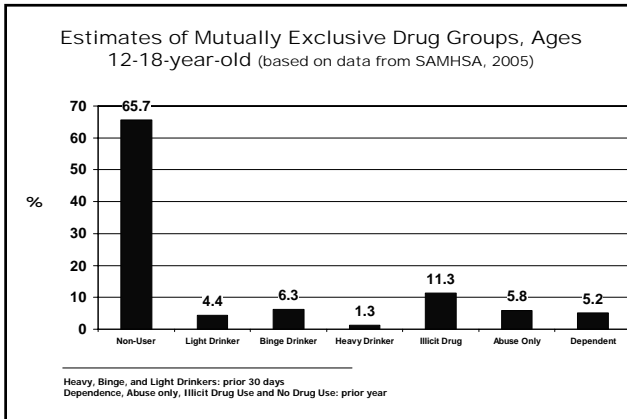


Drug Use Among Youths Aged 12 to 17

(SAMHSA, 2004)



Most frequently illicit drugs cited: marijuana, nonmedical psychotherapeutics & inhalants



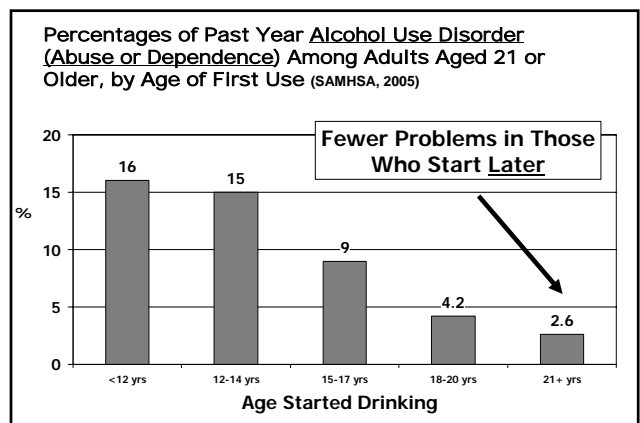
Early Onset as a Risk Factor for Adult Problems

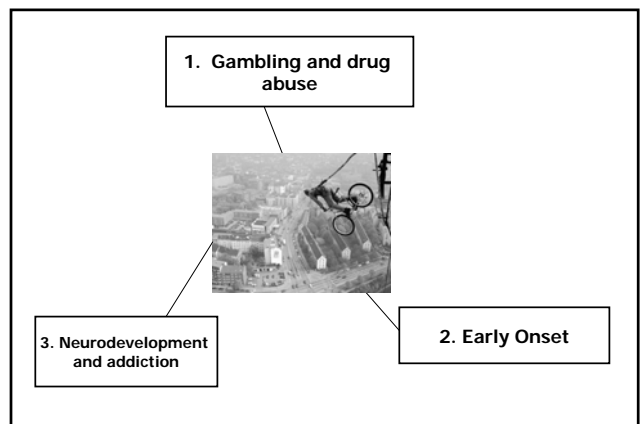
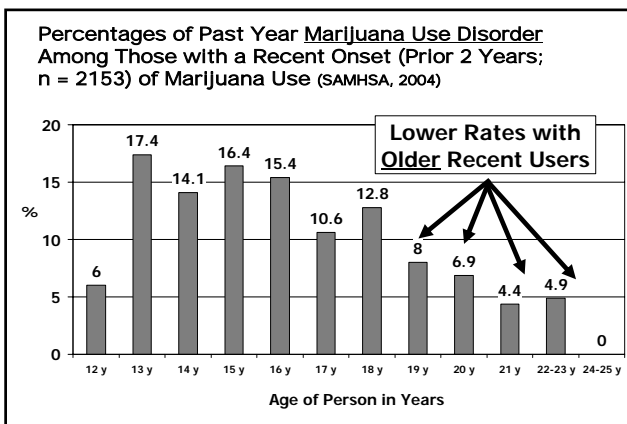
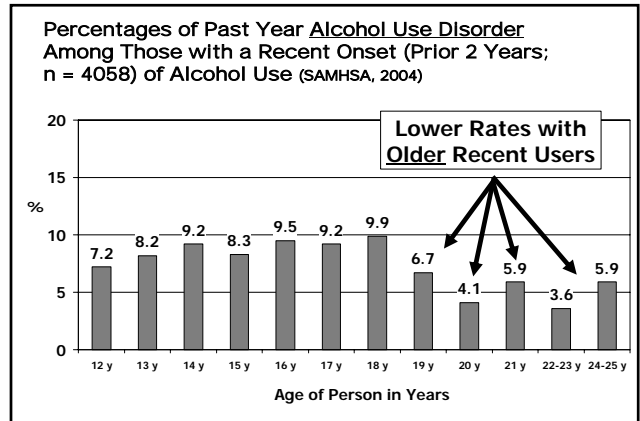
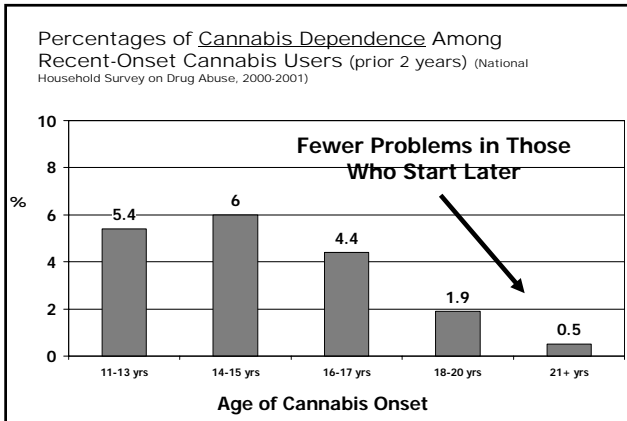
- Recent National Comorbidity Study supports the viewpoint that most adult problem gamblers began gambling during youth (Kessler et al., unpublished data)

Data to be shown here

Early Onset as a Risk Factor for Adult Problems

- There are several studies that confirm the association of early drug use onset and increased risk for developing substance abuse.



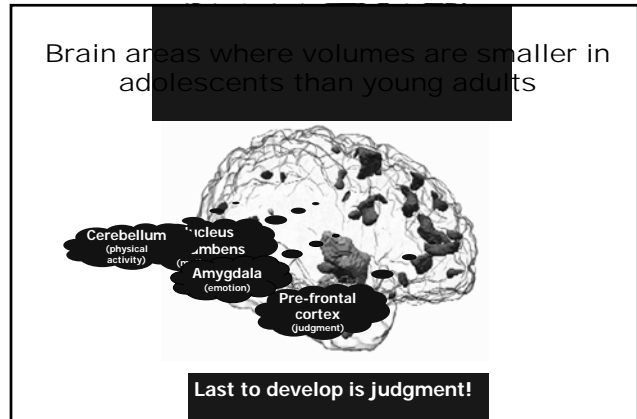
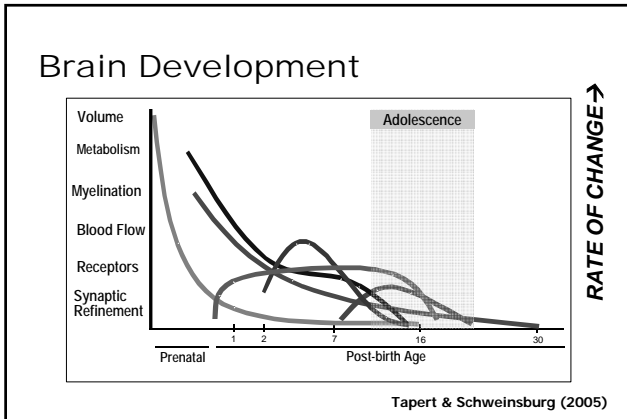


INSIDE THE ADOLESCENT BRAIN

The brain undergoes two major developmental spurts, one in the womb and the second from childhood through the teen years. While the organ matures by 18 and starts in a sequence that moves down the back of the brain to the front.

- **Adolescence is a period of profound brain maturation.**
- We *thought* brain development was complete by adolescence
- We now know... maturation is not complete until about **age 24!!!**

An Immature Brain = Less Brakes on the "Go" System



The dopamine system is more robust during adolescence than in adulthood

- novel stimuli trigger firing of dopamine; the experience is rewarded by a dopamine burst

- Compared to adults, the robust dopamine system of adolescence will contribute to a more heightened reward experience in the face of novel stimuli

Implications of "Arrested Development" for Adolescent Behavior

We can infer.....

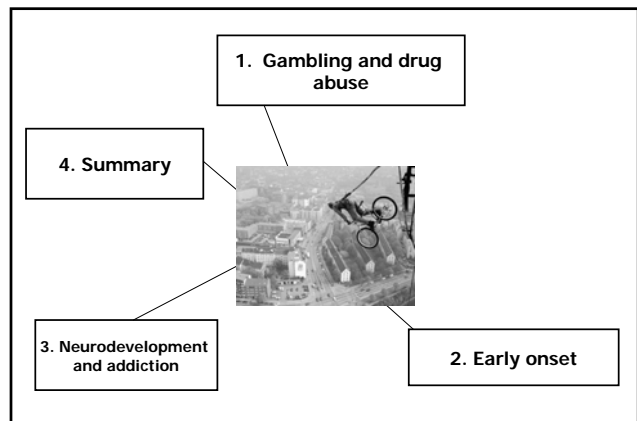
- Preference for physical activity
- Preference for high excitement and low effort activities
- Preference for activities that trigger high intensity feelings and arousal
- Preference for novelty
- Poor planning and judgment
- Minimal consideration of consequences
- More risky, impulsive behaviors

• Some evidence that being in a group accentuates risk taking

Does normal brain development contribute to adolescent susceptibility to addictive-like problems?

INDIRECT SUPPORT:

- > risk taking (particularly in groups) (gambling & DA?)
- >propensity toward low effort - high excitement activities (gambling & DA?)
- > seeking of high arousal activities (gambling & DA?)
- < capacity for good judgment & weighing consequences (gambling and DA?)
- > sensitivity to novel stimuli (gambling and DA ?)



A Way Forward

- Screen and assess for these addictive problems
 - particularly high-risk youth
 - ADHD youth
 - Mental health clinics
 - When one addictive problem is present

Lie/Bet Screen

(Johnson et al., 1997)

2-question version of the DSM-IV criteria:

1. Have you ever had to lie to people important to you about how much you gambled?
2. Ever felt the need to bet more and more money?

A Way Forward

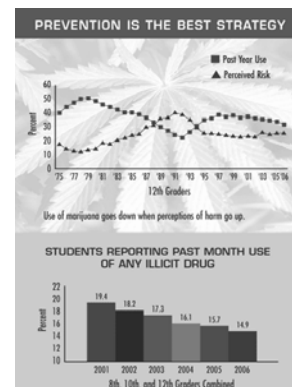
- Clinical implications
- Treatment issues
 - Drug-abusers
 - raise insights that gambling is another source of "intoxication"
 - educate that gambling may be a source of relapse (gambling urges can be powerful)

A Way Forward

- Clinical implications
- Treatment issues
 - Youth with ADHD
 - raise insights that gambling is a source of excitement
 - teach limits, if the person gambles

A Way Forward

- Prevention implications
 - Get schools to integrate gambling prevention into their drug prevention programs
 - Focus on perceived harm



A Way Forward

- **Prevention implications**
 - Get schools to integrate gambling prevention into their drug prevention programs
 - Focus on perceived harm
 - Focus on risk and protective factors

EXAMPLES OF RISK AND PROTECTIVE FACTORS

Risk Factors	Domain	Protective Factors
Early Aggressive Behavior	Individual	Self-Control
Poor Social Skills	Individual	Positive Relationships
Lack of Parental Supervision	Family	Parental Monitoring
Delinquent	Peer	Pro-social
Lax policies	School	Strong Policies
Poverty	Community	Strong Neighborhood Attachment

A Way Forward

- **Minnesota Institute on Public Health**
 - www.miph.org/gambling/
- **International Centre for Youth Gambling**
 - www.youthgambling.com/

THANK YOU!

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