HASSENFELD CHILDREN'S HOSPITAL AT NYU LANGONE

Department of Child and Adolescent Psychiatry

Managing High Risk Behavior in Teens

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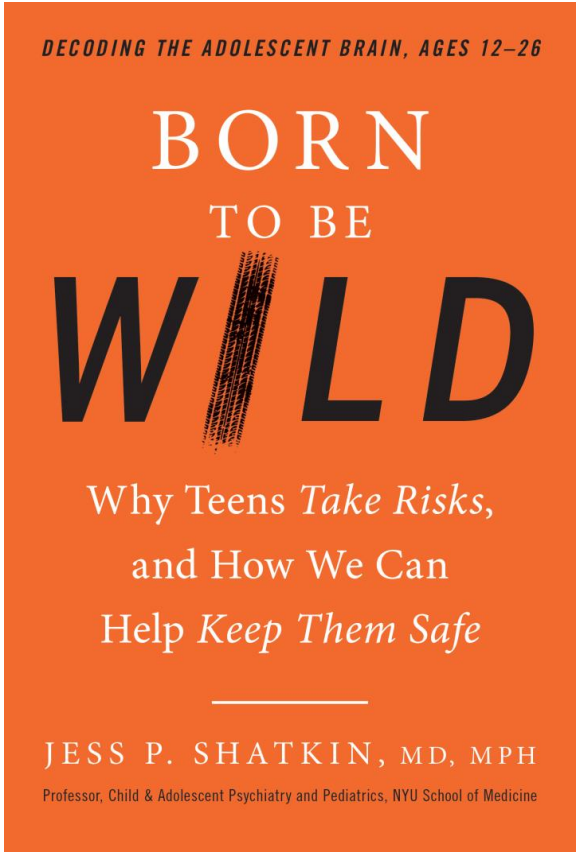
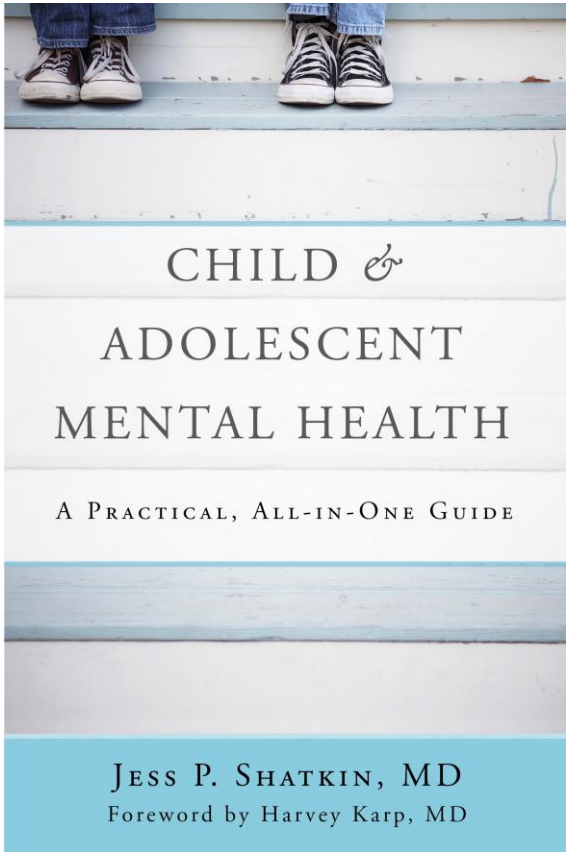
NYU School of Medicine

Disclosures



Penguin



W.W. Norton

Doctor Radio
SiriusXM, Channel 110

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Overview

1) What risks do adolescents take?
2) How do adolescents assess risk?
3) Why do adolescents engage in risky behavior?
4) How do adolescents make decisions involving risk?
5) Which practices will help keep our adolescents safe from risk?

Part 1:
What risks do adolescents take?

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What risks did you take as an adolescent?

Almost all deaths & disability among adolescents are due to:

- Emotion
- Cognition
- Behavior

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Risks

- >80% of high school students don’t wear bicycle helmets
  - One-third don’t wear motorcycle helmets
- In the past 30 days, 20% of high school students drove with someone who was drinking alcohol
  - 40% texted or emailed while driving
- More than 35% of sophomores have had sex, along with 50% of juniors and nearly 60% of seniors
  - 43% didn’t use a condom last time they had sex, 14% didn’t use any birth control (higher among minorities)
  - 1 in 4 teen girls gets an STI, 3 in 10 become pregnant (along with 51% of Latina teens)
  - 1 in 10 teen girls is physically forced to have intercourse
- 1 in 4 seniors binge drank in the last 30 days, along with >1 in 5 juniors and 1 in 6 sophomores
  - Over one-quarter of juniors and seniors smoked MJ in the past 30 days

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Leading Causes Of Death In 15 To 24 Year Olds

United States, 2013

CAUSE	% OF DEATHS
Accidents	47.7
Suicide	20.0
Homicide	17.7
Malignant Neoplasms	6.1
Heart Disease	3.8
Congenital Anomalies	1.4
Influenza & Pneumonia	0.8
Diabetes Mellitus	0.7
Complicated Pregnancy	0.7
Chronic Low Respiratory Disease	0.6

14.1

National Vital Statistics System, National Center for Health Statistics, CDC, 2013

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Adolescent Death & Disability Worldwide (ages 15 – 19-years-old)

Death

1. Road Injury
2. HIV
3. Suicide
4. Lower Respiratory Infections
5. Interpersonal Violence

Disability

1. Unipolar Depressive Disorders
2. Iron Deficiency Anemia
3. Alcohol Use Disorders
4. Back & Neck Pain
5. Anxiety Disorders

WHO, 2012

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Mental Health

- >20% of children 3 – 17 y/o meet DSM criteria (Surgeon General, 1999)
  - ❖ 49.5% of 13-18 y/o met DSM criteria, 27.6% for a “severe disorder,” 22.2% exclusive of SUDS (Merikangas et al, 2010)
- 50% of all mental illness begins by age 14 years and 75% by age 24 (Kessler et al, 2005)
- ACE’s affect >50% of children and adolescents (Felitti et al, 1998)
- 30% of high school students felt sad or hopeless for two or more weeks in the past 12 months
  - 18% seriously considered attempting suicide (2:1, female to male)
  - Almost 9% attempted suicide (2:1, female to male)

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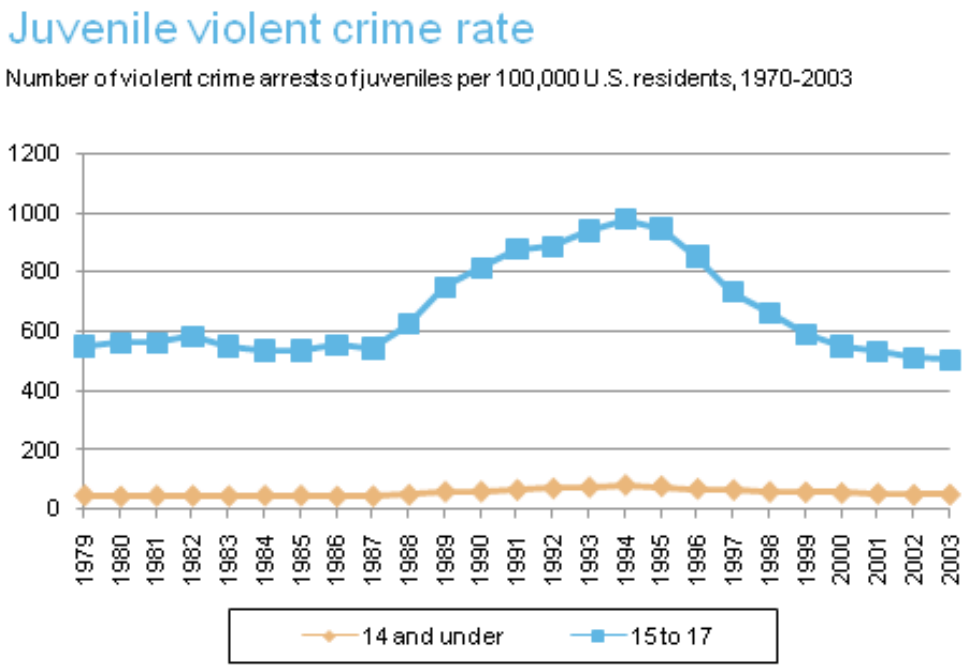
Who Commits Crimes?



Note: Violent crimes are offenses of murder, rape, robbery, and aggravated assault.
Source: Criminal Offenders Statistics, December 2004, Bureau of Justice Statistics

1. When the number of youth increases, so does the amount of crime
2. Half of all serious crimes are committed by those 10 – 17
3. Most serious crimes are committed by those under 30
4. Youth criminal behavior almost always happens in groups

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Part 2:
How do adolescents assess risk?

Let’s start with why adolescents take risks –

What are your thoughts?

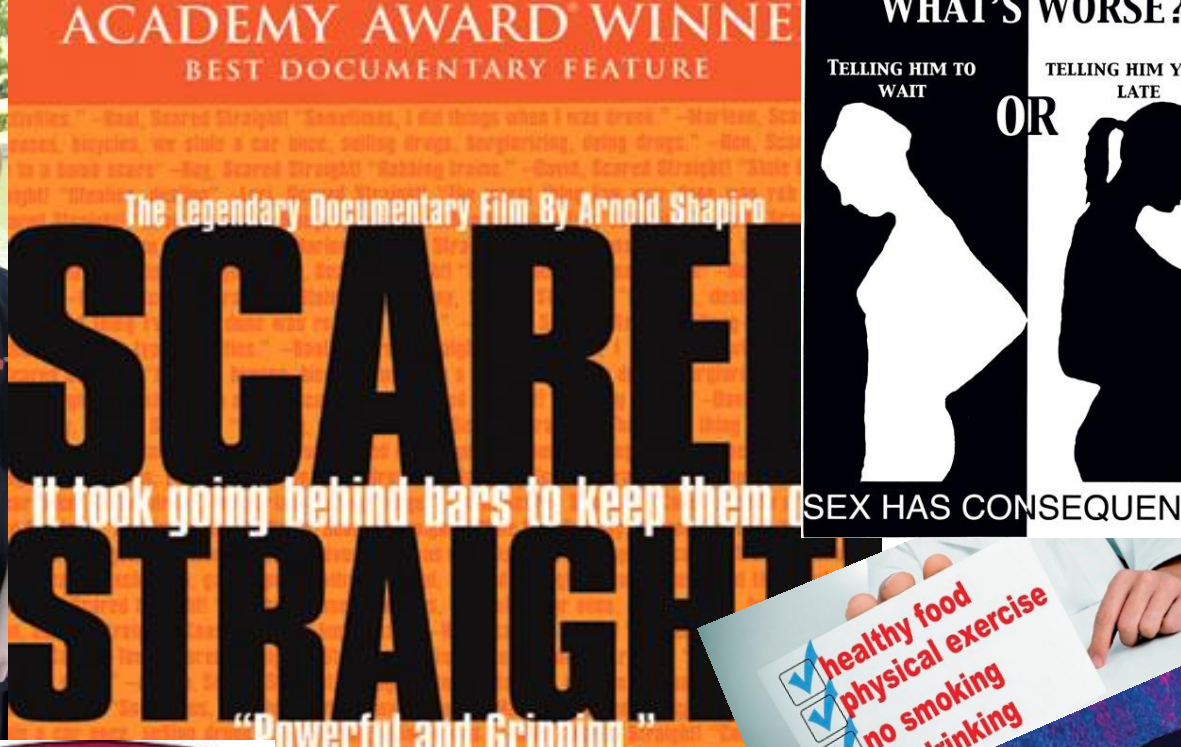
Adolescents Always Overestimate Risk

- Low probability events
  - ✓ Earthquakes and Hurricanes
- Higher Probability Events
  - ✓ Accidents and Pregnancy
- Teens believe that the risk of contracting a sexually transmitted infection to be between six and 60,000 times greater than the actual risk (Millstein & Halpern-Felsher, 2002)
- Adolescents believe that the chance they will die this year to be >200x the actual risk (Fischhoff et al, 2009)

The Paradox of Risk Programming

- Most adolescent risk reduction programs focus on improving adolescents' accuracy of risk perception
  - to try and overcome their belief of invincibility
  - to transform intuitive/biased "adolescent" decision-making into analytic unbiased "adult-like" decision-making
- This approach is misguided and doesn't work

D.A.R.E.
TO RESIST DRUGS AND VIOLENCE
DRISCOLL


ACADEMY AWARD WINNE
BEST DOCUMENTARY FEATURE
The Legendary Documentary Film By Arnold Shapiro
SCARE
It took going behind bars to keep them
STRAIGHT
"Powerful and Gripping."
—Washington Post

ZERO TOLERANCE
FOR ALCOHOL, DRUGS, SMOKING
AND WEAPONS ON SCHOOL PROPERTY

DRIVING SCHOOL

WHAT'S WORSE?
TELLING HIM TO WAIT
OR
TELLING HIM Y LATE
SEX HAS CONSEQUEN

healthy food
physical exercise
no smoking
no drinking
tinder
CHLAMYDIA

Why Do Adolescents Overestimate Risk?

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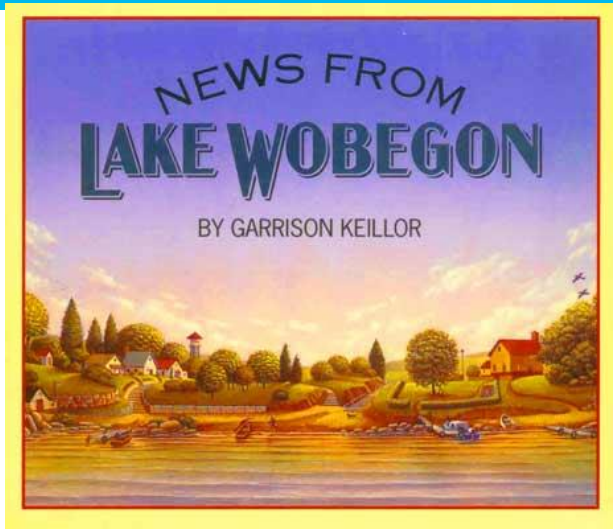
“all the women are strong, all the men are good looking, and all the children are above average”



- Self-Assessment Bias
  - Marriage, death, professorship
- Optimistic Bias
  - Due to *pluralistic ignorance*
  - We think we do things to protect ourselves that others don’t think to do
- Adolescents commonly have optimistic bias
- But adults have just as much (or more!)

Part 3:
Why do adolescents *really* engage in risky behavior?

Why Do Adolescents *Really* Take Risks?

+ Brain maturation is not yet complete
+ Driven by reward
+ Hormones & early puberty
+ Peer effects
+ Behavioral contributions

= a HUGE Evolutionary Advantage for human survival (but not an advantage for individuals)

▶ In other words, the adolescent brain isn't an accident – rather, it's a perfect evolutionary design

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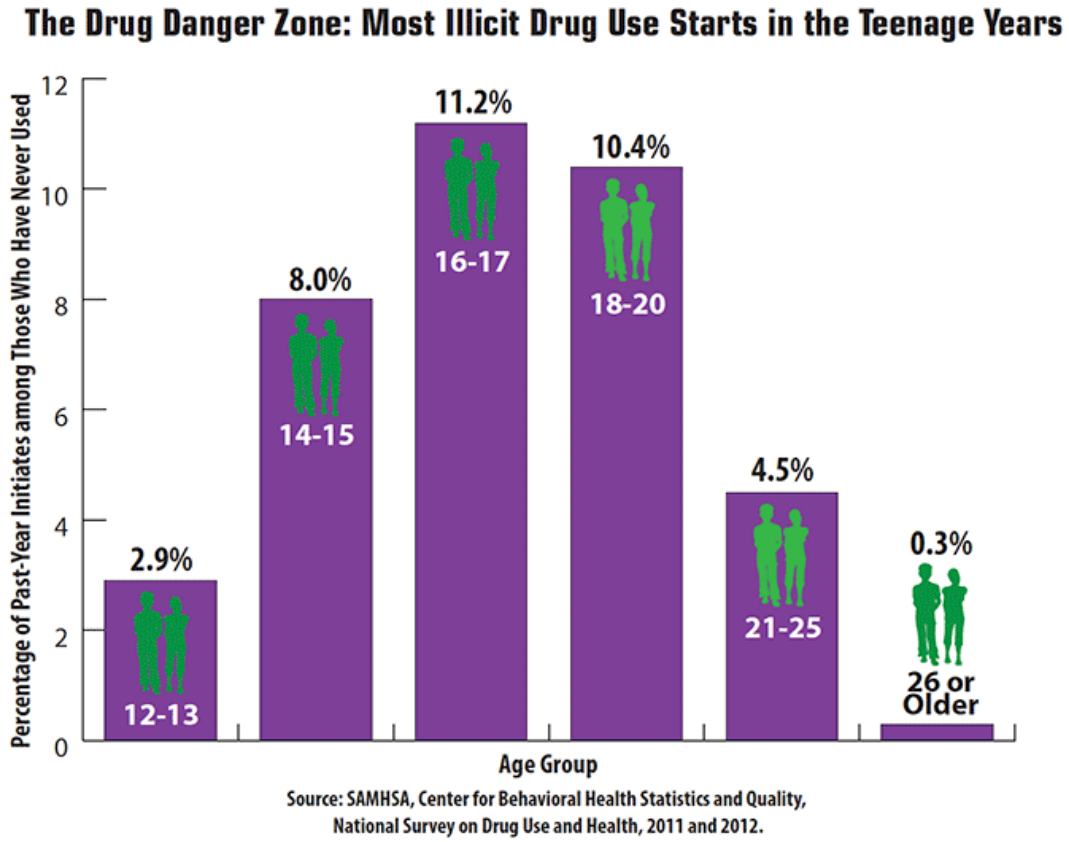
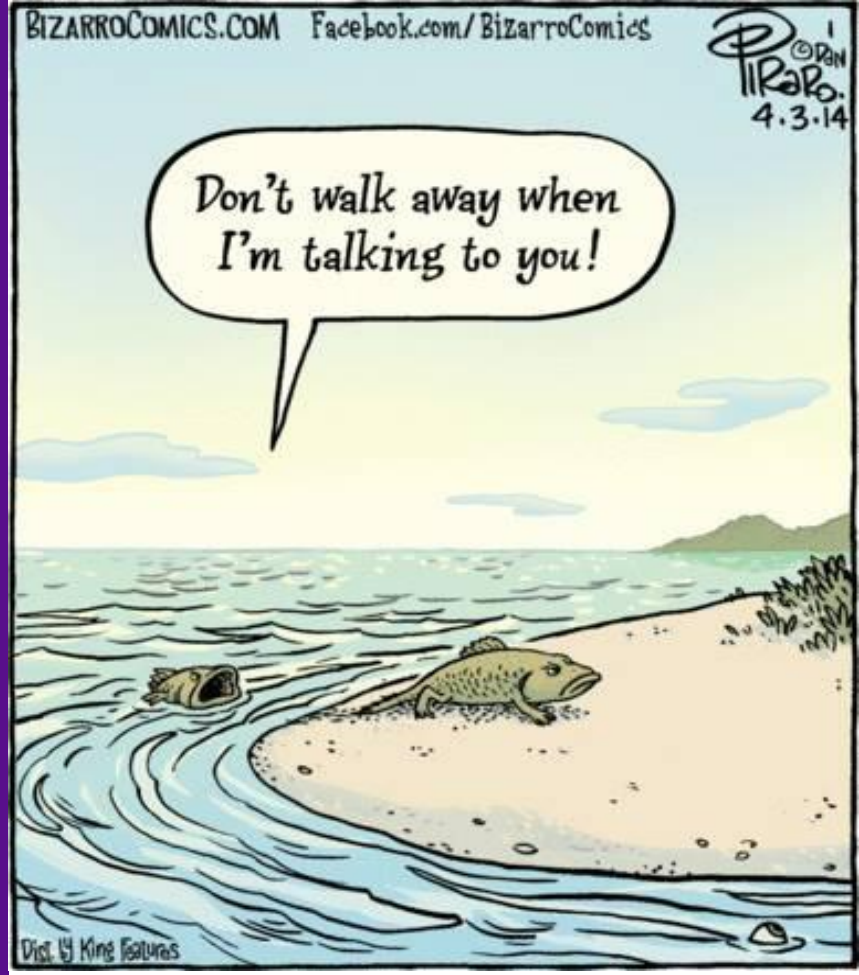
Substance Use & Abuse



Evolutionary Advantage

- The Adolescent Paradox
- Youth is not wasted on the young



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Part 4:
How do adolescents make decisions involving risk?

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Who Considers More Data in Decision-Processing?

- Vignettes:
  - ? John and Nancy are each 47 years old. They met a few years ago at a work conference. They are very attracted to one another and are now having a drink together in the bar after the day's meetings. Both are married and have children.
  - ? Michael and Susan are each 17 years old and attend different NYC high schools. They meet at a house party and are very attracted to one another. They're enjoying the keg party. They are each in a current relationship with someone else.
- Which couple is more likely to hook up?
- Which couple evaluates more pieces of information in making a decision about whether or not to hook up?

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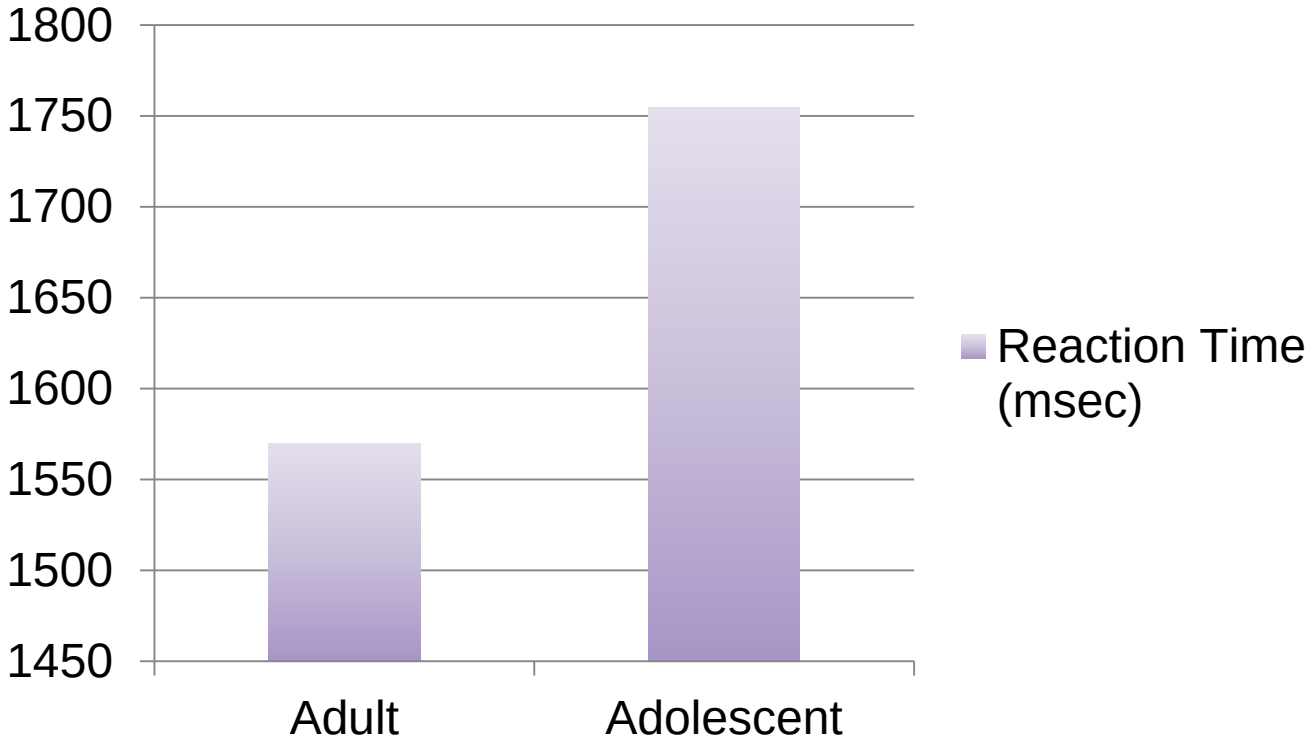
Reaction time in milliseconds for adolescents and adults to questions such as, *"Is it a good idea to eat a salad?" "Is it a good idea to take a walk?" "Is it a good idea to set your hair on fire?"*, and *"Is it a good idea to swim with sharks?"* (Baird & Fugelsang, 2004).



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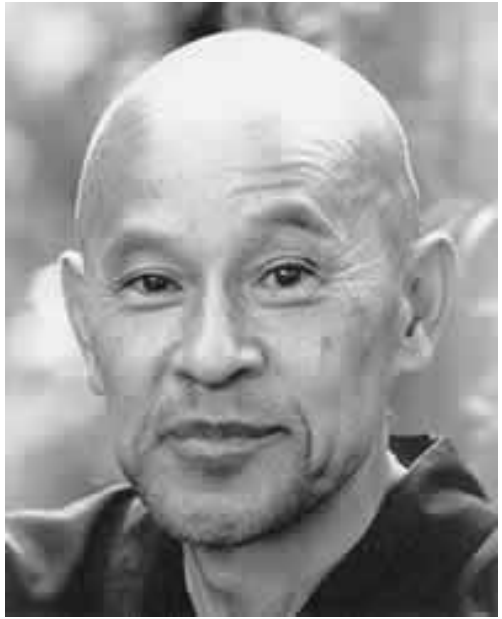
Advanced Decision-Makers

- Advanced decision-makers home in on essential patterns and gists, ignoring details and irrelevant cues
  - ✓ Physicians with experience make better decisions and with fewer pieces of information
  - ✓ Resident and early career physicians weigh more information, take more time, and make worse decisions
  - ✓ Triage nurses, fire fighters, cardiologists, pilots, drivers, etc.

In the beginner's mind there are many possibilities; in the expert's mind there are few.



--Shunryu Suzuki Roshi

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Part 5:
Which practices will keep our adolescents safe from risk?

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Guiding Principles for Managing Risk

- Bombarding adolescents with risk information won't help them make better decisions
  - They know more, but show little behavior change
- Focus on <u>practice</u> and <u>emotional salience</u>
  - Health classes may have even encouraged worse decision-making by teaching kids to be more deliberative (e.g., weighing risks & benefits)
- Adolescents are not fully mature
  - So exposure to risks should be limited as much as possible or taught via apprenticeship

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Adolescent Risk Reduction Efforts Should…

- Encourage the development of gist-based, automatic and non-deliberative decision-making
- Shelter young children and early adolescents from risky experiences
- Make great efforts to modify the environment
- Provide apprenticeships

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What We Can Do (1)

- Authoritative “just right” Parenting
- Behavioral Parent Training
- Being There (aka Close Monitoring)
- Talk to your kids about risk & drugs & sex & condoms
- Focus interventions on kids who are at high risk of substance abuse
- Reframe reward
- Provide “safe” risks
- Highlight the short term benefits of not taking risks (e.g., you don’t have to lie to your parents)
- Let’s Talk Screens

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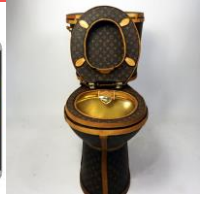

Screen Time

- 75% of youth have at least one electronic device in their bedroom
  - 45% have a television, 1/3 keep it on all night
- Median number of electronic devices in kids' rooms
  - 1 for children 6 – 11 y/o; 2 for 12 – 14 y/o; & 3 for those over 15 y/o
- Screen use impacts the brain & increased use is associated with greater:
  - Decreases in gray matter; reduction in frontal lobe cortical thickness; reduction in attention span; poor task performance involving memory & cognition; enhanced reward sensitivity & decreased sensitivity to loss; neurological signs of cravings; & higher rates of obesity
- When a cell phone is present, people report:
  - Lower relationship quality and less closeness, less trust in their conversational partner, less empathy from their conversational partner

- National Sleep Foundation, 2014; Shatkin, 2017; Faires et al, 2014; Przybyiski & Weinstein, 2012

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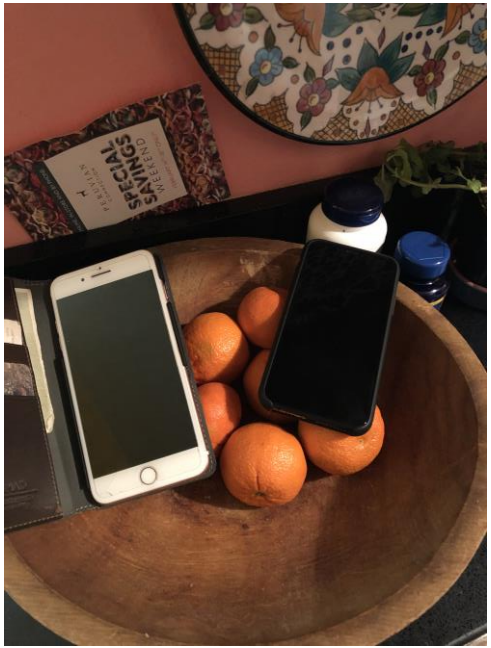
Why God Created the Fruit Bowl

- Postpone screens as long as possible (Wait Until 8th)
  - Consider Life 360 or Find Friends
- Postpone social media until at least 13 y/o
  - “Friend” your kids
- You own the phone!
- First work, then screens
  - Screens are a reward, not a privilege
- Limitations (e.g., Friday afternoon through Sunday evening)
- Keep all screens (computers, TVs, etc.) in shared spaces
- Always supervise children on screens
  - Doors open if screens in bedrooms
- Stop screens at least an hour before bedtime
- Use blue light blocking devices (e.g., f.lux, night shift, etc.)



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Verizon 12:36 PM 97%

Screen Time

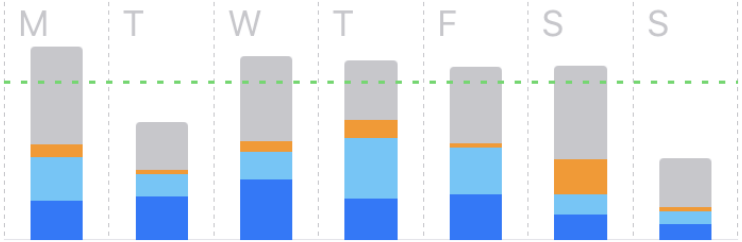
Today | Last 7 Days

Jess Shatkin's iPhone

SCREEN TIME Today at 12:36 PM

2h 4m per day

11% from last week



Productivity	Social Networking	Other
3h 35m	3h 6m	1h 9m

Weekly Total 14h 34m

Verizon 12:36 PM 97%

Screen Time **Last 7 Days**

MOST USED SHOW CATEGORIES

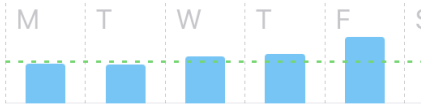
- Mail 2h 34m
- Messages 1h 54m
- Facebook 1h 4m
- Safari 45m
- Amazon 36m
- Fitbit 35m
- Wordscapes 32m

Show More

Verizon 12:37 PM

Screen Time **Last 7 Days**

63 per day



Most Pickups	Total Pickup
Friday: 101	444

FIRST USED AFTER PICKUP

- Mail 96
- Messages 70
- Calendar 13
- Fitbit 12

Show More

1:17 LTE

Screen Time

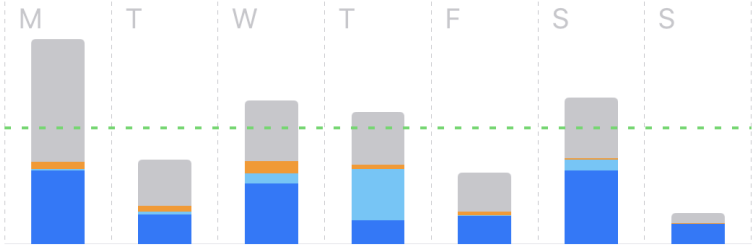
Today | Last 7 Days

Julian Shatkin's iPhone

SCREEN TIME Today at 1:17 PM

2h 54m per day

20% from last week



Social Networking 7h 44m

Games 1h 54m

Productivity 51m

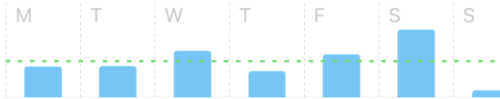
Weekly Total 20h 18m

MOST USED SHOW CATEGORIES

- Safari 4h 11m
- Instagram 3h 46m
- Messages 2h 44m
- Snapchat 1h 12m
- BitLife 1h 4m
- Mail 51m
- Ball Blast 34m
- Napster 29m
- Google Maps 13m
- YouTube: Watch, Listen, Stream 10m
- Phone 9m

PICKUPS

139 per day



Most Pickups
Saturday: 261

Total Pickups
973

FIRST USED AFTER PICKUP

- Messages 190
- Snapchat 98
- Napster 63
- Mail 59

Show More

NOTIFICATIONS

762

Around 109 per d

What We Can Do (2)

- Help our adolescents to understand that corporations are often manipulating them to engage in risky behaviors (by using their products)
  - ❖ Teach Media Literacy in schools & at home
  - ❖ Teens especially are interested in issues of justice (fighting back against ”the man”)
- Instead, we can use positive images and models of healthy behavior and negative images of unhealthy ones
  - ❖ In media, films, fiction

Fools, not cools

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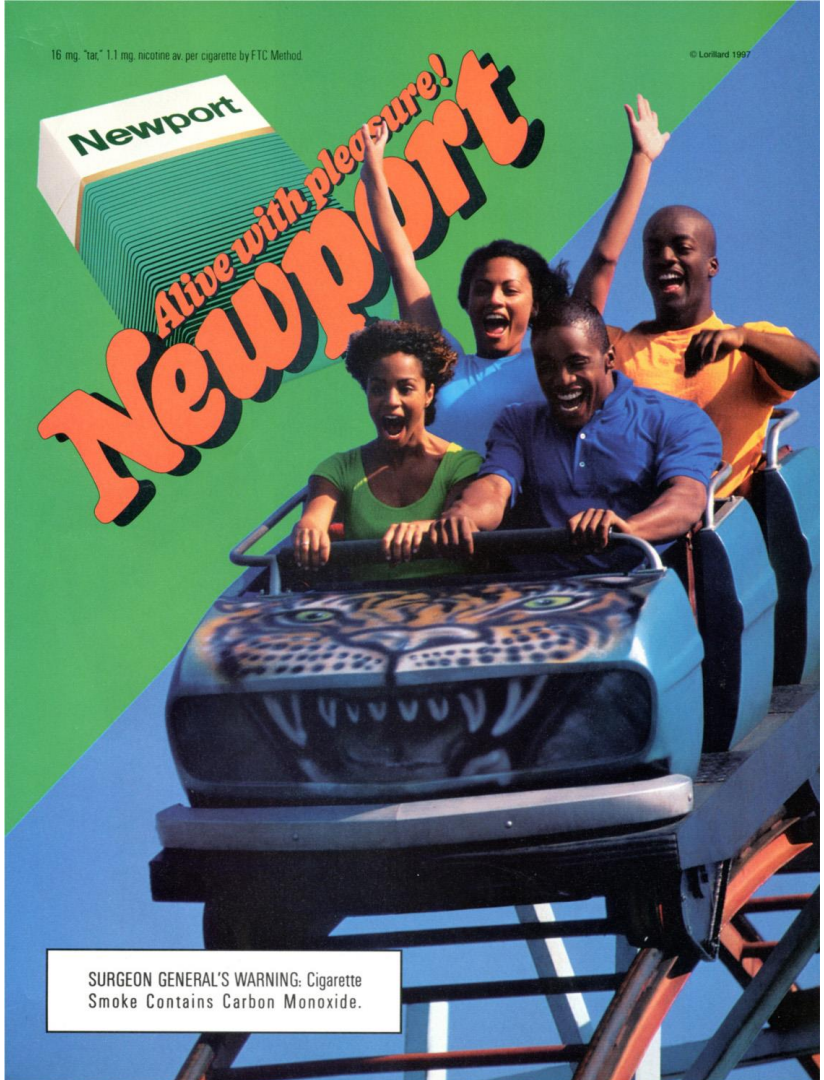

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TOBACCO USE IS NOT AN EQUAL OPPORTUNITY KILLER.

SMOKING DISPROPORTIONATELY AFFECTS THOSE MOST IN NEED SUCH AS THE POOR, THE HOMELESS, RACIAL MINORITIES, LGBTQ PERSONS AND THOSE SUFFERING FROM MENTAL ILLNESS AND SUBSTANCE USE DISORDERS.

THERE ARE UP TO 10X MORE TOBACCO ADS IN BLACK NEIGHBORHOODS THAN IN OTHER NEIGHBORHOODS.

SEIDENBURG AB, CAUGHEY RW, REES VW, CONOLLY GN. STOREFRONT CIGARETTE ADVERTISING DIFFERS BY COMMUNITY DEMOGRAPHIC PROFILE. AM J HEALTH PROMOT. 2010; 24(6): E26–E31. (2–5X INCREASE)

MORELAND-RUSSELL S. HARRIS J., SNIDER D. WALSH H., CYR J. BARNOYA J. DISPARITIES AND MENTHOL MARKETING : ADDITIONAL EVIDENCE IN SUPPORT OF POINT OF SALE POLICIES. INT J. ENVIRON. RES PUBLIC HEALTH. 2013; 10:4571–4583. (10X INCREASE)

J. CANTRELL ET AL. MARKETING LITTLE CIGARS AND CIGARILLOS: ADVERTISING, PRICE, AND ASSOCIATIONS WITH NEIGHBORHOOD DEMOGRAPHICS. AMERICAN JOURNAL OF PUBLIC HEALTH: OCTOBER 2013, VOL. 103, NO. 10, PP. 1902–1909.

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truth

INDIVIDUALS WITH MENTAL ILLNESS ACCOUNT FOR 46% OF CIGARETTES SOLD IN THE UNITED STATES.

GRANT BF, HASIN DS, CHOU SP, STINSON FS, DAWSON DA. NICOTINE DEPENDENCE AND PSYCHIATRIC DISORDERS IN THE UNITED STATES: RESULTS FROM THE NATIONAL EPIDEMIOLOGIC SURVEY ON ALCOHOL AND RELATED CONDITIONS. ARCH GEN PSYCHIATRY. 2004;61:1107–1115.

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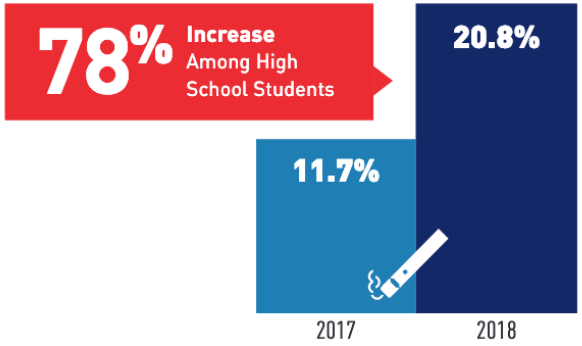
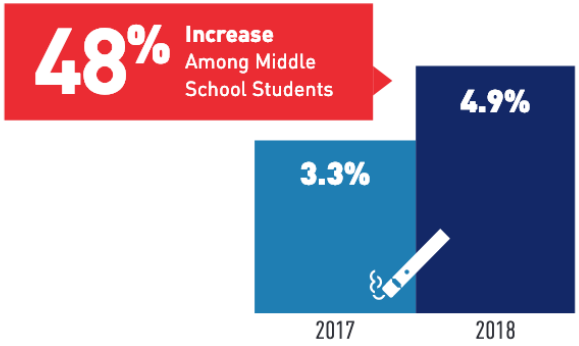
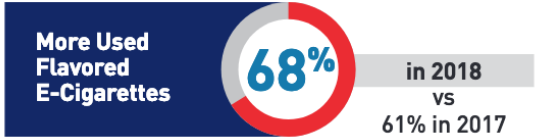
SURGE IN YOUTH CURRENT E-CIGARETTE USE — 1.5 Million More Students Used E-Cigarettes in 2018 vs 2017

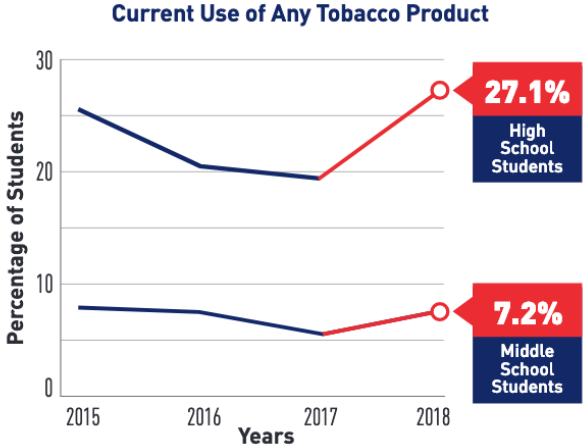




AMONG HIGH SCHOOL CURRENT E-CIGARETTE USERS — Rise in Frequency and Use of Flavors



E-CIGARETTE USE SURGE LED TO UPTICK IN OVERALL TOBACCO USE — Reversing Previous Declines



The use of e-cigarettes is causing an overall increase in the use of tobacco products among kids

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BUY JUUL
BUY JUULpods

VAPORIZED

JUUL

BUY JUUL
SIGN UP TO GET
25% OFF
YOUR FIRST PURCHASE
BUY JUULpods

VAPORIZED

JUUL
VAPORIZED

JUUL

JUUL
VAPORIZED

JUUL

Figure 15. The pose and hairstyle of this 2015 Vaporized campaign advertisement are reminiscent of popular singer Ariana Grande. This is an example of the style/identity theme.

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15- TO 17-YEAR-OLDS ARE

16x

MORE LIKELY TO USE A JUUL

COMPARED TO THOSE AGES 25-34.

truth initiative
INSPIRING TOBACCO-FREE LIVES

truthinitiative.org

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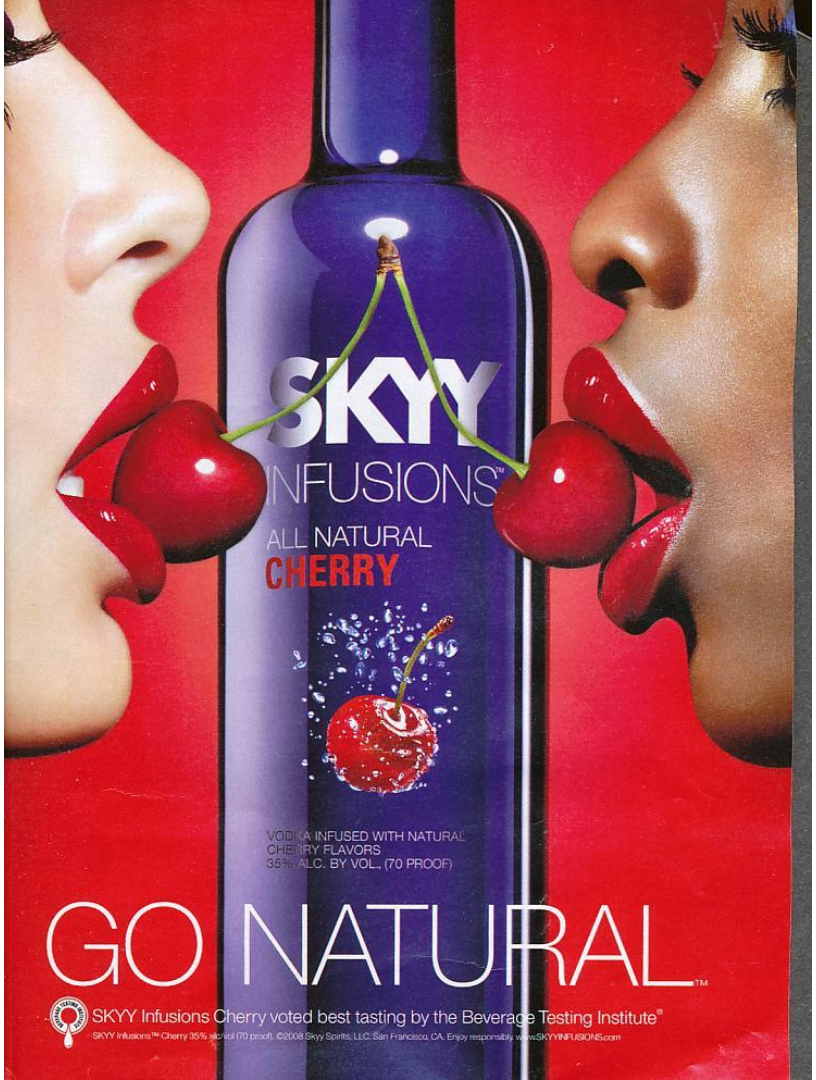

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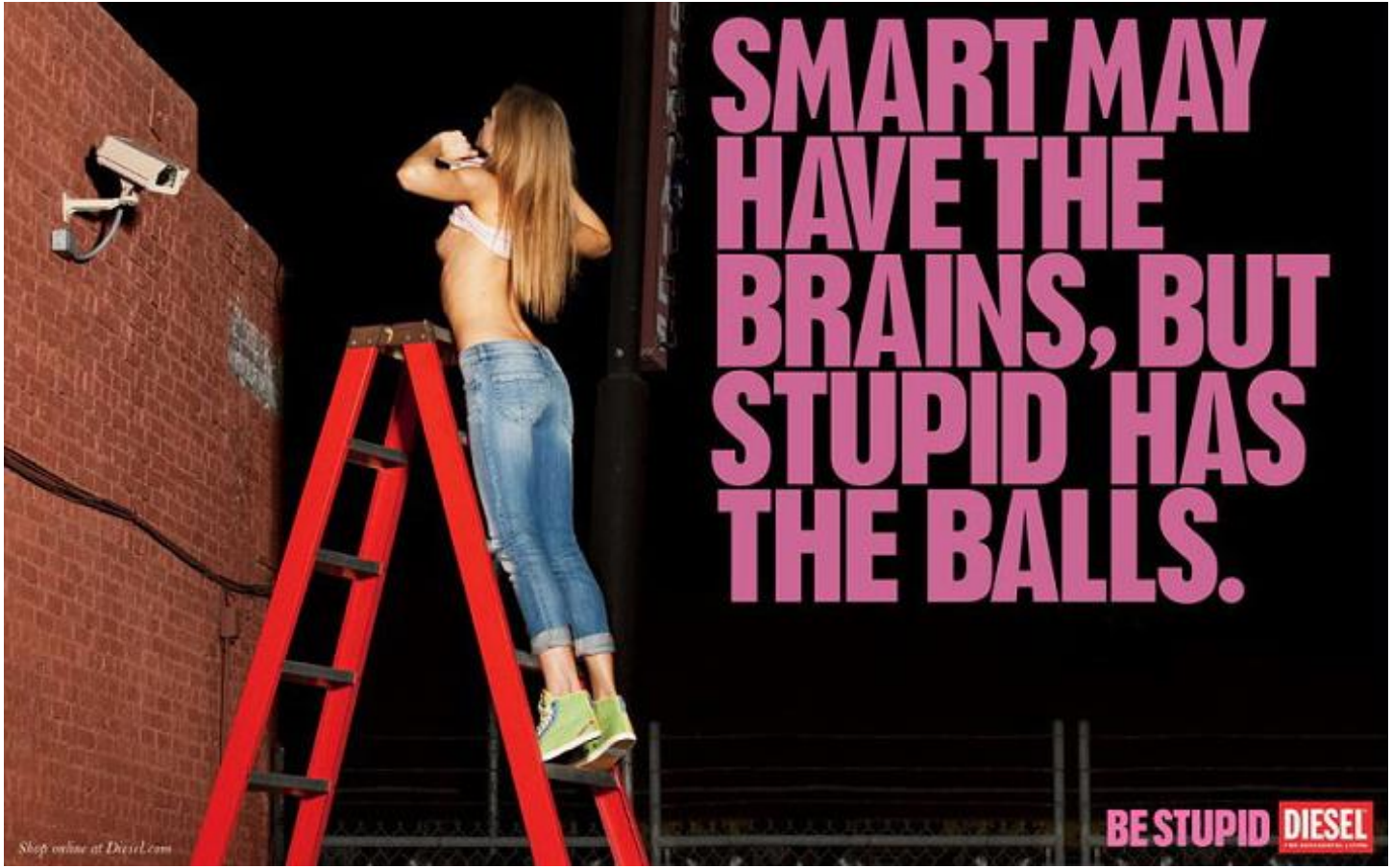

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What We Can Do (3)

- Acknowledge that risk is low, but consequence is dire (e.g., *“once is all it takes”* NOT *“don’t overdo it”*)
- Use analogies to steer adolescents away from deliberative calculation toward more categorical thinking about risk
  - ❖ *“Would you play Russian Roulette for one million dollars?”*

What We Can Do (4)

- Develop emotional and personal cues
  - ❖ *"What would happen if you got pregnant?" "What happens next?...and then…and then?"*
- Practice recognizing environmental signs of danger (and self-binding)
  - ❖ Red Alerts – "home alone after school with BF"
- Teach self-efficacy
  - ❖ Practice & rehearse refusal skills (e.g., "my parents drug test me"…"maybe next time") – role play, make it natural

What We Can Do (5)

- Role model
- Use frequent reminders
- Plan decision pathways (in moments of cold cognition)
  - ❖ Discourage risk/benefit in the moment
- Teach emotional self-regulation
- Social Norms Marketing
- Use ratios, not percent
  - ❖ 1 in 20, not 5%

And there’s still much more we can do in schools…

- Limit phones in schools
- The Triumvirate of Good Health
- School start time & after school programming
- Sex education/make condoms available
- Targeted drug abuse prevention
- School based mental health clinics
- Mentorship
- Teaching resilience via neuroscience
  - Emotion identification, communication skills, CBT skills, sleep, risk management

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And in society at large…

- Poverty
- Mentorship
- Policies & research dollars
- Driving and Alcohol & Drug Laws

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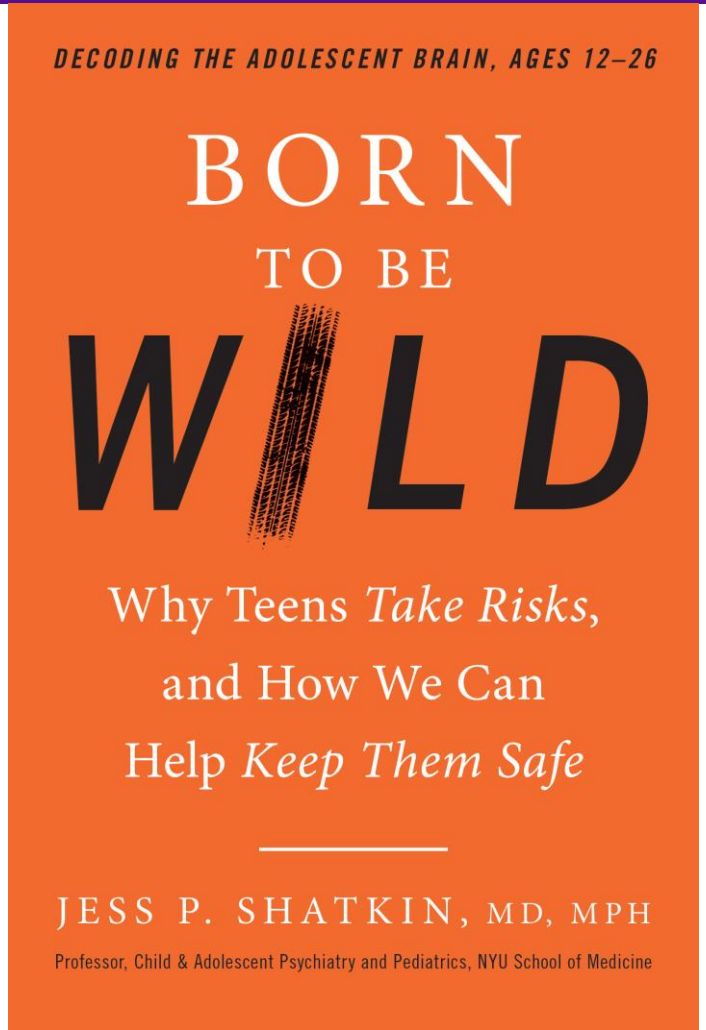

Discussion, Q&A

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