Monitoring the Future is an annual survey of 8th, 10th, and 12th graders conducted by researchers at the University of Michigan, Ann Arbor, under a grant from the National Institute on Drug Abuse, part of the National Institutes of Health. Since 1975, the survey has measured drug, alcohol, and cigarette use and related attitudes in 12th graders nationwide. Eighth and 10th graders were added to the survey in 1991.

Overall, 44,892 students from 382 public and private schools participated in the 2015 survey.
Reported Drinking Patterns Among 8th, 10th and 12th Grade Students: 2015

(Numbers in Percentage)

- **Drank in Past Month**
  - 12th Grade: 35%
  - 10th Grade: 22%
  - 8th Grade: 10%

- **Been Drunk** *
  - 12th Grade: 21%
  - 10th Grade: 3%
  - 8th Grade: 10%

- **Binge Drinking** **
  - 12th Grade: 17%
  - 10th Grade: 11%
  - 8th Grade: 5%

- **Drank Daily**
  - 12th Grade: 2%
  - 10th Grade: 1%
  - 8th Grade: 0%


Note: Author state language on the 93/94 survey changed slightly.
* Been drunk in the previous 30 days. ** Five or more drinks in a row in the previous two weeks.
How Much is a Binge?

Binge drinking occurs when guys consume 5 or more standard drinks, and when girls consume 4 or more standard drinks, in about 2 hours.
Standard drink sizes

12 fl oz of regular beer = 8–9 fl oz of malt liquor (shown in a 12 oz glass) = 5 fl oz of table wine = 1.5 fl oz shot of 80-proof spirits ("hard liquor"—whiskey, gin, rum, vodka, tequila, etc.)

About 5% alcohol

About 7% alcohol

About 12% alcohol

About 40% alcohol

The percent of "pure" alcohol, expressed here as alcohol by volume (alc/vol), varies by beverage.
Red Solo Cup Measurements

12 oz - beer
5 oz - wine
1 oz - liquor

How much are you REALLY drinking?
Alcohol and Risky Behavior

Figure 40: HS Significant Associations Between Binge Drinking and School, Other Substance Use, Sexual Activity, and Mental Health

Note: In 2011, 22.3% of Colorado students reported binge drinking in the past 30 days. All comparisons above reflect statistically significant differences (p < .05).
ALCOHOL AND THE TEENAGE BRAIN

A child’s brain continues developing until they are into their EARLY 20’s

ALCOHOL IS A DRUG that can disrupt a young person’s BRAIN DEVELOPMENT

FRONTAL LOBES speech, emotions, reasoning (including inhibition of impulsive behaviours)

HIPPOCAMPUS learning and memory

TEMPORAL LOBE interpretation of sounds and spoken language

PRE-FRONTAL CORTEX rational thinking, memory, personality, behaviour

CEREBELLUM movement and balance
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Overall, 44,892 students from 382 public and private schools participated in the 2015 survey.
PRESCRIPTION/OVER-THE-COUNTER VS. ILLICIT DRUGS*

- Adderall: 6.8%
- Vicodin: 4.8%
- Tranquilizers: 4.7%
- Cold Medicines: 4.1%
- OxyContin: 3.3%
- Ritalin: 1.8%
- Marijuana: 35.1%
- K2/Spice ("synthetic marijuana"): 5.8%
- MDMA/Ecstasy: 3.6%
- Cocaine: 2.6%
- LSD: 2.5%

*The percentage of 12th graders who have used these drugs in the past year.

The National Institute on Drug Abuse is a component of the National Institutes of Health, U.S. Department of Health and Human Services. NIDA supports most of the world's research on the health aspects of drug abuse and addiction. Fact sheets on the health effects of drugs of abuse and information on NIDA research and other activities can be found at www.drugabuse.gov.
MARIJUANA: AS PERCEIVED HARM DROPS, USE GOES UP

1993: 26.0% | 35.6%
2003: 26.6% | 34.9%
2013: 19.5% | 36.4%

*Past-year use in 12th graders.

USING  PERCEIVED HARM
(saw great risk in smoking marijuana occasionally)
From the 1960s into the 1990s, marijuana potency rose from 2% to 10% concentration of THC.
In the last decade, THC content in the plant forms of marijuana has increased to 30% concentration.
Today’s marijuana is 5-6x stronger than it was just 20 years ago.
What's the big deal about smoking weed all the time?
Marijuana and Risky Behavior

Figure 41: HS Significant Associations Between Marijuana Use and School, Other Substance Use, Sexual Activity, Mental Health, and Physical Activity

- Grades in School Mostly A’s or B’s: 80.3% Used Marijuana, 58.6% Did Not Use Marijuana
- Participate in Extracurricular Activities: 73.2% Used Marijuana, 58.7% Did Not Use Marijuana
- Binge Drinking (Past Month): 69.1% Used Marijuana, 59.0% Did Not Use Marijuana
- Had Sex in Past 3 Months: 11.9% Used Marijuana, 20.8% Did Not Use Marijuana
- Sad for 2+ Weeks: 28.9% Used Marijuana, 19.7% Did Not Use Marijuana
- Seriously Considered Suicide: 24.1% Used Marijuana, 11.9% Did Not Use Marijuana
- Physically Active Every Day (Past Week): 22.8% Used Marijuana, 30.7% Did Not Use Marijuana
When marijuana is smoked, its active ingredient, THC, travels throughout the body, including the brain, to produce its many effects. THC attaches to sites called cannabinoid receptors on nerve cells in the brain, affecting the way those cells work. Cannabinoid receptors are abundant in parts of the brain that regulate movement, coordination, learning and memory, higher cognitive functions such as judgment, and pleasure.
MARIJUANA MAY HURT THE DEVELOPING TEEN BRAIN

The teen brain is still developing and it is especially vulnerable to drug use.

IQ

Regular heavy marijuana use by teens can lead to an IQ drop of up to 8 points.

HEAVY MARIJUANA USE BY TEENS IS LINKED TO:

Educational Outcomes

1. lower grades and exam scores
2. less likely to graduate from HS or college

Life Outcomes

1. lower satisfaction with life
2. more likely to earn a lower income
3. more likely to be unemployed

NIH
National Institute on Drug Abuse

Mood & Anxiety Disorders Among Respondents with Marijuana Dependence (NESARC)

- Any Mood Disorder: 61%
- Any Anxiety Disorder: 20%
- Depression: 49%
- Dysthyemia: 47%
- Mania: 17%
- Hypomania: 24%
- Panic w/Agoraphobia: 16%
- Panic w/o Agoraphobia: 17%
- Social Phobia: 20%
- Specific Phobia: 10%
- Generalized Anxiety: 21%

Marijuana Use: Detrimental to Youth
American College of Pediatricians – April 2016
These are MRI scans of the corpus callosum, the bundle of fibers connecting the two brain hemispheres, allowing the two hemispheres to communicate and work in a coordinated way. Young adult males who smoked marijuana daily (and started at an average age of 15 yrs) were scanned along with age-matched on-users. All had low levels of alcohol use.

Source: Amore D, Barrick TR, Chongappa S et al. Corpus callosum damage in heavy marijuana use: Preliminary evidence from diffusion tensor tractography and tract-based spatial statistics. Neuroimage, 2008; 41:1067-1074
Butane Hash Oil (BHO)

- BHO is also known as...
  - Dabs
  - Budder
  - Shatter
  - Wax

- Weight wise, 1/2 (g) dabs on average, is equal in strength to 3.5 (g) of high potency plant marijuana.)
BHO has 90% THC concentration

High THC concentration leads to rapid dependency and Cannabis Withdrawal Syndrome:
  - Flu-like symptoms
  - Agitation
  - Anxiety
  - Nausea
  - Sweating
  - Body aches

More reported cases of BHO-induced psychosis
Can you tell the difference?
Ask questions about the culture at school:
• Do they see drug use on campus? At parties?
• How does that affect them?
• Are they concerned about friends using?
• Have they felt pressured to use?

By the time you think you need to start talking about substance use, likely your teen already knows more than you think they know.
Within your own family, make sure that expectations and boundaries around substance use are CLEAR and COMMUNICATED.

Understand that the rules of your house DO NOT HAVE TO be the same as the next parent or the community.

Be consistent! Teens are skillful litigators and will exploit the differing opinions about substance use between parents.
Listen to what your teen is saying when they think you aren’t listening.

Make an effort to understand what is compelling them to use drugs or alcohol:
- Social Pressures
- Academic Stressors
- Self-medicating emotional issues

Using drugs and alcohol is a symptom of a larger problem. Understanding what that problem is will aid you in getting your teen the help he/she needs.
Early Intervention often requires less intense treatment

Address the problem rather than chasing the symptom

Minimize more serious health/legal/social consequences

“Hitting Bottom” is an adult perspective and isn’t geared toward the specific needs of adolescents
Thank You

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